

QMTS2.E109769 - Polymeric Materials - Filament-wound Tubing, Industrial Laminates, Vulcanized Fiber, and Materials for Use in Fabricating Recognized Printed Wiring Boards - Component

Polymeric Materials - Filament-wound Tubing, Industrial Laminates, Vulcanized Fiber, and Materials for Use in Fabricating Recognized Printed Wiring Boards - Component

See General Information for Polymeric Materials - Filament-wound Tubing, Industrial Laminates, Vulcanized Fiber, and Materials for Use in Fabricating Recognized Printed Wiring Boards - Component

SHENGYI TECHNOLOGY CO LTD

E109769

411 GUANSUI RD

WANJIANG INDUSTRIAL DEVELOPMENT ZONE

DONGGUAN, GUANGDONG 523050 CHINA

Prepregs:

Mtl Dsg	ANSI Type	Color	Build up		R.T.I.		H				Meets 746E Non-HAL	Meets 746E DSR
			Min Thk (mm)	Flame Class	Elec (°C)	Mech (°C)	H W I	H A I	V T R	C T I		
Epoxy Prepreg only, furnished as sheets.												
S0101 600	No ANSI	NC	0.20	V-0	90	90	-	-	-	-	-	-
			0.38	V-0	90	90	-	-	-	-	-	-
			0.80	V-0	90	90	-	-	-	-	-	-
			1.40	V-0	90	90	-	-	-	0	-	-
Epoxy (EP) Prepreg only, furnished as sheets.												
SP168GN	No ANSI	NC	0.025	V-0	90	90	-	-	-	-	-	-
			0.10	V-0	90	90	-	-	-	-	-	-
			0.20	V-0	90	90	-	-	-	-	-	-
			0.38	V-0	90	90	-	-	-	-	-	-
			0.80	V-0	90	90	-	-	-	-	-	-
			1.60	V-0	90	90	-	-	-	3	-	-

Epoxy Blend Prepreg only, furnished as sheets.												
SP120	No ANSI	NC	0.05	V-0	50	50	-	-	-	-	-	-
			0.20	V-0	50	50	-	-	-	-	-	-
Prepreg only, furnished as sheets.												
SP170G	No ANSI	NC	0.05	V-0	50	50	-	-	-	-	-	-
			0.40	V-0	50	50	-	-	-	-	-	-
			0.80	V-0	50	50	-	-	-	-	-	-
			1.60	V-0	50	50	-	-	-	3	-	-
SP170N	No ANSI	NC	0.05	V-0	50	50	-	-	-	-	-	-
			0.38	V-0	50	50	-	-	-	-	-	-
			0.80	V-0	50	50	-	-	-	-	-	-
			1.60	V-0	50	50	-	-	-	3	-	-
Prepreg only.												
SP225GN (Note 1)												
		NC	0.025	V-0	90	90	-	-	-	-	-	-
			0.10	V-0	90	90	-	-	-	-	-	-
			0.20	V-0	90	90	-	-	-	2	-	-

High density interconnect - build up materials:

		Core		Dielectric		R.T.I.			H				Meets	Meets
Mtl		Min	Max	Min	Max	Flame	Elec	Mech	H	H	V	C	746E	746E
Dsg	Color	Thk	Thk	Thk	Thk	Class	(°C)	(°C)	W	A	T	T	Non-HAL	DSR
		(mm)	(mm)	(mic)	(mic)				I	I	R	I		
FR-4.0 core with Epoxy (EP) dielectric, High density interconnect - build up materials, furnished as sheets.														
S6015, S6015-1														
	NC	0.14	-	40	-	V-0	90	-	0	0	-	-	-	Yes
		0.14	-	-	100	V-0	120	120	1	0	-	3	-	Yes
S6018, S6018-1														
	NC	0.15	-	40	-	V-0	90	-	3	0	-	-	-	Yes
		0.15	-	-	100	V-0	120	120	3	0	-	4	-	Yes

High density interconnect - resin coated foils:

Core Dielectric R.T.I. H

Mtl		Min	Max	Min	Max				H	H	V	C	Meets	Meets
Dsg	Color	Thk	Thk	Thk	Thk	Flame	Elec	Mech	W	A	T	T	746E	746E
		(mm)	(mm)	(mic)	(mic)	Class	(°C)	(°C)	I	I	R	I	Non-HAL	DSR
FR-4.0 core with Epoxy (EP) dielectric, High density interconnect - resin coated foils, furnished as sheets.														
S6101	NC	0.38	-	50	100	V-0	90	-	-	-	-	2	-	-

Industrial laminates:

Build up				R.T.I.			H				Meets	Meets
Mtl	ANSI		Min	Flame	Elec	Mech	H	H	V	C	Meets	Meets
Dsg	Type	Color	Thk	Class	(°C)	(°C)	W	A	T	T	746E	746E
			(mm)				I	I	R	I	Non-HAL	DSR
Copolymer Industrial laminates, furnished as sheets.												
AeroBond 350												
	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	Yes
AeroWave300X												
	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	Yes
LNB33C	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	Yes
S	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	Yes
S7135D	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	Yes

S7135D2	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	Yes
S7136D	No ANSI	NC	0.16	V-0	160	90	0	0	-	-	-	Yes
			0.50	V-0	160	130	0	0	-	-	-	Yes
			0.76	V-0	160	160	0	0	-	-	-	Yes
			1.52	V-0	170	170	0	0	-	0	-	Yes
Copolymer Industrial laminates, furnished as sheets, rods or tubes.												
S7136H	No ANSI	NC	0.38	V-0	150	140	0	0	-	-	-	Yes
			0.50	V-0	150	150	0	0	-	-	-	Yes
			0.80	V-0	150	150	0	0	-	-	-	Yes
			1.60	V-0	150	150	0	0	-	0	-	Yes
SU1402	No ANSI	NC	0.38	V-0	170	170	0	0	-	-	-	Yes
			0.50	V-0	170	170	0	0	-	-	-	Yes
			0.80	V-0	170	170	0	0	-	-	-	Yes
			1.60	V-0	180	170	0	0	-	0	-	Yes
Epoxy Industrial laminates, furnished as sheets.												
S7735D2	No ANSI	NC	0.10	V-0	155	130	4	0	-	-	-	Yes
			0.20	V-0	160	160	0	0	-	-	-	Yes
			0.38	V-0	160	170	0	0	-	-	-	Yes
			0.63	V-0	160	200	0	0	-	-	-	Yes
			1.60	V-0	160	200	0	0	-	2	-	Yes
ST220P	No ANSI	NC	0.50	V-0	90	90	0	1	-	-	-	Yes
			0.63	V-0	90	90	0	1	-	-	-	Yes
			1.40	V-0	90	90	0	1	-	1	-	Yes
Epoxy Industrial laminates, furnished as sheets or rolls.												
SU1615	No ANSI	NC	0.05	V-0	90	100	5	0	-	-	-	-
			0.10	V-0	95	110	4	0	-	-	-	Yes
			0.20	V-0	110	120	4	0	-	-	-	Yes

			0.38	V-0	125	125	4	0	-	-	-	Yes
			0.63	V-0	140	125	0	0	-	-	-	Yes
			1.40	V-0	150	140	0	0	-	3	-	Yes
Epoxy (EP) Industrial laminates, furnished as sheets or rolls.												
Autolad5	No ANSI	NC	0.09	V-0	130	130	4	3	-	-	-	Yes
			0.20	V-0	130	130	2	2	-	-	-	Yes
			0.38	V-0	140	140	0	1	-	-	-	Yes
			0.75	V-0	150	150	0	1	-	-	-	Yes
			1.50	V-0	150	150	0	1	-	2	-	Yes
Epoxy (EP) Industrial laminates, furnished as sheets, rods or tubes.												
S1135, S7546												
	No ANSI	NC	0.05	V-0	-	-	-	-	-	-	-	-
			0.20	V-0	95	130	0	2	-	-	-	Yes
			0.38	V-0	105	130	0	1	-	-	-	Yes
			0.70	V-0	115	130	0	0	-	-	-	Yes
			1.50	V-0	130	140	0	0	-	2	-	Yes
S1155 600	No ANSI	NC	0.63	V-0	90	90	0	2	-	-	-	-
			1.40	V-0	90	90	0	1	-	0	-	Yes
S1155M	No ANSI	NC	0.03	V-0	125	110	0	3	-	-	Yes	Yes
			0.10	V-0	140	130	0	0	-	-	-	Yes
			0.20	V-0	150	140	0	0	-	-	-	Yes
			0.38	V-0	150	140	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
S1165, SI546, S7542K												
	No ANSI	NC	0.05	V-0	-	-	-	-	-	-	Yes	-
			0.20	V-0	125	115	1	2	-	-	-	Yes
			0.38	V-0	130	130	0	2	-	-	-	Yes
			0.80	V-0	140	130	0	2	-	-	-	Yes
			1.60	V-0	140	140	0	2	-	4	-	Yes
S3155G	No ANSI	NC	0.63	V-0	90	90	0	2	-	-	-	Yes

			1.40	V-0	90	90	0	1	-	1	-	Yes
S7242	No ANSI	BN	0.38	V-0	90	90	0	2	-	-	-	-
			0.63	V-0	90	90	-	-	-	-	-	-
			1.40	V-0	90	90	-	-	-	4	-	-
SB170G	No ANSI	NC	0.05	V-0	-	-	-	-	-	-	-	-
			0.20	V-0	95	130	0	2	-	-	-	Yes
			0.38	V-0	105	130	0	1	-	-	-	Yes
			0.70	V-0	115	130	0	0	-	-	-	Yes
			1.50	V-0	130	140	0	0	-	2	-	Yes
Epoxy blend Industrial laminates, furnished as sheets.												
S5W, SI455W												
	No ANSI	NC(WT)	0.20	HB	50	50	-	-	-	-	-	-
			0.38	HB	50	50	-	-	-	-	-	-
			0.63	HB	50	50	-	-	-	-	-	-
			1.40	HB	50	50	-	-	-	-	-	-
SE40, S7439, S7439HW, S7439C												
	No ANSI	NC	0.20	V-0	120	130	0	4	-	-	-	-
			0.38	V-0	160	160	0	2	-	-	-	Yes
			0.63	V-0	170	160	0	2	-	-	-	Yes
			1.40	V-0	180	170	0	1	-	3	-	Yes
SI242D	No ANSI	NC	0.04	V-0	110	90	4	4	-	-	-	-
			0.20	V-0	130	105	3	2	-	-	-	Yes
			0.38	V-0	140	115	0	2	-	-	-	Yes
			0.71	V-0	150	155	0	1	-	-	-	Yes
			1.50	V-0	160	155	0	1	-	2	-	Yes
Epoxy blend Industrial laminates, furnished as sheets or rolls.												
SU1610(h)	No ANSI	NC(WT)	0.10	HB	50	50	-	-	-	-	-	-
Epoxy blend Industrial laminates, furnished as sheets, rods or tubes.												
SI10U(S)	No ANSI	NC	0.04	V-0	70	85	4	2	-	-	-	Yes
			0.10	V-0	70	90	4	2	-	-	-	Yes

			0.20	V-0	85	90	3	1	-	-	-	Yes
			0.38	V-0	90	90	3	1	-	-	-	Yes
			0.63	V-0	95	90	0	1	-	-	-	Yes
			1.60	V-0	120	105	0	0	-	1	-	Yes
SI246, SI246U												
	No ANSI	NC	0.04	V-0	70	85	4	2	-	-	-	Yes
			0.10	V-0	70	90	4	2	-	-	-	Yes
			0.20	V-0	85	90	3	1	-	-	-	Yes
			0.38	V-0	90	90	3	1	-	-	-	Yes
			0.63	V-0	95	90	0	1	-	-	-	Yes
			1.60	V-0	120	105	0	0	-	1	-	Yes
SU1304	No ANSI	NC	0.04	V-0	70	85	4	2	-	-	-	Yes
			0.10	V-0	70	90	4	2	-	-	-	Yes
			0.20	V-0	85	90	3	1	-	-	-	Yes
			0.38	V-0	90	90	3	1	-	-	-	Yes
			0.63	V-0	95	90	0	1	-	-	-	Yes
			1.60	V-0	120	105	0	0	-	1	-	Yes
Epoxy Resin with filler Al(OH)3 Industrial laminates, furnished as sheets.												
S2600R	No ANSI	NC	0.63	V-0	90	90	0	2	-	-	-	Yes
			1.40	V-0	90	90	0	1	-	0	-	Yes
Modified Polyphenylene ether Industrial laminates, furnished as sheets.												
S78	No ANSI	NC	0.04	V-0	95	80	0	2	-	-	-	Yes
			0.10	V-0	95	90	0	1	-	-	-	Yes
			0.20	V-0	100	105	0	1	-	-	-	Yes
			0.38	V-0	125	115	0	1	-	-	-	Yes
			0.80	V-0	125	115	0	1	-	-	-	Yes
			1.50	V-0	125	115	0	1	-	2	-	Yes
Modified Polyphenylene ether Industrial laminates, furnished as sheets, rods or tubes.												
mmWave	No ANSI	NC	0.38	V-0	130	115	0	0	-	-	-	Yes
			0.80	V-0	150	130	0	0	-	-	-	Yes

			1.50	V-0	150	130	0	0	-	3	-	Yes
S7338, S7335, Syntactic 6, Syntactic 6N												
	No ANSI	NC	0.80	V-0	150	130	0	0	-	-	-	Yes
			1.50	V-0	150	130	0	0	-	3	-	Yes
Polybutadiene/polystyrene copolymer Industrial laminates, furnished as sheets, rods or tubes.												
S7136	No ANSI	NC	0.16	V-0	50	50	0	2	-	-	-	Yes
			0.50	V-0	50	50	0	2	-	-	-	Yes
			0.80	V-0	50	50	0	2	-	-	-	Yes
			1.60	V-0	50	50	0	2	-	1	-	Yes
Polyimide Industrial laminates, furnished as sheets.												
SH260, SH260M												
	No ANSI	NC(WT)	0.08	HB	50	50	-	-	-	-	-	-
			0.20	HB	50	50	-	-	-	-	-	-
			0.38	HB	50	50	-	-	-	-	-	-
			0.63	HB	50	50	-	-	-	-	-	-
			1.40	HB	50	50	-	-	-	-	-	-
Polyimide blend Industrial laminates, furnished as sheets.												
S1220, S7643												
	No ANSI	NC	0.04	V-0	90	100	0	4	-	-	-	-
			0.20	V-0	95	110	0	3	-	-	-	Yes
			0.38	V-0	100	110	0	2	-	-	-	Yes
			0.63	V-0	110	110	0	1	-	-	-	Yes
			1.60	V-0	120	125	0	1	-	2	-	Yes
SI64X, SI643, SI643U, SI643HU												
	No ANSI	NC	0.04	V-0	90	100	0	4	-	-	-	-
			0.20	V-0	95	110	0	3	-	-	-	Yes
			0.38	V-0	100	110	0	2	-	-	-	Yes
			0.63	V-0	110	110	0	1	-	-	-	Yes
			1.60	V-0	120	125	0	1	-	2	-	Yes
Polyphenylene Oxide Industrial laminates, furnished as sheets, rods or tubes.												

S7135	No ANSI	NC	0.16	V-0	65	90	2	3	-	-	-	Yes
			0.50	V-0	85	90	2	3	-	-	-	Yes
			0.80	V-0	95	90	0	2	-	-	-	Yes
			1.60	V-0	105	95	0	2	-	0	-	Yes
PTFE Industrial laminates, furnished as sheets.												
SG3300	No ANSI	NC	0.38	V-0	130	130	0	0	-	-	-	Yes
			0.80	V-0	130	130	0	0	-	-	-	Yes
			1.50	V-0	130	130	0	0	-	0	-	Yes
SG3300W2	No ANSI	NC	0.38	V-0	130	130	0	0	-	-	-	Yes
			0.80	V-0	130	130	0	0	-	-	-	Yes
			1.60	V-0	130	130	0	0	-	0	-	Yes
PTFE without reinforcement Industrial laminates, furnished as sheets.												
SG7300N, mmWave77												
	No ANSI	NC	0.127	V-0	130	130	4	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	130	0	0	-	-	-	Yes
			1.50	V-0	130	130	0	0	-	0	-	Yes
Industrial laminates, furnished as sheets.												
AeroWave 300												
	No ANSI	NC	0.04	V-0	95	80	0	2	-	-	-	Yes
			0.10	V-0	95	90	0	1	-	-	-	Yes
			0.20	V-0	100	105	0	1	-	-	-	Yes
			0.38	V-0	125	115	0	1	-	-	-	Yes
			0.80	V-0	125	115	0	1	-	-	-	Yes
			1.50	V-0	125	115	0	1	-	2	-	Yes
Aerowave350												
	No ANSI	NC	0.38	V-0	50	50	0	0	-	-	-	Yes
			0.80	V-0	50	50	0	0	-	-	-	Yes
			1.60	V-0	50	50	0	0	-	1	-	Yes
Autolad2G	FR-15.1	NC	0.10	V-0	120	120	0	0	-	-	Yes	Yes

			0.20	V-0	120	120	0	0	-	-	-	Yes
			0.43	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	0	-	Yes
Q160, PQ160, Q161, Q162												
	FR-4.0	NC	0.20	V-0	120	90	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.4	V-0	130	140	0	0	-	0	-	Yes
Q260, Q260#, PQ260												
	CEM-3.0	NC	1.4	V-0	130	140	0	2	-	0	-	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
Q310	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.40	V-0	130	140	1	2	4	3	-	Yes
Q360, Q360H, Q360G, Q360W												
	CEM-1	NC	0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	0	-	Yes
S1155GX	FR-4.1	NC	0.03	V-0	105	130	4	4	-	-	Yes	-
			0.05	V-0	105	130	4	4	-	-	-	-
			0.10	V-0	120	130	4	0	-	-	-	Yes
			0.20	V-0	130	130	2	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
S1170F	FR-4.0	NC	0.20	V-0	130	130	2	3	-	-	-	Yes
			0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
S1210G	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes

			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
S1250G	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
S26, S2600F												
	CEM-3.0	NC	0.63	V-0	130	140	0	1	-	-	-	Yes
			1.60	V-0	130	140	0	0	-	0	-	Yes
S7641G	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
S7645G	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
SDI06K	FR-15.1	NC	0.025	V-0	130	140	5	1	-	-	Yes	-
			0.10	V-0	130	150	4	0	-	-	-	Yes
			0.20	V-0	140	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	1	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
ST215, ST210G												

	CEM-3.1	NC	0.50	V-0	130	130	0	2	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.60	V-0	130	140	0	1	-	0	-	Yes
SU1301, S1155K, SL1155K												
	FR-4.1	NC	0.03	V-0	105	130	4	4	-	-	Yes	-
			0.05	V-0	105	130	4	4	-	-	-	-
			0.10	V-0	120	130	4	0	-	-	-	Yes
			0.20	V-0	130	130	2	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
SU1609	No ANSI	NC	0.025	V-0	90	90	5	1	-	-	Yes	-
			0.10	V-0	90	90	4	0	-	-	-	Yes
			0.20	V-0	90	90	4	0	-	-	-	Yes
			0.38	V-0	90	90	1	0	-	-	-	Yes
			0.63	V-0	90	90	0	0	-	-	-	Yes
			1.50	V-0	90	90	0	0	-	3	-	Yes
SU1621	No ANSI	NC	0.03	V-0	90	95	4	2	-	-	-	Yes
			0.05	V-0	90	95	4	1	-	-	-	Yes
			0.20	V-0	90	115	4	0	-	-	-	Yes
			0.38	V-0	90	115	3	0	-	-	-	Yes
			0.80	V-0	90	115	0	0	-	-	-	Yes
			1.60	V-0	100	120	0	0	-	2	-	Yes
Synamic6GX												
	FR-15.1	NC	0.05	V-0	140	130	4	2	-	-	Yes	Yes
			0.15	V-0	150	150	4	0	-	-	-	Yes
			0.20	V-0	150	150	4	0	-	-	-	Yes
			0.38	V-0	150	150	3	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	2	-	Yes
Synamic8G	No ANSI	NC	0.20	V-0	130	140	4	0	-	-	Yes	Yes

			0.38	V-0	140	150	1	0	-	-	-	Yes
			0.75	V-0	140	160	0	0	-	-	-	Yes
			1.50	V-0	140	170	0	0	-	3	-	Yes
Industrial laminates, furnished as sheets or rolls.												
Autolad1G	FR-4.1	NC	0.03	V-0	130	120	4	3	-	-	Yes	Yes
			0.20	V-0	130	130	4	0	-	-	-	Yes
			0.38	V-0	130	130	1	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G												
	FR-4.0	NC	0.10	V-0	120	90	0	0	-	-	-	Yes
			0.20	V-0	120	90	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
S1135G	No ANSI	NC	0.05	V-0	-	-	-	-	-	-	-	-
			0.20	V-0	125	120	0	0	-	-	-	Yes
			0.38	V-0	130	120	0	0	-	-	-	Yes
			0.63	V-0	130	120	0	0	-	-	-	Yes
			1.40	V-0	130	130	0	0	4	2	-	Yes
S25	No ANSI	NC	0.20	V-0	95	110	-	-	-	-	-	-
			0.38	V-0	100	110	-	-	-	-	-	-
			0.80	V-0	120	110	-	-	-	-	-	-
			1.60	V-0	140	130	-	-	-	-	-	-
S7439G	FR-15.1	NC	0.03	V-0	120	120	0	3	-	-	Yes	Yes
			0.20	V-0	150	140	0	0	-	-	-	Yes
			0.38	V-0	150	150	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
SU1611	No ANSI	NC	0.20	V-0	50	50	0	0	-	-	-	Yes
			0.38	V-0	50	50	0	0	-	-	-	Yes

			0.63	V-0	50	50	0	0	-	-	-	Yes
			1.40	V-0	50	50	0	0	-	3	-	Yes
Industrial laminates, furnished as sheets, rods or tubes.												
Autolad2	FR-4.0	NC	0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.60	V-0	130	140	0	0	-	0	-	Yes
Autolad3G	FR-15.1	NC	0.05	V-0	130	140	0	1	-	-	Yes	Yes
			0.10	V-0	130	140	0	0	-	-	-	Yes
			0.38	V-0	150	150	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
S1000	FR-4.0	NC	0.38	V-0	130	130	1	0	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.60	V-0	130	140	0	2	4	3	-	Yes
S1000-2, S-2(C)												
	FR-4.0	NC	0.38	V-0	130	130	1	0	-	-	-	Yes
			0.63	V-0	130	140	0	3	4	-	-	Yes
			1.60	V-0	130	140	0	2	4	3	-	Yes
S1000-2M, Autolad3												
	FR-4.0	NC	0.10	V-0	-	-	-	-	-	-	-	-
			0.20	V-0	130	130	2	3	-	-	-	Yes
			0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
S1000HS	FR-4.0	NC	0.20	V-0	-	-	-	-	-	-	-	-
			0.38	V-0	130	130	0	3	-	-	-	Yes
			0.80	V-0	130	140	0	1	-	-	-	Yes
			1.60	V-0	130	140	0	0	-	3	-	Yes
S1000M, S1000H, Autolad1												
	FR-4.0	NC	0.05	V-0	90	90	-	-	-	-	-	-
			0.10	V-0	90	90	-	-	-	-	-	-

			0.38	V-0	130	130	0	3	-	-	-	Yes
			0.80	V-0	130	140	0	1	-	-	-	Yes
			1.60	V-0	130	140	0	0	-	3	-	Yes
S1130	FR-4.0	NC	0.18	V-0	130	130	0	0	6	-	-	Yes
			0.33	V-0	130	130	0	0	5	-	-	Yes
			0.63	V-0	130	130	0	0	5	-	-	Yes
			1.40	V-0	130	130	0	0	4	0	-	Yes
S1141, S1141-4, S1141 150, S1141 170, S1151												
	FR-4.0	NC	0.07	V-0	90	90	3	0	-	-	-	Yes
			0.38	V-0	130	130	3	0	0	-	-	Yes
			0.63	V-0	130	140	3	0	0	-	-	Yes
			1.40	V-0	130	140	3	0	0	3	-	Yes
S1141KF	FR-4.0	NC	0.07	V-0	90	90	3	0	-	-	-	Yes
			0.38	V-0	130	130	3	0	0	-	-	Yes
			0.63	V-0	130	140	3	0	0	-	-	Yes
			1.40	V-0	130	140	3	0	0	3	-	Yes
S1145, S1150G, S1125, SI055W												
	FR-4.1	NC	0.05	V-0	110	110	0	3	-	-	Yes	Yes
			0.10	V-0	130	130	0	3	-	-	-	Yes
			0.20	V-0	130	130	0	3	-	-	-	Yes
			0.38	V-0	130	130	0	2	-	-	-	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	1	-	Yes
S1150	FR-4.0	NC	0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	4	-	Yes
S1150F, S1140F, S1141-4F												
	FR-4.0	NC	0.38	V-0	130	130	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.40	V-0	130	140	0	2	-	3	-	Yes
S1151G	FR-4.1	NC	1.40	V-0	130	140	0	0	-	0	Yes	Yes

			0.63	V-0	130	140	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.20	V-0	130	110	0	0	-	-	-	Yes
			0.05	V-0	130	100	4	1	-	-	-	Yes
S1152G	FR-4.1	NC	0.05	V-0	110	110	0	3	-	-	Yes	Yes
			0.10	V-0	130	130	0	3	-	-	-	Yes
			0.20	V-0	130	130	0	3	-	-	-	Yes
			0.38	V-0	130	130	0	2	-	-	-	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	1	-	Yes
S1165M	FR-4.1	NC	1.60	V-0	130	140	0	2	-	4	-	Yes
S1170	FR-4.0	NC	0.38	V-0	130	130	-	-	-	-	-	-
			0.63	V-0	130	140	0	3	-	-	-	Yes
			1.57	V-0	130	140	0	2	-	3	-	Yes
S1170G, S7045GH												
	FR-15.1	NC	0.03	V-0	150	125	4	4	-	-	Yes	-
			0.10	V-0	150	140	4	0	-	-	-	Yes
			0.20	V-0	150	150	1	0	-	-	-	Yes
			0.38	V-0	150	150	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
S1170GP	No ANSI	NC	0.38	V-0	-	-	-	-	-	-	-	-
			0.63	V-0	-	-	-	-	-	-	-	-
			1.40	V-0	-	-	-	-	-	-	-	-
S1170M	FR-4.0	NC	0.06	V-0	90	90	-	-	-	-	-	-
			0.20	V-0	130	140	0	3	-	-	-	Yes
			0.38	V-0	130	140	0	3	-	-	-	Yes
			0.63	V-0	130	140	0	2	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	3	-	Yes
S1180G	FR-4.1	NC	1.60	V-0	130	140	0	2	-	4	-	Yes
S1190	FR-4.0	NC	0.09	V-0	130	130	0	3	-	-	-	Yes

			0.20	V-0	130	130	0	2	-	-	-	Yes
			0.38	V-0	130	130	0	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	2	-	Yes
S1190M	FR-15.0	NC	0.09	V-0	130	130	0	3	-	-	-	Yes
			0.20	V-0	130	130	0	2	-	-	-	Yes
			0.38	V-0	140	140	0	1	-	-	-	Yes
			0.63	V-0	150	150	0	1	-	-	-	Yes
			1.40	V-0	150	150	0	1	-	2	-	Yes
S1440	FR-4.0	NC	0.38	V-0	130	140	0	0	4	-	-	Yes
			0.80	V-0	130	140	0	0	4	-	-	Yes
			1.60	V-0	130	140	0	0	3	1	-	Yes
S1600, S1600M												
	FR-4.0	NC	0.63	V-0	130	140	0	3	4	-	-	Yes
			1.57	V-0	130	140	0	2	4	0	-	Yes
S1600H	FR-4.0	NC	0.20	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	0	-	Yes
S1600L	FR-4.0	NC	0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.60	V-0	130	140	0	0	-	0	-	Yes
S1860	FR-4.0	NC	0.38	V-0	130	130	1	0	-	-	-	-
			0.80	V-0	130	140	1	1	-	-	-	Yes
			1.60	V-0	130	140	1	1	-	4	-	Yes
S2126, S2135, S2155												
	CEM-3.0	NC	0.63	V-0	130	140	3	0	4	-	-	Yes
			1.40	V-0	130	140	1	0	4	0	-	Yes
S2130, S2130JB\$												
	CEM-3.0	NC	0.63	V-0	130	140	0	2	4	-	-	Yes
			1.40	V-0	130	140	0	2	4	3	-	Yes

			0.50	V-0	130	130	0	2	-	-	-	Yes
S2131, S2131JB												
	CEM-3.0	NC	0.63	V-0	130	140	0	0	4	-	-	Yes
			1.40	V-0	130	140	0	0	4	3	-	Yes
S2136, ST210												
	CEM-3.0	NC	0.63	V-0	130	140	0	0	4	-	-	Yes
			1.40	V-0	130	140	0	0	4	3	-	Yes
S2155G	CEM-3.1	NC	0.50	V-0	130	130	0	1	-	-	-	Yes
			0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	0	-	Yes
S2600EF	CEM-3.0	NC	0.63	V-0	130	140	0	1	-	-	-	Yes
			1.40	V-0	130	140	0	1	-	3	-	Yes
S3110, COB714												
	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.57	V-0	130	140	1	2	4	-	-	Yes
			3.20	V-0	130	140	-	-	-	2	-	Yes
S3116	CEM-1	NC	0.63	V-0	130	140	3	2	4	-	-	Yes
			1.57	V-0	130	140	1	2	4	0	-	Yes
S3155	No ANSI	NC	0.63	V-0	90	90	-	-	-	-	-	-
			1.60	V-0	90	90	-	-	-	2	-	-
S7035, AeroWave 360												
	FR-4.0	NC	0.20	V-0	120	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
S7036	FR-4.0	NC	0.20	V-0	120	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
S7038, SL7038												
	FR-4.0	NC	0.20	V-0	120	130	0	0	-	-	-	Yes

			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
S7038V	FR-4.0	NC	0.20	V-0	120	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
S7040G	FR-4.1	NC	0.03	V-0	90	90	4	4	-	-	Yes	-
			0.20	V-0	120	120	4	0	-	-	-	Yes
			0.38	V-0	130	130	4	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
S7040GX	FR-4.1	NC	0.20	V-0	120	120	4	0	-	-	Yes	Yes
			0.38	V-0	120	120	4	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	2	-	Yes
S7045G	FR-4.1	NC	0.03	V-0	120	125	4	4	-	-	Yes	-
			0.10	V-0	120	130	4	0	-	-	-	Yes
			0.20	V-0	130	130	1	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
S7438	No ANSI	NC	0.10	V-0	-	-	-	-	-	-	-	-
			0.38	V-0	-	-	-	-	-	-	-	-
			0.80	V-0	-	-	-	-	-	-	-	-
			1.60	V-0	-	-	-	-	-	-	-	-
S7542G (Note 1)												
	No ANSI	NC	0.20	V-0	90	90	-	-	-	-	-	-
SB120	No ANSI	NC (YL)	0.05	V-0	-	-	-	-	-	-	-	-
			0.38	V-0	-	-	-	-	-	-	-	-
			0.63	V-0	-	-	-	-	-	-	-	-

			1.40	V-0	-	-	-	-	-	-	-	-
SCGA-500-GF220												
	No ANSI	NC	0.25	V-0	-	-	0	0	-	-	-	-
			0.50	V-0	-	-	0	0	-	-	-	-
			0.76	V-0	-	-	0	0	-	-	-	-
			1.50	V-0	-	-	0	0	-	0	-	-
SCGA-500-GF265												
	No ANSI	NC	0.25	V-0	-	-	0	0	-	-	-	-
			0.50	V-0	-	-	0	0	-	-	-	-
			0.76	V-0	-	-	0	0	-	-	-	-
			1.50	V-0	-	-	0	0	-	0	-	-
SCGA-500-GF300												
	No ANSI	NC	0.25	V-0	130	130	0	0	-	-	-	-
			0.50	V-0	130	130	0	0	-	-	-	-
			0.76	V-0	130	130	0	0	-	-	-	-
			1.50	V-0	130	130	0	0	-	0	-	-
SE80, SDI03, SDI03K, LSDI03K												
	FR-4.1	NC	0.03	V-0	130	130	0	1	-	-	Yes	Yes
			0.10	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
SML02G, SI543												
	FR-15.1	NC	0.03	V-0	130	140	0	1	-	-	Yes	Yes
			0.10	V-0	130	140	0	0	-	-	-	Yes
			0.38	V-0	150	150	0	0	-	-	-	Yes
			0.63	V-0	150	150	0	0	-	-	-	Yes
			1.40	V-0	150	150	0	0	-	3	-	Yes
ST115, ST115D												
	FR-4.0	NC	0.20	V-0	130	130	0	0	-	-	-	Yes
			0.38	V-0	130	130	0	0	-	-	-	Yes

			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	4	1	-	Yes
SU1305	FR-4.1	NC	0.03	V-0	120	110	0	3	-	-	Yes	Yes
			0.10	V-0	130	130	0	0	-	-	-	Yes
			0.20	V-0	130	140	0	0	-	-	-	Yes
			0.38	V-0	130	140	0	0	-	-	-	Yes
			0.63	V-0	130	140	0	0	-	-	-	Yes
			1.40	V-0	130	140	0	0	-	3	-	Yes
SU1501	No ANSI	NC	0.05	V-0	130	130	1	3	-	-	Yes	Yes
			0.10	V-0	160	160	1	0	-	-	-	Yes
			0.38	V-0	170	170	0	0	-	-	-	Yes
			0.63	V-0	180	180	0	0	-	-	-	Yes
			1.40	V-0	180	180	0	0	-	3	-	Yes
SU1504	No ANSI	NC	0.20	V-0	90	90	0	0	-	-	-	Yes
			0.38	V-0	90	90	0	0	-	-	-	Yes
			0.80	V-0	90	90	0	0	-	-	-	Yes
			1.60	V-0	90	90	0	0	-	0	-	Yes
SU1603	No ANSI	NC	0.10	V-0	150	150	3	0	-	-	-	Yes
			0.20	V-0	150	150	0	0	-	-	-	Yes
			0.38	V-0	160	150	0	0	-	-	-	Yes
			0.80	V-0	160	150	0	0	-	-	-	Yes
			1.50	V-0	160	150	0	0	-	2	-	Yes
WLM1	No ANSI	NC	0.04	HB	-	-	-	-	-	-	-	-
			0.10	HB	-	-	-	-	-	-	-	-
			0.38	HB	-	-	-	-	-	-	-	-
			0.63	HB	-	-	-	-	-	-	-	-
			1.40	HB	-	-	-	-	-	0	-	-

Metal base industrial laminates:

Mtl Dsg	Color	Metal	Dielectric		Flame Class	R.T.I.		H				Meets 746E Non-HAL	Meets 746E DSR
		Min Thk (mm)	Min Thk (mic)	Max Thk (mic)		Elec (°C)	Mech (°C)	H W I	H A I	V T R	C T I		

Aluminum base with Epoxy (EP) and Phenolic dielectric, industrial laminates, furnished as sheets or rolls.													
SA110L	NC	0.30		70	200	V-0	-	-	-	-	-	-	-
SAR15, SAR20, SAR20H, SAR30, STR15(e)													
	NC	0.30		50	150	V-0	130	130	4	0	-	0	Yes
Anodized Aluminum base with Epoxy (EP) blend dielectric, industrial laminates, furnished as sheets.													
SAR10S, SAR15S, SAR20S, SAR30S													
	NC	0.30		50	-	V-0	140	140	4	1	-	-	Yes
		0.30		-	150	V-0	140	140	4	1	-	0	Yes
Anodized Aluminum base with Epoxy (EP) with glass fabric dielectric, industrial laminates, furnished as sheets or rolls.													
SA115, SA120													
	NC	0.30		70	200	V-0	90	90	0	1	-	1	Yes
Copper base with Epoxy (EP) blend dielectric, industrial laminates, furnished as sheets.													
SCR10S, SCR15S, SCR20S, SCR30S (i)													
	NC	0.45		55	-	V-0	140	140	4	1	-	-	Yes
		0.45		-	150	V-0	140	140	4	1	-	0	Yes
Iron base with Epoxy (EP) blend dielectric, industrial laminates, furnished as sheets.													
SFR10S, SFR15S, SFR20S, SFR30S (i)													
	NC	0.45		55	-	V-0	140	140	4	1	-	-	Yes
		0.45		-	150	V-0	140	140	4	1	-	0	Yes

Ultrathin build ups:

Build Up					Laminate			Prepreg		
Mtl	ANSI	Min	TI	TI	Mtl	Thk	TI	Mtl	Thk	TI
Dsg		Thk	Elec	Mech						
Ultrathin industrial laminates and bonding layers, furnished in sheet form, for use in multilayer printed wiring boards where the thickness is built up to the minimum specified.										
AeroBond 350	No ANSI	0.16	160	90	AeroBond 350	50	50	AeroBond 350	50	50
		0.50	160	130	AeroBond 350	50	50	AeroBond 350	50	50
		0.76	160	160	AeroBond 350	50	50	AeroBond 350	50	50
		1.52	170	170	AeroBond 350	50	50	AeroBond 350	50	50

Aerowave 300	No ANSI	0.20	100	105	AeroWave 300	40	95	AeroBond 300	40	95
		0.38	125	115	AeroWave 300	40	95	AeroBond 300	40	95
AeroWave300X	No ANSI	0.16	160	90	AeroWave300X	50	50	AeroWave300XB	50	50
		0.50	160	130	AeroWave300X	50	50	AeroWave300XB	50	50
		0.76	160	160	AeroWave300X	50	50	AeroWave300XB	50	50
		1.52	170	170	AeroWave300X	50	50	AeroWave300XB	50	50
Aerowave350/Aerowave350B										
	No ANSI	0.38	50	50	Aerowave350	50	50	Aerowave350B	50	50
Autolad1G	FR-4.1	0.20	130	130	Autolad1G	30	120	Autolad1GB	30	120
		0.63	130	140	Autolad1G	30	120	Autolad1GB	30	120
Autolad2	FR-4.0	0.38	130	130	Autolad2	50	90	Autolad2B	50	90
		0.63	130	140	Autolad2	50	90	Autolad2B	50	90
Autolad2G	FR-15.1	0.20	120	120	Autolad2G	50	90	Autolad2GB	50	90
		0.43	130	130	Autolad2G	50	90	Autolad2GB	50	90
		0.63	150	150	Autolad2G	50	90	Autolad2GB	50	90
Autolad3G	FR-15.1	0.10	130	140	Autolad3G	30	90	Autolad3GB	30	90
		0.38	150	150	Autolad3G	30	90	Autolad3GB	30	90
		0.63	150	150	Autolad3G	30	90	Autolad3GB	30	90
		1.40	150	150	Autolad3G	30	90	Autolad3GB	30	90
Autolad5	No ANSI	0.20	130	130	Autolad5	30	90	Autolad5B	30	90
		0.38	140	140	Autolad5	30	90	Autolad5B	30	90
		0.75	150	150	Autolad5	30	90	Autolad5B	30	90
LNB33C	No ANSI	0.16	160	90	LNB33C	50	50	LNB33CB	50	50
		0.50	160	130	LNB33C	50	50	LNB33CB	50	50
		0.76	160	160	LNB33C	50	50	LNB33CB	50	50
		1.52	170	170	LNB33C	50	50	LNB33CB	50	50

Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G/Q100CB										
	FR-4.0	0.38	130	130	Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G	50	90	Q100CB	50	90
S	No ANSI	0.16	160	90	S	50	50	SB	50	50
		0.50	160	130	S	50	50	SB	50	50
		0.76	160	160	S	50	50	SB	50	50
		1.52	170	170	S	50	50	SB	50	50
S0101 600	No ANSI	0.40	90	90	-	-	-	S0101 600	200	90
S1000	FR-4.0	0.38	130	130	S1000	50	90	S1000B	50	90
		0.38	130	130	S1000	102	120	S1000B	102	120
S1000-2, S-2(C)	FR-4.0	0.38	130	130	S1000-2, S-2	50	90	S1000-2B, S-2B	50	50
		0.38	130	130	S1000-2, S-2	102	120	S1000-2B, S-2B	102	120
S1000-2M, Autolad3										
	FR-4.0	0.20	130	130	S1000-2M, Autolad3	50	90	S1000-2MB, SP170M, Autolad3B	50	90
		0.38	130	130	S1000-2M, Autolad3	50	90	S1000-2MB, SP170M, Autolad3B	50	90
		0.63	130	140	S1000-2M, Autolad3	50	90	S1000-2MB, SP170M, Autolad3B	50	90
		1.40	130	140	S1000-2M, Autolad3	50	90	S1000-2MB, SP170M, Autolad3B	50	90
S1000HS	FR-4.0	0.20	-	-	S1000HS	50	-	S1000HSB	50	-
		0.38	130	130	S1000HS	50	90	S1000HSB	50	90
		0.63	130	140	S1000HS	50	90	S1000HSB	50	90
S1000M, S1000H, Autolad1										
	FR-4.0	0.10	90	90	S1000M, S1000H, Autolad1	50	90	S1000MB, S1000HB, Autolad1B	50	90

		0.38	130	130	S1000M, S1000H, Autolad1	50	90	S1000MB, S1000HB, Autolad1B	50	90
S1130	FR-4.0	0.38	130	130	S1130	50	90	S0101	50	90
		0.38	130	130	S1130	160	120	S0101	160	120
S1135, S7546	No ANSI	0.20	95	130	S1135, S7546	50	50	S1135B, S7546B	50	50
		0.38	105	130	S1135, S7546	50	50	S1135B, S7546B	50	50
		0.70	115	130	S1135, S7546	50	50	S1135B, S7546B	50	50
		1.50	130	140	S1135, S7546	50	50	S1135B, S7546B	50	50
S1135G	No ANSI	0.20	125	120	S1135G	30	90	S1135GB	30	90
		0.38	130	120	S1135G	30	90	S1135GB	30	90
		0.63	130	120	S1135G	30	90	S1135GB	30	90
		1.40	130	130	S1135G	30	90	S1135GB	30	90
S1141, S1141-4, S1141 150, S1141 170, S1151										
	FR-4.0	0.38	130	130	S1141, S1141-4, S1141 150, S1141 170, S1151	50	90	S0401, S0401-4, S0401 150, S0401 170, S1151B	50	90
		0.38	130	130	S1141, S1141-4, S1141 150, S1141 170, S1151	160	120	S0401, S0401-4, S0401 150, S0401 170, S1151B	160	120
S1141KF	FR-4.0	0.38	130	130	S1141KF	50	90	S0401KF	50	90
		0.38	130	140	S1141KF	160	120	S0401KF	160	120
S1145, S1150G, S1125, SI055W										
	FR-4.1	0.10	130	130	S1145, S1150G, S1125, SI055W	30	90	S1145B, S1150GB, S1125B, SI055WB	30	90
S1150	FR-4.0	0.38	130	130	S1150	50	90	S1150B	50	90
S1150F, S1140F, S1141-4F										
	FR-4.0	0.38	130	130	S1150F, S1140F, S1141-4F	50	90	S1150FB, S1140FB, S0401-4F	50	90

		0.63	130	140	S1150F, S1140F, S1141-4F	50	90	S1150FB, S1140FB, S0401- 4F	50	90
		1.40	130	140	S1150F, S1140F, S1141-4F	50	90	S1150FB, S1140FB, S0401- 4F	50	90
S1151G	FR- 4.1	0.63	130	140	S1151G	50	90	S1151GB	50	90
		0.38	130	130	S1151G	50	90	S1151GB	50	90
		0.20	130	110	S1151G	50	90	S1151GB	50	90
S1152G	FR- 4.1	0.10	130	130	S1152G	30	90	S1152GB	30	90
S1155 600	No ANSI	0.63	50	50	S1155 600	200	50	S0155 600	200	50
S1155GX	FR- 4.1	0.10	120	130	S1155GX	30	105	S1155GXB	30	105
		0.20	130	130	S1155GX	30	105	S1155GXB	30	105
		0.63	130	140	S1155GX	30	105	S1155GXB	30	105
S1155M	No ANSI	0.10	140	130	S1155M	30	125	S1155MB	30	125
		0.20	150	140	S1155M	30	125	S1155MB	30	125
		0.38	150	140	S1155M	30	125	S1155MB	30	125
		0.63	150	150	S1155M	30	125	S1155MB	30	125
		1.40	150	150	S1155M	0.03	125	S1155MB	30	125
S1165, SI546, S7542K										
	No ANSI	0.20	125	115	S1165, SI546, S7542K	50	90	S0165, SI546B, S7542KB	50	90
S1165M	FR- 4.1	1.60	130	130	S1165M	50	90	S0165M	50	90
S1170	FR- 4.0	0.38	130	130	S1170	50	90	S0701	50	90
		0.63	130	140	S1170	50	90	S0701	50	90
		1.57	130	140	S1170	50	90	S0701	50	90
S1170F	FR- 4.0	0.20	130	130	S1170F	50	90	S1170FB	50	90
		0.38	130	130	S1170F	50	90	S1170FB	50	90
		0.63	130	140	S1170F	50	90	S1170FB	50	90

		1.40	130	140	S1170F	50	90	S1170FB	50	90
S1170G, S7045GH	FR-15.1	0.10	150	140	S1170G, S7045GH	30	150	S1170GB, S7045GHB	30	150
		0.20	150	150	S1170G, S7045GH	30	150	S1170GB, S7045GHB	30	150
		0.38	150	150	S1170G, S7045GH	30	150	S1170GB, S7045GHB	30	150
		0.63	150	150	S1170G, S7045GH	30	150	S1170GB, S7045GHB	30	150
		1.40	150	150	S1170G, S7045GH	30	150	S1170GB, S7045GHB	30	150
S1170GP	No ANSI	0.38	-	-	S1170GP	50	-	S1170GPB	50	-
S1170M	FR-4.0	0.20	130	140	S1170M	50	90	S0701M	50	90
S1180G	FR-4.1	1.60	130	130	S1180G	50	90	S1180GB	50	90
S1190	FR-4.0	0.20	130	130	S1190	30	90	S1190B	30	90
		0.38	130	130	S1190	30	90	S1190B	30	90
		0.63	130	140	S1190	30	90	S1190B	30	90
		1.40	130	140	S1190	30	90	S1190B	30	90
S1190M	FR-15.0	0.20	130	130	S1190M	30	90	S1190MB	30	90
		0.38	140	140	S1190M	30	90	S1190MB	30	90
		0.63	150	150	S1190M	30	90	S1190MB	30	90
		1.40	150	150	S1190M	30	90	S1190MB	30	90
S1210G	FR-15.1	0.10	130	150	S1210G	25	130	S1210GB	25	130
		0.20	140	150	S1210G	25	130	S1210GB	25	130
		0.38	150	150	S1210G	25	130	S1210GB	25	130
		0.63	150	150	S1210G	25	130	S1210GB	25	130
		1.40	150	150	S1210G	25	130	S1210GB	25	130
S1220, S7643	No ANSI	0.20	95	110	S1220, S7643	40	90	S1220B, S7643B	30	90
		0.38	100	110	S1220, S7643	40	90	S1220B, S7643B	30	90

		0.63	110	110	S1220, S7643	40	90	S1220B, S7643B	30	90
		1.60	120	125	S1220, S7643	40	90	S1220B, S7643B	30	90
S1250G	FR-15.1	0.10	130	150	S1250G	25	130	S1250GB	25	130
		0.20	140	150	S1250G	25	130	S1250GB	25	130
		0.38	150	150	S1250G	25	130	S1250GB	25	130
		0.63	150	150	S1250G	25	130	S1250GB	25	130
		1.40	150	150	S1250G	25	130	S1250GB	25	130
S1440	FR-4.0	0.38	130	130	S1440	50	90	S0440	50	90
		0.38	130	130	S1440	160	120	S0440	160	120
S1600H	FR-4.0	0.20	130	130	S1600H	50	90	S1600HB	50	90
		0.38	130	130	S1600H	50	90	S1600HB	50	90
		0.63	130	140	S1600H	50	90	S1600HB	50	90
		1.40	130	140	S1600H	50	90	S1600HB	50	90
S1600L	FR-4.0	0.38	130	130	S1600L	50	90	S1600LB	50	90
		0.63	130	140	S1600L	50	90	S1600LB	50	90
		1.40	130	140	S1600L	50	90	S1600LB	50	90
S1860	FR-4.0	0.38	130	130	S1860	50	90	S1860B	50	90
S2130, S2130JB	CEM-3.0	0.63	130	140	S2130, S2130JB\$	50	90	S0102	50	90
		0.63	130	140	S2130, S2130JB\$	50	90	S0103	90	90
		0.63	130	140	S2130, S2130JB\$	50	90	S0104	160	120
S25	No ANSI	0.20	95	110	S25	50	50	S25B	50	50
		0.38	100	110	S25	50	50	S25B	50	50
		0.80	120	110	S25	50	50	S25B	50	50
		1.60	140	130	S25	50	50	S25B	50	50
S7035, AeroWave 360										
	FR-4.0	0.20	120	130	S7035, AeroWave 360	50	90	S7035B, AeroBond 360	50	90

		0.38	130	130	S7035, AeroWave 360	50	90	S7035B, AeroBond 360	50	90
		0.63	130	140	S7035, AeroWave 360	50	90	S7035B, AeroBond 360	50	90
		1.40	130	140	S7035, AeroWave 360	50	90	S7035B, AeroBond 360	50	90
S7036	FR-4.0	0.20	120	130	S7036	50	90	S7036B	50	90
		0.38	130	130	S7036	50	90	S7036B	50	90
		0.63	130	140	S7036	50	90	S7036B	50	90
		1.40	130	140	S7036	50	90	S7036B	50	90
S7038, SL7038	FR-4.0	0.20	120	130	S7038, SL7038	50	90	S7038B, SL7038B	50	90
		0.38	130	130	S7038, SL7038	50	90	S7038B, SL7038B	50	90
		0.63	130	140	S7038, SL7038	50	90	S7038B, SL7038B	50	90
		1.40	130	140	S7038, SL7038	50	90	S7038B, SL7038B	50	90
S7038V	FR-4.0	0.20	120	130	S7038V	50	90	S7038VB	50	90
		0.38	130	130	S7038V	50	90	S7038VB	50	90
		0.63	130	140	S7038V	50	90	S7038VB	50	90
		1.40	130	140	S7038V	50	90	S7038VB	50	90
S7040G	FR-4.1	0.20	120	120	S7040G	30	90	S7040GB	30	90
		0.38	130	130	S7040G	30	90	S7040GB	30	90
		0.63	130	140	S7040G	30	90	S7040GB	30	90
		1.40	130	140	S7040G	30	90	S7040GB	30	90
S7040GX	FR-4.1	0.20	120	120	S7040GX	30	90	S7040GXB	30	90
		0.38	130	130	S7040GX	30	90	S7040GXB	30	90
		0.63	130	140	S7040GX	30	90	S7040GXB	30	90
		1.40	130	140	S7040GX	30	90	S7040GXB	30	90
S7045G	FR-4.1	0.10	120	130	S7045G	30	120	S7045GB	30	120
		0.20	130	130	S7045G	30	120	S7045GB	30	120
		0.38	130	130	S7045G	30	120	S7045GB	30	120

		0.63	130	140	S7045G	30	120	S7045GB	30	120
		1.40	130	140	S7045G	30	120	S7045GB	30	120
S7135D	No ANSI	0.16	160	90	S7135D	50	50	S7135D	50	50
		0.50	160	130	S7135D	50	50	S7135D	50	50
		0.76	160	160	S7135D	50	50	S7135D	50	50
		1.52	170	170	S7135D	50	50	S7135D	50	50
S7135D2	No ANSI	0.16	160	90	S7135D2	50	50	S7135D2	50	50
		0.50	160	130	S7135D2	50	50	S7135D2	50	50
		0.76	160	160	S7135D2	50	50	S7135D2	50	50
		1.52	170	170	S7135D2	50	50	S7135D2	50	50
S7136D	No ANSI	0.16	160	90	S7136D	50	50	S7136D	50	50
		0.50	160	130	S7136D	50	50	S7136D	50	50
		0.76	160	160	S7136D	50	50	S7136D	50	50
		1.52	170	170	S7136D	50	50	S7136D	50	50
S7136H	No ANSI	0.38	150	140	S7136H	85	50	S7136HB	85	50
S7242	No ANSI	0.38	90	90	S7242	50	50	S7242B	50	50
		0.63	90	90	S7242	50	50	S7242B	50	50
		1.40	90	90	S7242	50	50	S7242B	50	50
S7338, S7335, Symanic 6, Symanic 6N										
	No ANSI	0.80	150	130	S7338, S7335, Symanic 6, Symanic 6N	40	50	S7338B, S7335B, Symanic 6B, Symanic 6NB	40	50
S7439G	FR- 15.1	0.20	150	140	S7439G	30	120	S7439GB	30	120
		0.38	150	150	S7439G	30	120	S7439GB	30	120
		0.63	150	150	S7439G	30	120	S7439GB	30	120
		1.40	150	150	S7439G	30	120	S7439GB	30	120
S7542G (Note 1)	No ANSI	0.20	90	90	S7542G	30	90	S7542GB	30	90
S7641G	FR- 15.1	0.10	130	150	S7641G	25	130	S7641GB	25	130

		0.20	140	150	S7641G	25	130	S7641GB	25	130
		0.38	150	150	S7641G	25	130	S7641GB	25	130
		0.63	150	150	S7641G	25	130	S7641GB	25	130
		1.40	150	150	S7641G	25	130	S7641GB	25	130
S7645G	FR-15.1	0.10	130	150	S7645G	25	130	S7645GB	25	130
		0.20	140	150	S7645G	25	130	S7645GB	25	130
		0.38	150	150	S7645G	25	130	S7645GB	25	130
		0.63	150	150	S7645G	25	130	S7645GB	25	130
		1.40	150	150	S7645G	25	130	S7645GB	25	130
S7735D2/ S7735D2B										
	No ANSI	0.20	160	160	S7735D2	100	155	S7735D2B	100	155
		0.38	160	170	S7735D2	100	155	S7735D2B	100	155
		0.63	160	200	S7735D2	100	155	S7735D2B	100	155
S78	No ANSI	0.20	100	105	S78	40	95	S78B	40	95
		0.38	125	115	S78	40	95	S78B	40	95
SB170G	No ANSI	0.20	95	130	SB170G	50	50	SB170GB	50	50
		0.38	105	130	SB170G	50	50	SB170GB	50	50
		0.70	115	130	SB170G	50	50	SB170GB	50	50
		1.50	130	140	SB170G	50	50	SB170GB	50	50
SDI06K	FR-15.1	0.10	130	150	SDI06K	25	130	SDI06KB	25	130
		0.20	140	150	SDI06K	25	130	SDI06KB	25	130
		0.38	150	150	SDI06K	25	130	SDI06KB	25	130
		0.63	150	150	SDI06K	25	130	SDI06KB	25	130
		1.40	150	150	SDI06K	25	130	SDI06KB	25	130
SE40, S7439, S7439HW, S7439C										
	No ANSI	0.20	120	130	SE40, S7439, S7439HW, S7439C	50	50	SE40B, S7439B, S7439HWB, S7439CB	50	50

		0.38	160	160	SE40, S7439, S7439HW, S7439C	50	50	SE40B, S7439B, S7439HWB, S7439CB	50	50
		0.63	170	160	SE40, S7439, S7439HW, S7439C	50	50	SE40B, S7439B, S7439HWB, S7439CB	50	50
		1.40	180	170	SE40, S7439, S7439HW, S7439C	50	50	SE40B, S7439B, S7439HWB, S7439CB	50	50
SE80, SDI03, SDI03K, LSDI03K										
	FR-4.1	0.10	130	130	SE80, SDI03, SDI03K, LSDI03K	30	90	SE80B, SDI03B, SDI03KB, LSDI03KB	30	90
		0.38	130	130	SE80, SDI03, SDI03K, LSDI03K	30	90	SE80B, SDI03B, SDI03KB, LSDI03KB	30	90
		0.63	130	140	SE80, SDI03, SDI03K, LSDI03K	30	90	SE80B, SDI03B, SDI03KB, LSDI03KB	30	90
		1.40	130	140	SE80, SDI03, SDI03K	30	90	SE80B, SDI03B, SDI03KB	30	90
SF201		-	-	-	-	-	-	-	-	-
SH260, SH260M	No ANSI	0.20	50	50	SH260, SH260M	40	50	SH260B	40	50
SI10U(S)	No ANSI	0.10	70	90	SI10U(S)	40	70	SI10NB(S)	40	70
		0.20	85	90	SI10U(S)	40	70	SI10NB(S)	40	70
		0.38	90	90	SI10U(S)	40	70	SI10NB(S)	40	70
		0.63	95	90	SI10U(S)	40	70	SI10NB(S)	40	70
		1.60	120	105	SI10U(S)	40	70	SI10NB(S)	40	70
SI242D	No ANSI	0.20	130	105	SI242D	40	50	SI242DB	30	50
		0.38	140	115	SI242D	40	50	SI242DB	30	50
		0.71	150	155	SI242D	40	50	SI242DB	30	50
		1.50	160	155	SI242D	40	50	SI242DB	30	50
SI246, SI246U	No ANSI	0.10	70	90	SI246, SI246U	40	70	SI246B, SI246UB	40	70
		0.20	85	90	SI246, SI246U	40	70	SI246B, SI246UB	40	70
		0.38	90	90	SI246, SI246U	40	70	SI246B, SI246UB	40	70

		0.63	95	90	SI246, SI246U	40	70	SI246B, SI246UB	40	70
		1.60	120	105	SI246, SI246U	40	70	SI246B, SI246UB	40	70
SI64X, SI643, SI643U, SI643HU										
	No ANSI	0.20	95	110	SI64X, SI643, SI643U, SI643HU	40	90	SI64XB, SI643B, SI643UB, SI643HUB, SI643HB	30	90
		0.38	100	110	SI64X, SI643, SI643U, SI643HU	40	90	SI64XB, SI643B, SI643UB, SI643HUB, SI643HB	30	90
		0.63	110	110	SI64X, SI643, SI643U, SI643HU	40	90	SI64XB, SI643B, SI643UB, SI643HUB, SI643HB	30	90
		1.60	120	125	SI64X, SI643, SI643U, SI643HU	40	90	SI64XB, SI643B, SI643UB, SI643HUB, SI643HB	30	90
SML02G, SI543	FR-15.1	0.10	130	140	SML02G, SI543	30	90	SML02GB, SI543B	30	90
		0.38	150	150	SML02G, SI543	30	90	SML02GB, SI543B	30	90
		0.63	150	150	SML02G, SI543	30	90	SML02GB, SI543B	30	90
		1.40	150	150	SML02G, SI543	30	90	SML02GB, SI543B	30	90
SP170G	No ANSI	0.10	50	50	-	-	-	SP170G	50	50
SP170N	No ANSI	0.10	50	50	-	-	-	SP170N	50	50
ST115, ST115D	FR-4.0	0.20	130	130	ST115, ST115D	50	90	ST115B, ST115DB	50	90
		0.38	130	130	ST115, ST115D	50	90	ST115B, ST115DB	50	90
		0.63	130	140	ST115, ST115D	50	90	ST115B, ST115DB	50	90
		1.40	130	140	ST115, ST115D	50	90	ST115B, ST115DB	50	90
SU1301, S1155K, SL1155K										
	FR-4.1	0.10	120	130	SU1301, S1155K, SL1155K	30	105	SU1301B, S1155KB, SL1155KB	30	105
		0.20	130	130	SU1301, S1155K	30	105	SU1301B, S1155KB, SL1155KB	30	105

		0.63	130	140	SU1301, S1155K, SL1155K	30	105	SU1301B, S1155KB, SL1155KB	30	105
SU1304	No ANSI	0.10	70	90	SU1304	40	70	SU1304B	40	70
		0.20	85	90	SU1304	40	70	SU1304B	40	70
		0.38	90	90	SU1304	40	70	SU1304B	40	70
		0.63	95	90	SU1304	40	70	SU1304B	40	70
		1.60	120	105	SU1304	40	70	SU1304B	40	70
SU1305	FR- 4.1	0.10	130	130	SU1305	30	120	SU1305B	30	120
		0.20	130	140	SU1305	30	120	SU1305B	30	120
SU1402	No ANSI	0.38	170	170	SU1402	85	50	SU1402B	85	50
		1.60	180	170	SU1402	85	50	SU1402B	85	50
SU1501		0.10	160	160	SU1501	30	90	SU1501B	30	90
SU1504	No ANSI	0.20	90	90	SU1504	50	90	SU1504B	50	90
		0.38	90	90	SU1504	50	90	SU1504B	50	90
		0.80	90	90	SU1504	50	90	SU1504B	50	90
		1.60	90	90	SU1504	50	90	SU1504B	50	90
SU1603	No ANSI	0.20	150	150	SU1603	50	65	SU1603B	40	65
		0.38	160	150	SU1603	50	65	SU1603B	40	65
		0.80	160	150	SU1603	50	65	SU1603B	40	65
		1.50	160	150	SU1603	50	65	SU1603B	40	65
SU1609	No ANSI	0.10	90	90	SU1609	25	90	SU1609B	25	90
		0.20	90	90	SU1609	25	90	SU1609B	25	90
		0.38	90	90	SU1609	25	90	SU1609B	25	90
		0.63	90	90	SU1609	25	90	SU1609B	25	90
		1.50	90	90	SU1609	25	90	SU1609B	25	90
SU1611	No ANSI	0.20	50	50	SU1611	50	50	SU1611B	50	50
		0.38	50	50	SU1611	50	50	SU1611B	50	50

		0.63	50	50	SU1611	50	50	SU1611B	50	50
		1.50	50	50	SU1611	50	50	SU1611B	50	50
SU1615	No ANSI	0.10	95	110	SU1615	30	90	SU1615B	30	90
		0.20	110	120	SU1615	30	90	SU1615B	30	90
		0.38	125	125	SU1615	30	90	SU1615B	30	90
		0.63	140	125	SU1615	30	90	SU1615B	30	90
		1.40	150	140	SU1615	30	90	SU1615B	30	90
SU1621	No ANSI	0.20	90	115	SU1621	30	90	SU1621B	30	90
		0.38	90	115	SU1621	30	90	SU1621B	30	90
		0.80	90	115	SU1621	30	90	SU1621B	30	90
		1.60	100	120	SU1621	30	90	SU1621B	30	90
Synamic6GX	FR-15.1	0.15	150	150	Synamic6GX	50	140	Synamic6GXB	50	140
Synamic8G	No ANSI	0.20	130	140	Synamic8G	50	50	Synamic8GB	50	50
		0.38	140	150	Synamic8G	50	50	Synamic8GB	50	50
		0.75	140	160	Synamic8G	50	50	Synamic8GB	50	50
		1.50	140	170	Synamic8G	50	50	Synamic8GB	50	50
WLM1	No ANSI	0.10	-	-	WLM1	30	-	WLM1B	30	-

Base films (declad materials):

		Film		Adhesive		R.T.I.			H				Meets 746E DSR
Mtl Dsg	Color	Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Flame Class	Elec (°C)	Mech (°C)	H W I	H A I	V T R	C T I	
Liquid Crystal Polymer (LCP) Base films (Adhesiveless) furnished as sheets or rolls.													
SF701	NC	0.025	0.025	-	-	VTM-0	130	130	4	2	-	-	Yes
		0.050	0.050	-	-	VTM-0	130	130	4	1	-	4	Yes
Polyamide-imide Base films with adhesive on one or both sides.													
M215	BK	0.003	0.007	-	-	VTM-0	-	-	-	-	-	-	-
Polyethylene Terephthalate (PET) Base films with Polyester adhesive required on both sides, furnished as sheets or rolls.													

BIF202													
	NC	0.125	0.125	30	38	VTM-0	105	105	0	0	-	-	Yes
		0.125	0.188	20	20	VTM-2	105	105	4	0	-	-	Yes
		0.188	0.188	30	30	VTM-1	105	105	4	0	-	-	Yes
		0.188	0.188	38	38	V-2	105	105	4	0	-	1	Yes
Polyethylene Terephthalate (PET) Base films with Polyester adhesive on one side only, furnished as sheets or rolls.													
BIF201													
	WT	0.125	0.125	20	38	VTM-2	105	105	0	0	-	-	Yes
		0.175	0.175	38	38	VTM-2	105	105	0	0	-	1	Yes
Polyimide (PI) Base films (Adhesiveless) furnished as sheets or rolls.													
SF212	NC	0.0125	0.0125	-	-	VTM-0	220	240	0	4	-	-	-
		0.020	0.020	-	-	VTM-0	240	240	0	3	-	-	Yes
		0.025	0.025	-	-	V-0	240	240	0	3	-	3	Yes
		0.050	0.050	-	-	V-0	260	260	0	1	-	3	Yes
SF230	NC	0.0125	0.0125	-	-	VTM-0	130	130	0	3	-	-	Yes
		0.020	0.020	-	-	VTM-0	130	130	0	3	-	-	Yes
		0.025	0.025	-	-	VTM-0	130	130	0	1	-	-	Yes
		0.050	0.050	-	-	V-0	130	130	0	0	-	4	Yes
DL	NC	0.009	0.049	-	-	VTM-0	130	130	0	4	-	-	-
		0.050	0.050	-	-	VTM-0	130	130	0	1	-	4	Yes
SF201	NC	0.0125	0.0125	-	-	V-0	130	130	2	4	-	-	-
		0.025	0.025	-	-	V-0	130	130	1	4	-	3	-
SL	NC	0.009	0.049	-	-	VTM-0	130	130	0	4	-	-	-
		0.050	0.050	-	-	VTM-0	130	130	0	1	-	4	Yes
Polyimide (PI) Base films with Epoxy adhesive on one or both sides, furnished as sheets.													
SF302	NC	0.0125	0.050	10	25	V-0	240	200	4	0	-	4	Yes
Polyimide (PI) Base films with Epoxy adhesive on one or both sides, furnished as sheets or rolls.													
SF305	NC	0.0125	0.050	10	25	V-0	240	200	4	4	-	2	-
		0.0125	0.050	25	25	V-0	240	200	4	3	-	2	Yes
Polyimide (PI) Base films with Polyimide adhesive on one or both sides, furnished as sheets.													

SF202	NC	0.0125	0.025	-	-	VTM-0	130	130	0	4	-	3	-
		0.038	0.038	-	-	V-0	130	130	0	2	-	3	Yes
		0.050	0.050	-	-	V-0	130	130	0	1	-	3	Yes

Metal clad films:

Metal Clad Dsg	Lam- inate Dsg	Pre- preg Dsg	Film		Adhesive		Clad Cond Thk			Max	Flame Class	Max	Solder Lts	
			Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)		Oper Temp (°C)	Temp (°C)	Time (sec)
Liquid Crystal Polymer (LCP) (Adhesiveless) Metal clad films for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets or rolls.														
SF701	SF701	-	0.25	0.05	-	-	12	35	-	50.8	VTM-0	130	288	10
Polyimide (PI) (Adhesiveless) Metal clad films for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets or rolls.														
SF212	SF212	-	0.0125	0.125	-	-	6	102	-	50.8	VTM-0	150	300	10
			0.020	0.020	-	-	6	102	-	50.8	VTM-0	150	300	10
			0.025	0.025	-	-	6	102	-	50.8	V-0	150	300	10
			0.050	0.050	-	-	6	102	-	50.8	V-0	150	300	10
SF230	SF230	-	0.0125	0.125	-	-	6	70	-	50.8	VTM-0	130	300	10
			0.020	0.020	-	-	6	70	-	50.8	VTM-0	130	300	10
			0.025	0.025	-	-	6	70	-	50.8	VTM-0	130	300	10
			0.050	0.050	-	-	6	70	-	50.8	V-0	130	300	10
Polyimide (PI) (Adhesiveless) Metal clad films for use in single layer printed wiring boards with copper required on both sides, furnished as sheets or rolls.														
DL	DL	-	0.009	0.050	-	-	9	70	-	50.8	VTM-0	130	288	10
Polyimide (PI) (Adhesiveless) Metal clad films for use in single layer printed wiring boards with copper on one side only, furnished as sheets or rolls.														
SF201	SF201	-	0.0125	0.025	-	-	12	35	-	50.8	V-0	130	300	10
SL	SL	-	0.009	0.050	-	-	9	70	-	50.8	VTM-0	130	288	10
Polyimide (PI) with Epoxy adhesive Metal clad films for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets or rolls.														
SF305	SF305	-	0.0125	0.05	10	25	12	102	-	50.8	V-0	130	288	10
SF302	SF302	-	0.0125	0.05	0.010	0.025	12	70	-	50.8	V-0	105	288	10
Polyimide (PI) with Polyimide adhesive Metal clad films for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets or rolls.														

SF202	SF202	-	0.0125	0.025	-	-	6	70	-	50.8	VTM-0	130	300	10
			0.038	0.050	-	-	6	70	-	50.8	V-0	130	300	10

Metal clad industrial laminates:

Metal Clad Dsg	Lam- inate Dsg	Pre- preg Dsg	ANSI Type	Bld up	Clad	Cond	Thk	Max	Area Dia (mm)	Max	Solder Lts	
				Min Thk (mm)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Flame Class		Oper Temp (°C)		
Benzoxazines, Phenolic, Epoxy Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets.												
S1135G												
	S1135G	S1135GB	No ANSI	0.20^	12	102	12	50.8	V-0	120	288	20
				0.38^	12	102	70	50.8	V-0	120	288	20
Epoxy (EP) Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets.												
S1135, S7546												
	S1135, S7546	S1135B, S7546B	No ANSI	0.20	9	102	70	50.8	V-0	95	288	20
				0.38	9	102	70	50.8	V-0	105	288	20
				0.70	9	102	70	50.8	V-0	115	288	20
				1.50	9	102	70	50.8	V-0	130	288	20
S1155M/ S1155MB												
	S1155M	S1155MB	No ANSI	0.10	12	102	18	50.8	V-0	130	288	20
				0.20	12	102	70	50.8	V-0	130	288	20
S1165, SI546, S7542K												
	S1165, SI546, S7542K	S0165, SI546B, S7542KB	No ANSI	0.38	9	102	68	50.8	V-0	130	288	20
S7242	S7242	S7242B	No ANSI	0.38	9	102	70	50.8	V-0	90	300	180
SB170G												
	SB170G	SB170GB	No ANSI	0.20	9	102	70	50.8	V-0	95	288	20
				0.38	9	102	70	50.8	V-0	105	288	20

				0.70	9	102	70	50.8	V-0	115	288	20
				1.50	9	102	70	50.8	V-0	130	288	20
Epoxy (EP) Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets.												
S1135, S7546												
	S1135, S7546	-	No ANSI	0.20	9	102	-	50.8	V-0	95	288	20
				0.38	9	102	-	50.8	V-0	105	288	20
				0.70	9	102	-	50.8	V-0	115	288	20
				1.50	9	102	-	50.8	V-0	130	288	20
S1155M												
	S1155M	-	No ANSI	0.10	12	102	-	50.8	V-0	130	288	20
S1165, S1546, S7542K												
	S1165, S1546	-	No ANSI	0.20	9	102	-	50.8	V-0	115	288	20
				0.38	9	102	-	50.8	V-0	130	288	20
S7242	S7242	-	No ANSI	0.38	9	102	-	50.8	V-0	90	300	180
SB170G												
	SB170G	-	No ANSI	0.20	9	102	-	50.8	V-0	95	288	20
				0.38	9	102	-	50.8	V-0	105	288	20
				0.70	9	102	-	50.8	V-0	115	288	20
				1.50	9	102	-	50.8	V-0	130	288	20
Epoxy (EP) Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides.												
S3155G												
	S3155G	-	No ANSI	0.63	18	102	-	50.8	V-0	90	288	20
Epoxy (EP) Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets.												
S1155 600												
	S1155 600	S0155 600	No ANSI	0.63	9	102	70	50.8	V-0	90	288	20

Epoxy (EP) Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets.

S1155 600

	S1155 600	-	No ANSI	0.63	9	102	-	50.8	V-0	90	288	20
--	-----------	---	---------	------	---	-----	---	------	-----	----	-----	----

Epoxy blend Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets.

SE40, S7439, S7439HW, S7439C

	SE40, S7439, S7439HW, S7439C	SE40B, S7439B, S7439HWB, S7439CB	No ANSI	0.20	12	102	70	50.8	V-0	120	288	20
				0.38	12	102	70	50.8	V-0	130	288	20
				0.63	12	102	70	50.8	V-0	130	288	20
				1.40	12	102	70	50.8	V-0	130	288	20

SI242D

	-	-	No ANSI	0.20	9	102	70	50.8	V-0	105	280	120
				0.38	9	102	70	50.8	V-0	115	280	120
				0.71	9	102	70	50.8	V-0	140	280	120
				1.50	9	102	70	50.8	V-0	140	280	120

Epoxy blend Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets.

SE40, S7439, S7439HW, S7439C

	SE40, S7439, S7439HW, S7439C	-	No ANSI	0.20	12	102	-	50.8	V-0	120	288	20
				0.38	12	102	-	50.8	V-0	130	288	20
				0.63	12	102	-	50.8	V-0	130	288	20
				1.40	12	102	-	50.8	V-0	130	288	20

SI242D

	SI242D	-	No ANSI	0.04	11	102	-	50.8	V-0	90	280	120
				0.20	11	102	-	50.8	V-0	105	280	120
				0.38	11	102	-	50.8	V-0	115	280	120

				0.71	11	102	-	50.8	V-0	140	280	120
				1.50	11	102	-	50.8	V-0	140	280	120
Epoxy with Filler Al(OH)3 Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets.												
S2600R												
	S2600R	-	No ANSI	0.63	17	102	-	50.8	V-0	90	300	20
Modified Polyphenylene ether Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets.												
S7338, S7335, Synamic 6, Synamic 6N/S7338B, S7335B, Synamic 6B, Synamic 6NB												
	S7338, S7335, Synamic 6, Synamic 6N	S7338B, S7335B, Synamic 6B, Synamic 6NB	No ANSI	0.80	9	102	70	50.8	V-0	130	288	20
Modified Polyphenylene ether Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets.												
mmWave												
	mmWave	-	No ANSI	0.38	9	102	-	50.8	V-0	115	288	20
				0.80	9	102	-	50.8	V-0	130	288	20
S7335, S7338, Synamic 6, Synamic 6N												
	S7335, S7338, Synamic 6, Synamic 6N	-	No ANSI	0.80	9	102	-	50.8	V-0	130	288	20
Polyimide blend Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets.												
S1220, S7643												
	S1220, S7643	-	No ANSI	0.04	12	102	-	50.8	V-0	90	280	120
				0.20	12	102	-	50.8	V-0	95	280	120
				0.63	12	102	-	50.8	V-0	110	280	120
				1.60	12	102	-	50.8	V-0	120	280	120
SI64X, SI643, SI643U, SI643HU												
	SI64X, SI643, SI643U, SI643HU	-	No ANSI	0.04	12	102	-	50.8	V-0	90	280	120
				0.20	12	102	-	50.8	V-0	95	280	120

				0.38	12	102	-	50.8	V-0	100	280	120
				0.63	12	102	-	50.8	V-0	110	280	120
				1.60	12	102	-	50.8	V-0	120	280	120
Polyphenylene Oxide Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets.												
S7135	-	-	No ANSI	0.16	17	102	-	50.8	V-0	65	288	20
				0.50	17	102	-	50.8	V-0	85	288	20
				0.80	17	102	-	50.8	V-0	90	288	20
				1.60	17	102	-	50.8	V-0	95	288	20
Metal clad multilayer package (mass laminate) with internal circuitry and solid copper on outside surfaces, furnished as sheets.												
S1130	S1130	-	FR-4.0	0.22	12	68	-	50.8	V-0	130	288	60
S1170	S1170	S0701	FR-4.0	0.38	17	102	68	50.8	V-0	130	288	40
Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets.												
AeroWave 300												
	AeroWave 300	AeroBond 300	No ANSI	0.20	12	102	70	50.8	V-0	100	288	30
				0.38	12	102	70	50.8	V-0	115	288	30
Autolad2/Autolad2B												
	Autolad2	Autolad2B	FR-4.0	0.38	9	102	70	50.8	V-0	130	288	20
S1000	S1000	S1000B	FR-4.0	0.38	15	102	65	50.8	V-0	130	288	20
S1000-2, S-2(C)												
	S1000-2, S-2	S1000-2B, S-2B	FR-4.0	0.38	15	102	65	50.8	V-0	130	288	20
S1000-2M, Autolad3												
	S1000-2M, Autolad3	S1000-2MB, SP170M, Autolad3B	FR-4.0	0.20	12	102	70	50.8	V-0	130	288	20
S1130	S1130	S0101	FR-4.0	0.38	12	68	-	50.8	V-0	130	288	40

S1141, S1141-4, S1141 150, S1141 170, S1151												
	S1141, S1141-4, S1141 150, S1141 170, S1151	S0401, S0401-4, S0401 150, S0401 170, S1151B	FR-4.0	0.38	8.5	102	70	50.8	V-0	130	288	20
S1141KF												
	S1141KF	S0401KF	FR-4.0	0.38	8.5	102	68	50.8	V-0	130	288	20
S1150	S1150	S1150B	FR-4.0	0.38	9	102	70	50.8	V-0	130	288	20
S1150F, S1140F, S1141-4F												
	S1150F, S1140F, S1141-4F	S1150FB, S1140FB, S0401-4F	FR-4.0	0.38	9	102	70	50.8	V-0	130	288	20
S1151G												
	S1151G	S1151GB	FR-4.1	0.38	12	102	68	50.8	V-0	130	288	20
				0.25	12	102	68	50.8	V-0	110	288	20
S1152G												
	S1152G	S1152GB	FR-4.1	0.10	12	102	68	50.8	V-0	130	288	20
S1165M												
	S1165M	S0165M	FR-4.1	1.60	9	102	68	50.8	V-0	130	288	20
S1170	S1170	S0701	FR-4.0	0.38	17	102	68	50.8	V-0	130	288	40
S1170F												
	S1170F	S1170FB	FR-4.0	0.20	12	102	70	50.8	V-0	130	288	20
S1170G, S7045GH/ S1170GB, S7045GHB												
	S1170G, S7045GH	S1170GB, S7045GHB	FR-15.1	0.10	12	102	18	50.8	V-0	140	288	20
				0.20	12	102	70	50.8	V-0	150	288	20
S1170M												
	S1170M	S0701M	FR-4.0	0.20	9	102	68	50.8	V-0	130	288	20
S1180G												

	S1180G	S1180GB	FR-4.1	1.60	9	102	68	50.8	V-0	130	288	20
S1190	S1190	S1190B	FR-4.0	0.20	9	102	68	50.8	V-0	130	288	20
S1190M												
	S1190M	S1190MB	FR-15.0	0.20	9	102	68	50.8	V-0	130	288	20
S1210G/ S1210GB												
	S1210G	S1210GB	FR-15.1	0.10	12	102	70	50.8	V-0	130	288	20
S1250G/ S1250GB												
	S1250G	S1250GB	FR-15.1	0.10	12	102	70	50.8	V-0	130	288	20
S1440	S1440	S0440	FR-4.0	0.38	9.0	70	-	50.8	V-0	130	288	20
S1600H/S1600HB												
	S1600H	S1600HB	FR-4.0	0.38	9	102	70	50.8	V-0	130	288	20
S1600L/S1600LB												
	S1600L	S1600LB	FR-4.0	0.38	9	102	70	50.8	V-0	130	288	20
S1860	S1860	S1860B	FR-4.0	0.38	17	68	-	50.8	V-0	130	288	20
S7038, SL7038												
	S7038, SL7038	S7038B, SL7038B	FR-4.0	0.20	17	102	68	50.8	V-0	120	288	20
				0.38	17	102	68	50.8	V-0	130	288	20
S7040G/ S7040GB												
	S7040G	S7040GB	FR-4.1	0.24	12	102	68	50.8	V-0	120	288	20
				0.38	12	102	68	50.8	V-0	130	288	20
S7040GX/ S7040GXB												
	S7040GX	S7040GXB	FR-4.1	0.24	12	102	68	50.8	V-0	120	288	20
				0.38	12	102	68	50.8	V-0	130	288	20
S7045G/ S7045GB												

	S7045G	S7045GB	FR-4.1	0.10	12	102	18	50.8	V-0	120	288	20
				0.20	12	102	70	50.8	V-0	130	288	20
S7641G/S7641GB												
	S7641G	S7641GB	FR-15.1	0.10	12	102	70	50.8	V-0	130	288	20
S7645G/S7645GB												
	S7645G	S7645GB	FR-15.1	0.10	12	102	70	50.8	V-0	130	288	20
S78	S78	S78B	No ANSI	0.20	12	102	70	50.8	V-0	100	288	30
				0.38	12	102	70	50.8	V-0	115	288	30
SDI06K/ SDI06KB												
	SDI06K	SDI06KB	FR-15.1	0.10	12	102	70	50.8	V-0	130	288	20
ST115, ST115D												
	ST115	ST115B	FR-4.0	0.38	12	102	70	50.8	V-0	130	288	20
SU1301/SU1301B, S1155K/S1155KB, SL1155K/SL1155KB												
	SU1301, S1155K, SL1155K	SU1301B, S1155KB, SL1155KB	FR-4.1	0.10	12	102	70	50.8	V-0	120	288	20
				0.20	12	102	70	50.8	V-0	130	288	20
SU1305/ SU1305B												
	SU1305	SU1305B	FR-4.1	0.10	12	102	18	50.8	V-0	130	288	20
				0.20	12	102	70	50.8	V-0	130	288	20
SU1504/ SU1504B												
	SU1504	SU1504B	No ANSI	0.38	9	102	70	50.8	V-0	90	288	20
SU1603/ SU1603B												
	SU1603	SU1603B	No ANSI	0.30	9	102	68	50.8	V-0	130	288	20
SU1609/ SU1609B												
	SU1609	SU1609B	No ANSI	0.10	12	102	70	50.8	V-0	90	288	20

Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets or rolls.

S2130, S2130JB

	S2130, S2130JB	S0102, S0103, S0104	CEM- 3.0	0.63	17	102	68	50.8	V-0	130	275	20
--	-------------------	------------------------	-------------	------	----	-----	----	------	-----	-----	-----	----

SU1611/ SU1611B

	SU1611	SU1611B	No ANSI	0.38	12	102	70	50.8	V-0	50	288	20
--	--------	---------	------------	------	----	-----	----	------	-----	----	-----	----

Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets, rods or tubes.

S1000HS/S1000HSB

	S1000HS	S1000HSB	FR- 4.0	0.38	12	102	68	50.8	V-0	130	288	20
--	---------	----------	------------	------	----	-----	----	------	-----	-----	-----	----

S1000M, S1000H, Autolad1

	S1000M, S1000H, Autolad1	S1000MB, S1000HB, Autolad1B	FR- 4.0	0.38	12	102	68	50.8	V-0	130	288	20
--	--------------------------------	-----------------------------------	------------	------	----	-----	----	------	-----	-----	-----	----

Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides.

Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G/Q100CB

	Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G	Q100CB	FR- 4.0	0.38	12	102	70	50.8	V-0	130	288	20
--	--	--------	------------	------	----	-----	----	------	-----	-----	-----	----

S1155GX/S1155GXB

	S1155GX	S1155GXB	FR- 4.1	0.10	12	102	70	50.8	V-0	120	288	20
				0.20	12	102	70	50.8	V-0	130	288	20

Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets.

AeroWave 300

	AeroWave 300	-	No ANSI	0.10	12	102	-	50.8	V-0	90	288	30
				0.20	12	102	-	50.8	V-0	100	288	30
				0.38	12	102	-	50.8	V-0	115	288	30

Autolad2

	Autolad2	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	288	20
Q160, PQ160, Q161, Q162												
	Q160	-	FR-4.0	0.20	18	102	-	50.8	V-0	90	288	20
				0.38	18	102	-	50.8	V-0	130	288	20
Q260, Q260#, PQ260												
	Q260	-	CEM-3.0	0.63	18	102	-	50.8	V-0	130	288	20
Q360, Q360H, Q360G, Q360W												
	Q360, Q360H, Q360G, Q360W	-	CEM-1	0.63	17	102	-	50.8	V-0	130	288	20
S1000	S1000	-	FR-4.0	0.38	15	102	-	50.8	V-0	130	288	20
				0.63	15	102	-	50.8	V-0	130	288	20
				1.60	15	102	-	50.8	V-0	130	288	20
S1000-2, S-2(C)												
	S1000-2, S-2	-	FR-4.0	0.38	15	102	-	50.8	V-0	130	288	20
				0.63	15	102	-	50.8	V-0	130	288	20
				1.60	15	102	-	50.8	V-0	130	288	20
S1000-2M, Autolad3												
	S1000-2M, Autolad3	-	FR-4.0	0.20	12	102	-	50.8	V-0	130	288	20
S1130	S1130	-	FR-4.0	0.22	17	68	-	50.8	V-0	130	291	60
				0.38	17	68	-	50.8	V-0	130	291	60
				1.40	17	68	-	50.8	V-0	130	291	60
S1135G												
	S1135G	-	No ANSI	0.20	12	102	-	50.8	V-0	120	288	20
S1141, S1141-4, S1141 150, S1141 170, S1151												
	S1141, S1141-4, S1141 150, S1141 170, S1151	-	FR-4.0	0.38	8.5	68	-	50.8	V-0	130	288	20

S1141KF												
	S1141KF	-	FR-4.0	0.38	8.5	102	-	50.8	V-0	130	288	20
S1150	S1150	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	288	20
S1150F, S1140F, S1141-4F												
	S1150F, S1140F, S1141-4F	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	288	20
S1151G												
	S1151G	-	FR-4.1	0.38	12	102	-	50.8	V-0	130	288	20
				0.25	12	102	-	50.8	V-0	110	288	20
S1152G												
	S1152G	-	FR-4.1	0.10	12	102	-	50.8	V-0	130	288	20
S1165M												
	S1165M	-	FR-4.1	1.60	9	102	-	50.8	V-0	130	288	20
S1170	S1170	-	FR-4.0	0.38	17	102	-	50.8	V-0	130	288	40
S1170F												
	S1170F	-	FR-4.0	0.20	12	102	-	50.8	V-0	130	288	20
S1170G, S7045GH												
	S1170G, S7045GH	-	FR-15.1	0.10	12	102	-	50.8	V-0	140	288	20
				0.20	12	102	-	50.8	V-0	150	288	20
S1170M												
	S1170M	-	FR-4.0	0.20	9	102	-	50.8	V-0	130	288	20
S1180G												
	S1180G	-	FR-4.1	1.60	9	102	-	50.8	V-0	130	288	20
S1190	S1190	-	FR-4.0	0.09	9	102	-	50.8	V-0	130	288	20
S1190M												

	S1190M	-	FR-15.0	0.09	9	102	-	50.8	V-0	130	288	20
S1210G												
	S1210G	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	288	20
S1250G												
	S1250G	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	288	20
S1440	S1440	-	FR-4.0	0.38	9.0	70	-	50.8	V-0	130	288	20
S1600, S1600M												
	S1600, S1600M	-	FR-4.0	0.63	17	68	-	50.8	V-0	130	288	20
S1600H												
	S1600H	-	FR-4.0	0.20	9	102	-	50.8	V-0	130	288	20
S1600L												
	S1600L	-	FR-4.0	0.38	9	102	-	50.8	V-0	130	288	20
S1860	S1860	-	FR-4.0	0.38	17	105	-	50.8	V-0	130	288	20
S2126, S2135, S2155												
	S2155	-	CEM-3.0	0.63	9.0	105	-	50.8	V-0	130	274	20
S2130, S2130JB												
	S2130, S2130JB	-	CEM-3.0	0.50	17	102	-	50.8	V-0	130	288	20
S2131, S2131JB												
	S2131, S2131JB	-	CEM-3.0	0.63	8.5	68	-	50.8	V-0	130	260	20
S2136, ST210												
	S2136, ST210	-	CEM-3.0	0.63	8.5	68	-	50.8	V-0	130	260	20
S26, S2600F												
	S26	-	CEM-3.0	0.63	9	102	-	50.8	V-0	130	288	20
S2600EF (d)												

	S2600EF	-	CEM-3.0	S2600EF	17	68	-	50.8	V-0	130	180	10800
											230	120
											260	40
											23	300
											260	20
				S2600EF	17	68	-	50.8	V-0	130	200	1800
											250	40
											260	20
				S2600EF	17	68	-	50.8	V-0	130	180	240
											230	90
											260	20
											230	90
											180	240
											260	20
				S2600EF	17	68	-	50.8	V-0	130	300	20
S3110, COB714												
	S3110, COB714	-	CEM-1	0.63	17	102	-	50.8	V-0	130	288	30
S3116	S3116	-	CEM-1	0.63	17	102	-	50.8	V-0	130	274	20
S3155	S3155	-	No ANSI	0.63	18	68	-	25.4	V-0	90	274	20
S7038, SL7038												
	S7038, SL7038	-	FR-4.0	0.20	17	102	-	50.8	V-0	120	288	20
				0.38	17	102	-	50.8	V-0	130	288	20
S7040G												
	S7040G	-	FR-4.1	0.03	12	102	-	50.8	V-0	90	288	20
				0.24	12	102	-	50.8	V-0	120	288	20
				0.38	12	102	-	50.8	V-0	130	288	20
S7040GX												

	S7040GX	-	FR-4.1	0.24	12	102	-	50.8	V-0	120	288	20
				0.38	12	102	-	50.8	V-0	130	288	20
S7045G												
	SU1308	-	FR-4.1	0.10	12	102	-	50.8	V-0	120	288	20
				0.20	12	102	-	50.8	V-0	130	288	20
S7641G												
	S7641G	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	288	20
S7645G												
	S7645G	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	288	20
S78	S78	-	No ANSI	0.10	12	102	-	50.8	V-0	90	288	30
				0.20	12	102	-	50.8	V-0	100	288	30
				0.38	12	102	-	50.8	V-0	115	288	30
SDI06K												
	SDI06K	-	FR-15.1	0.025	9	102	-	50.8	V-0	130	288	20
ST115, ST115D												
	ST115	-	FR-4.0	0.38	12	102	-	50.8	V-0	130	288	20
ST215, ST210G												
	ST215, ST210G	-	CEM-3.1	0.50	12	102	-	50.8	V-0	130	288	20
SU1301, S1155K, SL1155K												
	SU1301, S1155K, SL1155K	-	FR-4.1	0.03	12	102	-	50.8	V-0	105	288	20
				0.10	12	102	-	50.8	V-0	120	288	20
				0.20	12	102	-	50.8	V-0	130	288	20
SU1305												
	SU1305	-	FR-4.1	0.10	12	102	-	50.8	V-0	130	288	20
SU1504												

	SU1504	-	No ANSI	0.20	9	102	-	50.8	V-0	90	288	20
SU1603												
	SU1603	-	No ANSI	0.10	9	102	-	50.8	V-0	130	288	20
SU1609												
	SU1609	-	No ANSI	0.025	9	102	-	50.8	V-0	90	288	20
SU1611												
	SU1611	-	No ANSI	0.38	12	102	-	50.8	V-0	50	288	20
Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets or rolls.												
Q100, Q100A, Q100B, Q100C, Q100D, Q100E, Q100F, Q100G												
	Q100	-	FR- 4.0	0.38	12	102	-	50.8	V-0	130	288	20
				0.10	17	102	-	50.8	V-0	90	288	20
Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets, rods or tubes.												
S1000HS												
	S1000HS	-	FR- 4.0	0.38	12	102	-	50.8	V-0	130	288	20
S1000M, S1000H, Autolad1												
	S1000M, S1000H, Autolad1	-	FR- 4.0	0.38	12	102	-	50.8	V-0	130	288	20
S2155G												
	S2155	-	CEM- 3.1	0.50	12	102	-	50.8	V-0	130	288	20
Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides.												
Q310	Q310	-	CEM- 1	0.63	17	102	-	50.8	V-0	130	288	20
S1155GX												
	S1155GX	-	FR- 4.1	0.03	12	102	-	50.8	V-0	105	288	20
				0.10	12	102	-	50.8	V-0	120	288	20

				0.20	12	102	-	50.8	V-0	130	288	20
Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets.												
S1145, S1150G, S1125, SI055W												
	S1145, S1150G, S1125, SI055W	S1145B, S1150GB, S1125B, SI055WB	FR-4.1	0.10	12	102	68	50.8	V-0	130	288	20
S7035, AeroWave 360												
	S7035, AeroWave 360	S7035B, AeroBond 360	FR-4.0	0.20	17	102	68	50.8	V-0	120	288	20
				0.38	17	102	68	50.8	V-0	130	288	20
S7036	S7036	S7036B	FR-4.0	0.20	17	102	68	50.8	V-0	120	288	20
				0.38	17	102	68	50.8	V-0	130	288	20
S7038V												
	S7038V	S7038VB	FR-4.0	0.20	17	102	68	50.8	V-0	120	288	20
				0.38	17	102	68	50.8	V-0	130	288	20
Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets.												
S1145, S1150G, S1125, SI055W												
	S1145, S1150G, S1125, S7542	-	FR-4.1	0.10	12	102	-	50.8	V-0	130	288	20
S7035, AeroWave 360												
	S7035, AeroWave 360	-	FR-4.0	0.20	17	102	-	50.8	V-0	120	288	20
				0.38	17	102	-	50.8	V-0	130	288	20
S7036	S7036	-	FR-4.0	0.20	17	102	-	50.8	V-0	120	288	20
				0.38	17	102	-	50.8	V-0	130	288	20
S7038V												
	S7038V	-	FR-4.0	0.20	17	102	-	50.8	V-0	120	288	20
				0.38	17	102	-	50.8	V-0	130	288	20

Metal clad metal base industrial laminates:

Metal Clad Dsg	Lam- inate Dsg	Pre- preg Dsg	Metal	Dielectric		Clad Cond		Thk	Max	Area Dia	Oper Temp	Solder Lts		
			Min Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Flame Class				Temp (°C)	Temp (°C)
Aluminum base with Epoxy (EP) and Phenolic dielectric, Metal clad industrial laminates with copper on one or both sides, furnished as sheets or rolls.														
SAR15, SAR20, SAR20H, SAR30, STR15(e)														
	SAR15, SAR20, SAR20H, SAR30, STR15(e)	-	0.30		50	150	17	102	-	50.8	V-0	130	300	60
Anodized Aluminum base with Epoxy (EP) blend dielectric, Metal clad industrial laminates with copper on one side only, furnished as sheets.														
SAR10S, SAR15S, SAR20S, SAR30S														
	SAR10S, SAR15S, SAR20S, SAR30S	-	0.30		50	150	18	102	-	50.8	V-0	140	300	60
Anodized Aluminum base with Epoxy (EP) with glass fabric dielectric, Metal clad industrial laminates with copper on one or both sides, furnished as sheets or rolls.														
SA115, SA120														
	SA115, SA120	-	0.30		70	200	12	140	-	50.8	V-0	90	300	60
Copper base with Epoxy (EP) blend dielectric, Metal clad industrial laminates with copper on one or both sides, furnished as sheets or rolls.														
SCR10S, SCR15S, SCR20S, SCR30S														
	SCR20S	-	0.45		55	150	17	102	-	50.8	V-0	130	300	60
Iron base with Epoxy (EP) blend dielectric, Metal clad industrial laminates with copper on one or both sides, furnished as sheets or rolls.														
SFR10S, SFR15S, SFR20S, SFR30S														
	SFR20S	-	0.45		55	150	17	102	-	50.8	V-0	130	300	60

Metal clad industrial laminates (Flammability Only Recognition):

Metal Clad Dsg	Lam- inate Dsg	Pre- preg Dsg	ANSI Type	Bld up	Clad	Cond	Thk	Max	Max	Solder	Lts	
				Min	Min	Max	Max	Area	Oper	Temp	Temp	Time
				Thk	Ext	Ext	Int	Dia	Flame	Temp	Temp	Time
				(mm)	(mic)	(mic)	(mic)	(mm)	Class	(°C)	(°C)	(sec)
Copolymer Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets (Flammability Only Recognition).												
S7136H/S7136HB												

	S7136H	S7136HB	No ANSI	0.38	-	-	-	-	V-0	-	288	20
SU1402/SU1402B												
	SU1402	SU1402B	No ANSI	0.38	-	-	-	-	V-0	-	288	20
Copolymer Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets (Flammability Only Recognition).												
S7136H												
	S7136H	-	No ANSI	0.38	-	-	-	-	V-0	-	288	20
SU1402												
	SU1402	-	No ANSI	0.38	-	-	-	-	V-0	-	288	20
Epoxy Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets (Flammability Only Recognition).												
ST220P												
	ST220P	-	No ANSI	0.50	-	-	-	-	V-0	-	288	20
Epoxy (EP) Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets (Flammability Only Recognition).												
S1135, S7546												
	S1135, S7546	-	No ANSI	0.05	-	-	-	-	V-0	-	288	20
S1155M												
	S1155M	-	No ANSI	0.03	-	-	-	-	V-0	-	288	20
S1165, SI546, S7542K												
	S1165, SI546, S7542K	-	No ANSI	0.05	-	-	-	-	V-0	-	300	40
SB170G												
	SB170G	-	No ANSI	0.05	-	-	-	-	V-0	-	288	20
Epoxy blend Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets (Flammability Only Recognition).												
S5W, SI455W												
	S5W, SI455W	-	No ANSI	0.20	-	-	-	-	HB	-	288	20

Epoxy blend Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets or rolls (Flammability Only Recognition).

SU1610(h)

	SU1610(h)	-	No ANSI	0.10	-	-	-	-	HB	-	288	20
--	-----------	---	------------	------	---	---	---	---	----	---	-----	----

Modified Polyimide Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides (Flammability Only Recognition).

SH260, SH260M/SH260B

	SH260, SH260M	SH260B	No ANSI	0.20	-	-	-	-	HB	-	288	20
--	------------------	--------	------------	------	---	---	---	---	----	---	-----	----

Polybutadiene/polystyrene copolymer Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets, rods or tubes (Flammability Only Recognition).

S7136	S7136	-	No ANSI	0.16	-	-	-	-	V-0	-	288	20
--------------	-------	---	------------	------	---	---	---	---	-----	---	-----	----

Polyimide Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets (Flammability Only Recognition).

SH260, SH260M

	SH260, SH260M	-	No ANSI	0.08	-	-	-	-	HB	-	280	120
--	------------------	---	------------	------	---	---	---	---	----	---	-----	-----

Polyimide blend Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets (Flammability Only Recognition).

S1220, S7643

	S1220, S7643	S1220B, S7643B	No ANSI	0.20	-	-	-	-	V-0	-	280	120
				0.38	-	-	-	-	V-0	-	280	120
				0.63	-	-	-	-	V-0	-	280	120
				1.60	-	-	-	-	V-0	-	280	120

SI64X, SI643, SI643U, SI643HU

	SI64X, SI643, SI643U, SI643HU	SI64XB, SI643B, SI643UB, SI643HUB, SI643HB	No ANSI	0.20	-	-	-	-	V-0	-	280	120
				0.38	-	-	-	-	V-0	-	280	120
				0.63	-	-	-	-	V-0	-	280	120
				1.60	-	-	-	-	V-0	-	280	120

Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets (Flammability Only Recognition).

S1151G												
	S1151G	S1151GB	FR-4.1	0.20	-	-	-	-	V-0	-	288	20
S25	S25	S25B	No ANSI	0.20	-	-	-	-	V-0	-	288	20
ST115, ST115D												
	ST115, ST115D	ST115B, ST115DB	FR-4.0	0.20	-	-	-	-	V-0	-	288	20
Metal clad industrial laminates for use in multilayer printed wiring boards with copper on one or both sides, furnished as sheets or rolls (Flammability Only Recognition).												
SU1611/ SU1611B												
	SU1611	SU1611B	No ANSI	0.20	-	-	-	-	V-0	-	288	20
Metal clad industrial laminates for use in single layer printed wiring boards with copper on one or both sides, furnished as sheets (Flammability Only Recognition).												
S1151G												
	S1151G	-	FR-4.1	0.05	-	-	-	-	V-0	-	288	20
S1152G												
	S1152G	-	FR-4.1	0.05	-	-	-	-	V-0	-	288	20
S1170G, S7045GH												
	S1170G, S7045GH	-	FR-15.1	0.03	-	-	-	-	V-0	-	288	20
S1170M												
	S1170M	-	FR-4.0	0.06	-	-	-	-	V-0	-	288	20
S25	S25	-	No ANSI	0.20	-	-	-	-	V-0	-	288	20
S7045G												
	S7045G	-	FR-4.1	0.03	-	-	-	-	V-0	-	288	20
S7438	S7438	-	No ANSI	0.10	-	-	-	-	V-0	-	288	20
SB120	SB120	-	No ANSI	0.05	-	-	-	-	V-0	-	288	20
ST115, ST115D												

	ST115, ST115D	-	FR-4.0	0.20	-	-	-	-	V-0	-	288	20
SU1305												
	SU1305	-	FR-4.1	0.03	-	-	-	-	V-0	-	288	20
SU1611												
	SU1611	-	No ANSI	0.20	-	-	-	-	V-0	-	288	20
S1145, S1150G, S1125, SI055W												
	S1145, S1150G, S1125, SI055W	-	FR-4.1	0.05	-	-	-	-	V-0	-	288	20

Metal clad metal base industrial laminates (Flammability Only Recognition):

			Metal		Dielectric		Clad Cond Thk			Max		Max		Solder Lts	
Metal Clad Dsg	Lam-inate Dsg	Pre-preg Dsg	Min Thk (mm)		Min Thk (mic)	Max Thk (mic)	Min Ext (mic)	Max Ext (mic)	Max Int (mic)	Area Dia (mm)	Flame Class	Oper Temp (°C)	Temp (°C)	Time (sec)	
Aluminum base with Epoxy (EP) and Phenolic dielectric, Metal clad industrial laminates with copper on one side only, furnished as sheets or rolls (Flammability Only Recognition).															
SA110L															
	SA110L	-	0.30		70	200	-	-	-	-	V-0	-	288	20	

Bonding film unsupported (Freefilms):

Mtl Dsg	Color	Min Thk (mic)	Max Thk (mic)	Flame Class
Bonding film unsupported (Freefilms) for use in printed wiring boards, furnished as sheets.				
SF206B	NC	10	50	-
SF315B	NC	10	50	-

Coverlays:

Mtl Dsg	Color	Film		Adhesive		Flame Class
		Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	
Polyamide-imide film with Epoxy (EP) adhesive Coverlays for use in flexible printed wiring boards, furnished as sheets or rolls.						
SF215C	BK	0.003	0.007	5	30	VTM-0

Polyimide (PI) film with Epoxy (EP) adhesive Coverlays for use in flexible printed wiring boards, furnished as sheets or rolls.						
SF202C	NC	0.0075	0.012	5	50	VTM-0
		0.0125	0.050	12.5	50	V-0
SF303C (Note2)						
	WT	0.0205	0.075	15	50	V-0
SF305C	NC	0.0075	0.012	5	50	VTM-0
		0.0125	0.050	12.5	50	V-0
SF315C	NC (BK)	0.0075	0.012	5	50	VTM-0
		0.0125	0.050	12.5	50	V-0
SF325C	NC	0.0125	0.025	12.5	35	V-0
SF335C	NC	0.0075	0.0124	5	15	VTM-0
		0.0125	0.050	12.5	50	V-0
Coverlays for use in flexible printed wiring boards, furnished as sheets.						
SF206C	NC	0.0125	0.024	10	50	VTM-0
		0.025	0.050	10	50	V-0
SF302C	NC	0.0125	0.025	12.5	35	V-0

Investigated flex package combinations:

Category	Grade	Film		Adhesive		Copper	
		Min Thk (mm)	Max Thk (mm)	Min Thk (mic)	Max Thk (mic)	Min Thk (mic)	Max Thk (mic)
SF202/SF315C Flame Class: V-0; Max Area Diam (mm): 50.8; Max Oper Temp (°C): 130; Solder Limits (C/sec): 300/10furnished as sheets							
Base film	SF202	0.0125	0.050	-	-	6	70
Coverlay	SF315C	0.0075	0.05	5	50	-	-
SF202/SF325C Flame Class: V-0; Max Area Diam (mm): 50.8; Max Oper Temp (°C): 130; Solder Limits (C/sec): 300/10furnished as sheets							
Base film	SF202	0.0125	0.050	-	-	6	70
Coverlay	SF325C	0.0125	0.025	12.5	35	-	-
SF212/SF202C Flame Class: V-0; Max Area Diam (mm): 50.8; Max Oper Temp (°C): 150; Solder Limits (C/sec): 300/10furnished as sheets							
Base film	SF212	0.0125	0.0125	-	-	6	70
Base film	SF212	0.020	0.020	-	-	6	70

Base film	SF212	0.025	0.025	-	-	6	70
Base film	SF212	0.050	0.050	-	-	6	70
Coverlay	SF202C	0.0075	0.05	5	50	-	-
SF212/SF315C Flame Class: V-0; Solder Limits (C/sec): 300/10furnished as sheets							
Base film	SF212	0.0125	0.0125	-	-	-	-
Base film	SF212	0.020	0.020	-	-	-	-
Base film	SF212	0.025	0.025	-	-	-	-
Base film	SF212	0.050	0.050	-	-	-	-
Coverlay	SF315C	0.0075	0.05	5	50	-	-
SF302/SF302C Flame Class: V-0; Max Area Diam (mm): 50.8; Max Oper Temp (°C): 105; Solder Limits (C/sec): 288/10furnished as sheets							
Base film	SF302	0.0125	0.050	10	25	10.9	70
Coverlay	SF302C	0.0125	0.025	12.5	35	-	-
SF305/SF305C Flame Class: V-0; Max Area Diam (mm): 50.8; Max Oper Temp (°C): 130; Solder Limits (C/sec): 288/10							
Base film	SF305	0.0125	0.050	10	25	12	102
Coverlay	SF305C	0.0075	0.050	5	50	-	-

- # will be replaced by one letter A~Z.

\$ - Multilayer Recognition shall start from minimum thickness of 0.63mm

(C) - Identical to the S1000 family.

(d) - Alternate solder limits: 6 cycles max.: 25-183C @ 2C/sec.; 183-260-183C @ 1.3C/sec. (120 sec. total); 183-25C @ 3C/sec.

(e) - STR15 is shipped as a B-stage insulation sheet [Resin coated copper (RCC) foil] without being adhered to a metal substrate. PWB manufacturer must adhere to Aluminum metal base as specified, within thickness range Recognized.

(h) - Thickness is 0.10 mm ONLY

(i) - Employs the same dielectric as SAR10S family

Note 1 - thickness is limited to 0.20 mm maximum

Marking: Company name or trademark  and material designation on container or wrapper.

Last Updated on 2020-07-15

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2020 UL LLC"