

ORCER RF-35

Low Cost
Excellent Peel Strength
Exceptionally Low Dissipation Factor
Low Moisture Absorption
Enhanced Surface Smoothness

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APPLICATIONS

Power Amplifiers
Filters and Couplers
Passive Components

ORCER RF-35

RF-35 is an organic-ceramic laminate in the ORCER family of Taconic products. It is based on woven glass reinforcement. RF-35 is a result of Taconic's expertise in both ceramic fill technology and in coated PTFE fiberglass.

RF-35 is the best choice for low cost, high volume commercial microwave and radio frequency applications.

RF-35 has excellent peel strength for 1/2 ounce and 1 ounce copper (even in comparison to standard epoxy materials), a critical aspect whenever rework is required.

RF-35's Tg is over 600°F (315°C)

RF-35's ultra low moisture absorption rate and low dissipation factor minimize phase shift with frequency.

RF-35 is dimensionally stable due to the use of woven fabrics in its design.

RF-35 laminates are generally ordered clad on one or both sides with 1/2, 1, and 2 oz. electrodeposited copper.

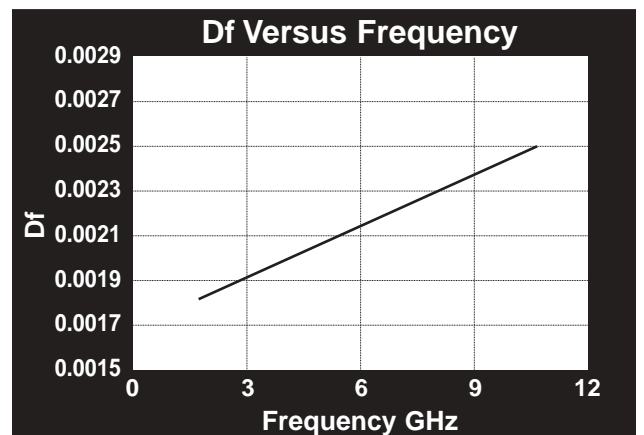
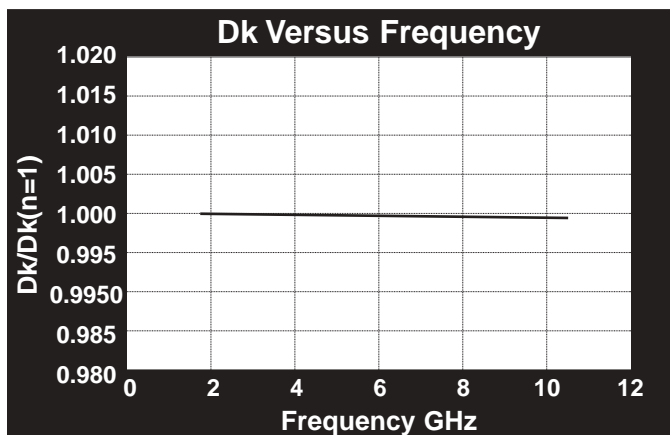
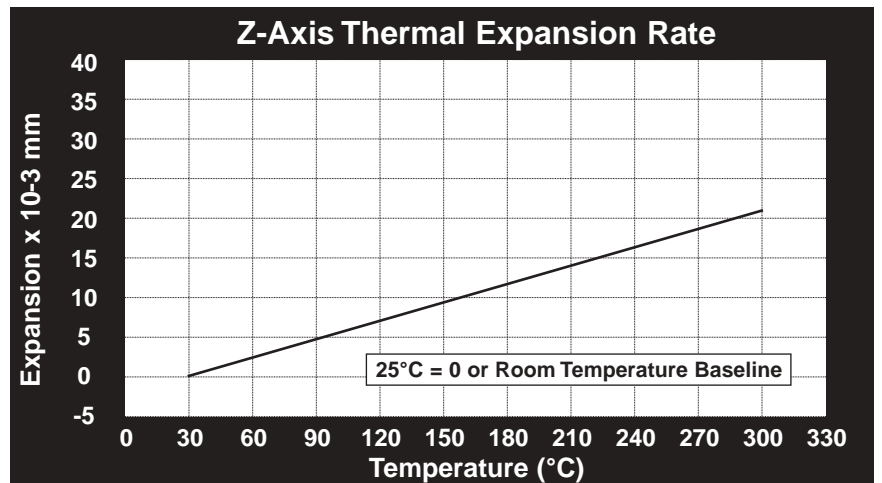
RF-35 laminates exhibit flammability of V-0, and are tested in accordance with IPC-TM 650. A certificate of compliance containing lot-specific test data accompanies each shipment.

See "How to Order" on back page for a complete product listing.

RF-35 TYPICAL VALUES

Property	Test Method	Units	Value	Units	Value
Dielectric Constant @ 1.9 GHz	IPC-TM 650 2.5.5		3.50		3.50
Dissipation Factor @ 1.9 GHz	IPC-TM 650 2.5.5		0.0018		0.0018
Moisture Absorption (.060")	IPC-TM 650 2.6.2.1	%	0.02	%	0.02
Peel Strength (1/2 oz. copper)	IPC-TM 650 2.4.8	lbs./linear inch	>8.0	N/mm	>1.5
Peel Strength (1 oz. copper)	IPC-TM 650 2.4.8	lbs./linear inch	>10.0	N/mm	>1.8
Dielectric Breakdown	IPC-TM 650 2.5.6	kV	41	kV	41
Volume Resistivity	IPC-TM 650 2.5.17.1	Mohm/cm	1.26 x 10 ⁹	Mohm/cm	1.26 x 10 ⁹
Surface Resistivity	IPC-TM 650 2.5.17.1	Mohm	1.46 x 10 ⁸	Mohm	1.46 x 10 ⁸
Arc Resistance	IPC TM 650 2.5.1	seconds	>180	seconds	>180
Flexural Strength Lengthwise	ASTM D 790	psi	>22,000	N/mm ²	>152
Flexural Strength Crosswise	ASTM D 790	psi	>18,000	N/mm ²	>124
Thermal Conductivity	ASTM F 433	W/m/K	0.24	W/m/K	0.24
Tensile Strength Lengthwise	ASTM D 638	psi	27,000	N/mm ²	187
Tensile Strength Crosswise	ASTM D 638	psi	21,000	N/mm ²	145
Dimensional Stability Lengthwise	IPC-TM 650 2.4.39	in/in	0.00004	mm/mm	0.00004
Dimensional Stability Crosswise	IPC-TM 650 2.4.39	in/in	-0.00010	mm/mm	-0.00010
x-y CTE	ASTM D 3386 (TMA)	ppm/°C	19-24	ppm/°C	19-24
z CTE	ASTM D 3386 (TMA)	ppm/°C	64	ppm/°C	64
Flammability	UL-94		V-0		V-0
Hardness	Rockwell M Scale		34		34

Type	Dk
TLY-5A	2.17
TLY-5	2.20
TLY-3	2.33
TLT-0 TLX-0	2.45
TLT-9 TLX-9	2.50
TLT-8 TLX-8	2.55
TLT-7 TLX-7	2.60
TLT-6 TLX-6	2.65
TLE-95	2.95
TLC-27	2.75
TLC-30	3.00
TLC-32	3.20
RF-30	3.00
RF-35 RF-35P	3.50
RF-60	6.15
CER-10	10



All reported values are typical and should not be used for specification purposes. In all instances the user shall determine suitability in any given application.

How to Order

Designation	Dielectric Constant
RF-35	3.5+/- 0.1

Available Thickness	Normal Dielectric Constant
0.0100" (0.25mm)	3.5
0.0200" (0.50mm)	3.5
0.0300" (0.76mm)	3.5
0.0600" (1.52mm)	3.5

Standard sheet size is 36" x 48" (914mm x 1220mm). Please contact our Customer Service Department for availability of other sizes and claddings.

RF-35 can be ordered with the following electrodeposited copper:

Designation	Weight	Copper Thickness	Copper Thickness
CH	1/2 oz./sq. ft.	~ .0007"	~18 µm
C1	1 oz./sq. ft.	~ .0014"	~ 35 µm
C2	2 oz./sq. ft.	~ .0028"	~ 70 µm

Panels may be ordered cut to size

Typical Panel Sizes	
12" x 18"	304mm x 457mm
16" x 18"	406mm x 457mm
18" x 24"	457mm x 610mm
16" x 36"	406mm x 914mm
24" x 36"	610mm x 914mm
18" x 48"	457mm x 1220mm

An example of our part number is: RF-35-0600-CH/CH-18" x 24" (RF-35-0600-CH/CH-457mm x 610mm)

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ADVANCED DIELECTRIC DIVISION

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