

ORCER RF-60

Exceptional Interlaminar Bonds
Low Moisture Absorption
Enhanced Dimensional Stability
Low Z-Axis Expansion
Stable DK Over Frequency
Increased Flexural Strength

TACONIC

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APPLICATIONS

Power Amplifiers
Filters and Couplers
Passive Components
Antennas

ORCER RF-60

RF-60 is an organic-ceramic laminate in the ORCER family of Taconic products. It is based on woven glass reinforcement. RF-60 is a result of Taconic's expertise in both ceramic fill technology and in coated PTFE fiberglass.

RF-60 exhibits exceptional interlaminar bond strength and solder resistance. RF-60's proprietary composition results in low moisture absorption and uniform electrical properties.

RF-60's woven glass reinforcement ensures excellent dimensional stability and enhances flexural strength. The RF-60 laminate exhibits low Z-axis expansion (CTE 75 ppm/°C), allowing for plated-through-hole reliability in extreme thermal environments.

RF-60 laminates can be sheared, drilled, milled and plated using standard methods for PTFE-woven fiberglass materials. For processing information, refer to the RF-60 Fabrication Guidelines.

RF-60 laminates are generally ordered clad on both sides with 1/2, 1, or 2 oz. electrodeposited copper. Various panel sizes are available. Contact our Customer Service Department for more information.

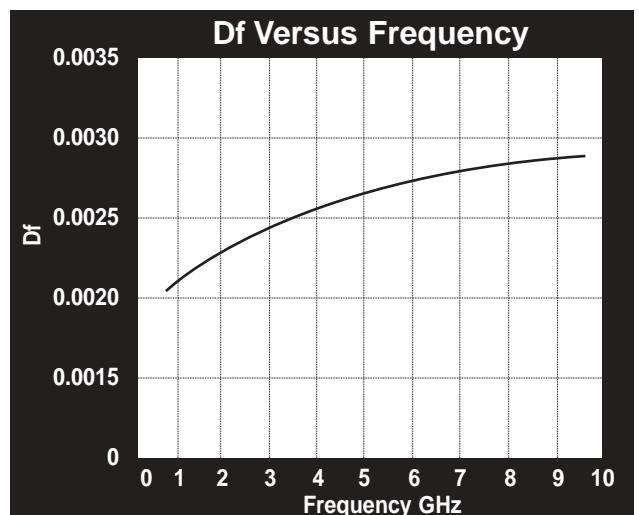
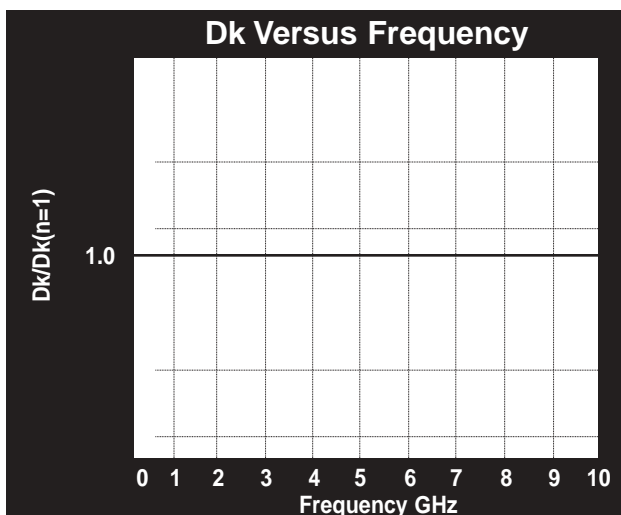
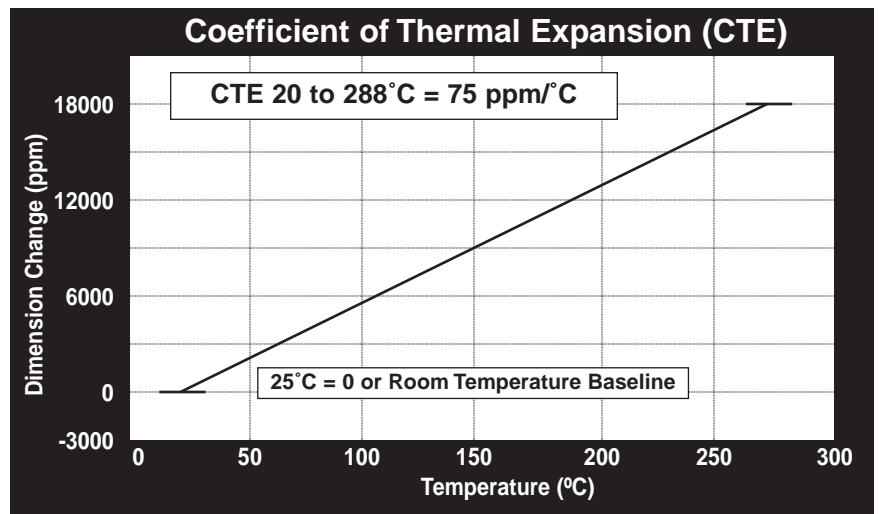
RF-60 laminates are tested in accordance with IPC-TM 650. A certificate of compliance containing lot-specific test data accompanies each shipment.

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

RF-60 TYPICAL VALUES

Property	Test Method	Units	Value	Units	Value
Dielectric Constant (Nominal)	IPC-TM-650 2.5.5.6		6.15 +/-0.25		6.15 +/-0.25
Dissipation Factor @ X-band	IPC-TM-650 2.5.5.5		0.0028		0.0028
Moisture Absorption	IPC-TM-650 2.6.2.1	%	<0.02	%	0.02
Dielectric Breakdown	IPC-TM-650 2.5.6	kV	44	kV	44
Volume Resistivity	IPC-TM-650 2.5.17.1	Mohm/cm	2.1×10^8	Mohm/cm	2.1×10^8
Surface Resistivity	IPC-TM-650 2.5.17.1	Mohm	1.1×10^8	Mohm	1.1×10^8
Arc Resistance	IPC-TM-650 2.5.1	Seconds	>180	seconds	>180
Flexural Strength Lengthwise	ASTM D 790	psi	25,000	N/mm ²	174
Flexural Strength Crosswise	ASTM D 790	psi	22,000	N/mm ²	153
Peel Strength (1 oz.ED)	IPC-TM-650 2.4.8	lbs./linear in.	>8	N/mm	>1.41
Thermal Conductivity	ASTM F 433	W/m/K	0.43	W/m/K	0.43
Tensile Strength Lengthwise	ASTM D 882	psi	28,900	N/mm ²	200
Tensile Strength Crosswise	ASTM D 882	psi	22,200	N/mm ²	146
Dimensional Stability Lengthwise	IPC-TM-650 2.4.39	mils/in	-0.06	mm/mm	-0.0006
Dimensional Stability Crosswise	IPC-TM-650 2.4.39	mils/in	-0.08	mm/mm	-0.0008
x-y CTE	ASTM D 3386 (TMA)	ppm/°C	11-13	ppm/°C	11-13
z CTE	ASTM D 3386 (TMA)	ppm/°C	75	ppm/°C	75
UL-94 Flammability Rating	UL-94		V-0	UL-94	V-0
Specific Gravity		g/cm ³	2.81	g/cm ³	2.81

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



How to Order

Designation	Dielectric Constant
RF-60	6.15+/-0.25*

*Nominal of 6.15 is for 0.0250"

Available Thickness	Nominal Dielectric Constant
*0.0250" (0.63 mm)	6.15
0.0310" (0.78 mm)	6.20
0.0500" (1.27 mm)	6.40
0.0600" (1.52 mm)	6.45

Please contact our Customer Service Department for the availability of other thicknesses, types of copper foil and thick metal claddings.

Designation	Weight	Copper Thickness	Copper Thickness
CH	½ oz./sq. ft.	~.0007"	18 µm
C1	1 oz./sq. ft.	~.0014"	35 µm
C2	2 oz./sq. ft.	~.0028"	70 µm

Typical Panel Sizes	
12" x 18"	304 mm x 457 mm
16" x 18"	406 mm x 457 mm
18" x 24"	457 mm x 610 mm

An example of our part number is:

RF-60-0600-CH/CH-18" x 24" (RF-60-0600-CH/CH-457 mm x 610 mm)

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ADVANCED DIELECTRIC DIVISION

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