

ORCER RF-35P

Thickness Available \geq 0.002" (0.05mm)
Low Cost
Excellent Peel Strength
Exceptionally Low Loss
Low Moisture Absorption
Consistent Dimensional Stability

Mullingar Business Park
Mullingar, Co. Westmeath,
Republic of Ireland
TEL: +353-44-38300
FAX: +353-44-44369

TACONIC

P.O. Box 69 • 136 Coonbrook Road
Petersburgh, NY 12138
TEL: 518-658-3202 • FAX: 518-658-3988
TOLL FREE: 800-833-1805 • FAX: 800-272-2503

801 Koong Jeon Plaza II
360-4Yatap-dong Bundang-ku
Sungnam-si, Kyungki-do
Republic of Korea
TEL: 82-31-704-1858/9
FAX: 82-31-704-1857

APPLICATIONS

Multi Layer
Power Amplifiers
Filters and Couplers
Passive Components
High Speed Digital

ORCER RF-35P

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

RF-35P is the best choice for low cost, high volume, high frequency applications.

RF-35P 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-35P'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-35P is available in thickness as thin as 0.002" (0.05mm).

RF-35P is dimensionally stable due to the use of woven fabrics in its design. RF-35P yields exceptional electrical, mechanical and thermal performance for high density, multi layer microwave and high speed digital circuits.

RF-35P is constructed with all fine weave glass, yielding exceptional machining quality.

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

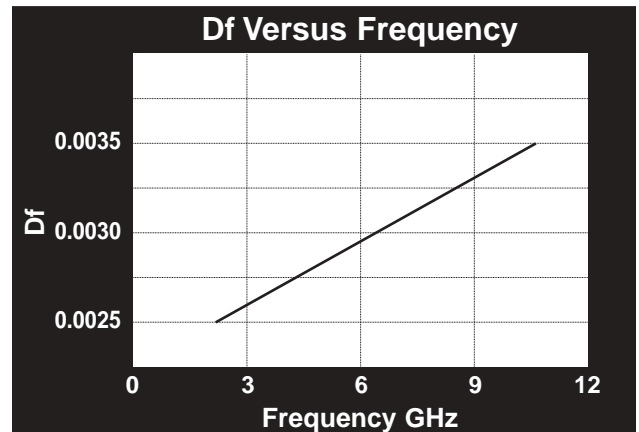
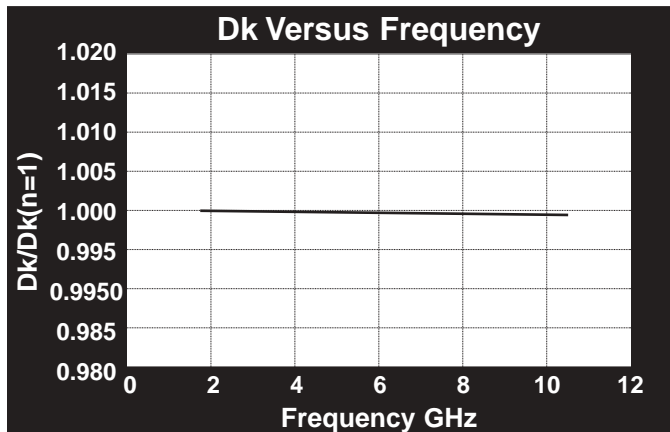
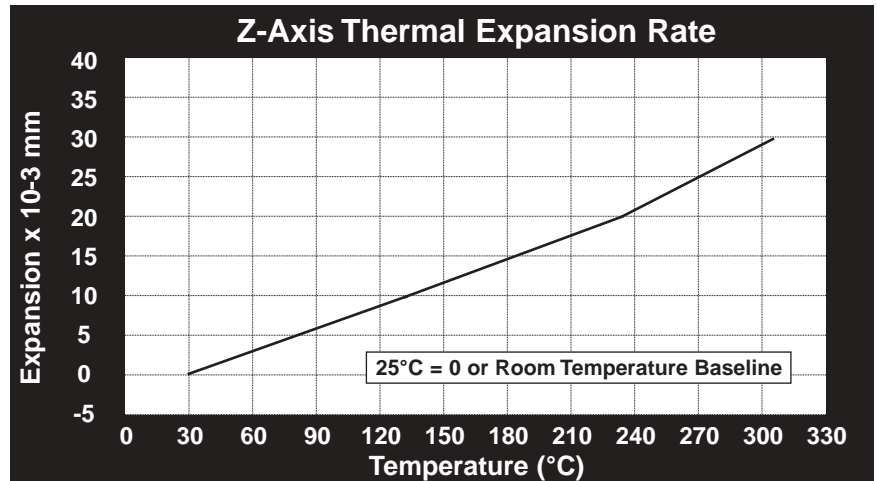
RF-35P laminates exhibit flammability of V-0, and are tested in accordance with IPC-TM 650. A certificate of compliance containing lot-specific test data accompanies each shipment.

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

RF-35P 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		0.0025		0.0025
Moisture Absorption (.060")	IPC-TM 650 2.6.2.1	%	.03	%	.03
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	5×10^8	Mohm/cm	5×10^8
Surface Resistivity	IPC-TM 650 2.5.17.1	Mohm	3.5×10^7	Mohm	3.5×10^7
Arc Resistance	IPC TM 650 2.5.1	seconds	>180	seconds	>180
Flexural Strength Lengthwise	ASTM D 790	psi	>28,000	N/mm ²	>193
Flexural Strength Crosswise	ASTM D 790	psi	>16,000	N/mm ²	>110
Thermal Conductivity	ASTM F 433	BTU/in/hr/ft ² /°F	1.60	W/m/K	0.226
Tensile Strength Lengthwise	ASTM D 882	psi	47,600	N/mm ²	329
Tensile Strength Crosswise	ASTM D 882	psi	26,400	N/mm ²	182
Dimensional Stability Lengthwise	IPC-TM 650 2.4.39	in/in	-0.0004	mm/mm	-0.0004
Dimensional Stability Crosswise	IPC-TM 650 2.4.39	in/in	0.00001	mm/mm	0.00001
x-y CTE	ASTM D 3386 (TMA)	ppm/°C	15	ppm/°C	15
z CTE	ASTM D 3386 (TMA)	ppm/°C	110	ppm/°C	110
Flammability	UL-94		V-0		V-0

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-35P	3.5+/- .1

Available Thickness		Normal Dielectric Constant
0.002" (0.05mm)	0.0100" (0.25mm)	3.5
0.004" (0.10mm)	0.0200" (0.50mm)	3.5
0.006" (0.15mm)	0.0300" (0.76mm)	3.5
0.008" (0.20mm)	0.0600" (1.52mm)	3.5

*Other thicknesses are readily available upon request.
Standard sheet size is 36" x 48" (914mm x 1220mm). Please contact our Customer Service Department for availability of other sizes and claddings.*

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

Panels may be ordered cut to size

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

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-35P-0060-CH/CH-18" x 24" (RF-35P-0060-CH/CH-457mm x 610mm)

TACONIC
ADVANCED DIELECTRIC DIVISION

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Petersburgh, New York 12138 • USA
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