

More PCB substrate datasheets
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TRF

-41, -43

Low – loss ceramic-filled PTFE

High thermal conductivity

Stable DK over temperature

Stable DK over frequency

Very low Z-axis CTE

TACONIC

An ISO 9001:2008 Registered Company

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Applications

Satellite radio

RFID

TRF -41 -43

The TRF range of laminated materials represent a new generation of low-loss, thermally-stable laminated material from Taconic Advanced Dielectric Division.

TRF is woven-glass reinforced for enhanced dimensional-stability and coupled with Taconic's expertise in ceramic technology, TRF exhibits low and consistent Z-axis expansion across a wide range of temperature including and up to soldering conditions.

The range of dielectric-constant may allow designers to make a seamless switch from FR4 in applications where a lower-loss material may be required.

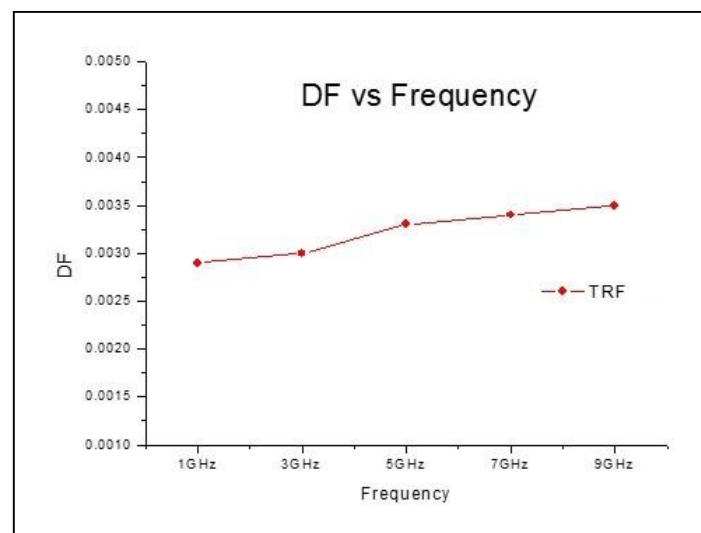
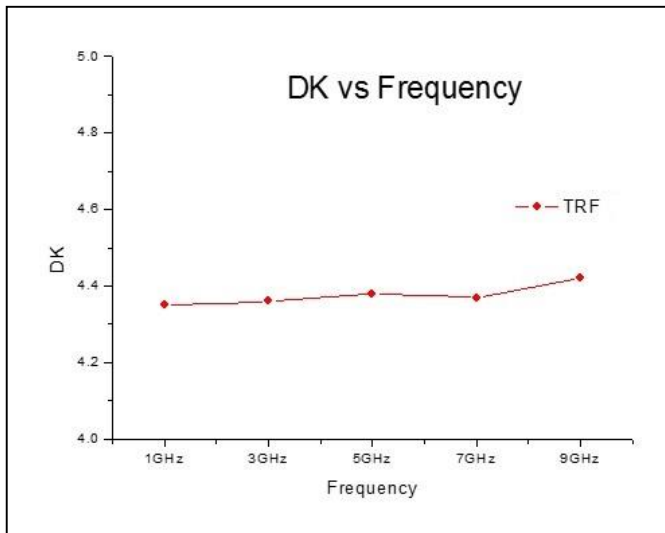
TRF can be sheared, drilled, milled and plated using standard methods for PTFE woven fibre-glass materials.

TRF is generally copper-clad with ½ , 1 or 2oz electrodeposited Copper foil and a wide range of panel sizes are available.

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

TRF-41 & -43 TYPICAL VALUES

Property	Test Method	Unit	Value	
			TRF-41	TRF-43
Dielectric Constant	IPC-TM-650 2.5.5.5.1(m)	10GHz	4.1±0.15	4.3±0.15
Dissipation Factor	IPC-TM-650 2.5.5.5.1(m)	10GHz	0.0035	0.0035
Moisture Absorption	IPC-TM-650 2.6.2.1	%	0.06	0.06
Surface Resistivity	IPC-TM-650 2.5.17.1	Mohm	3.0×10 ⁷	3.0×10 ⁷
Volume Resistivity	IPC-TM-650 2.5.17.1	Mohm·cm	8.0×10 ⁷	8.0×10 ⁷
Flexural Strength (Lengthwise)	IPC-TM-650 2.4.4	lbs / in N/mm ²	17,000 177	17,000 177
Flexural Strength (Crosswise)	IPC-TM-650 2.4.4	lbs / in N/mm ²	15,000 103	15,000 103
Peel Strength	IPC-TM-650 2.4.8	lbs / in N/mm	>8 > 1.4	>8 > 1.4
Thermal Conductivity	IPC-TM-650 2.4.50	W/m-k	0.43	0.43
C.T.E (X axis)	ASTM D 3386 (TMA)	ppm/°C (50~150°C)	9	9
C.T.E (Y axis)	ASTM D 3386 (TMA)	ppm/°C (50~150°C)	9	9
C.T.E (Z axis)	ASTM D 3386 (TMA)	ppm/°C (50~150°C)	40	40
Flammability		UL-94		V-0



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
TRF - 41	4.10 ± 0.15
TRF - 43	4.30 ± 0.15

Typical Thickness	
0.0080"	0.20mm
0.0160"	0.41mm
0.0240"	0.61mm
0.0320"	0.81mm
0.0400"	1.02mm
0.0640"	1.63mm ¹
0.1200"	3.05mm ¹

¹Parts of thickness specification not less than 64mil products would be IPC-4103/class B.

Available Copper Cladding						
Designation	Weight	Copper Thickness		R _{ms} Treated Side		Description
CLH	1/2 oz./sq. ft.	~ .0007"	~ 18 μ m	13 μ in	0.3 μ m	Reverse treated / Electrodeposited
CL1	1 oz./sq. ft.	~ .0014"	~ 35 μ m	13 μ in	0.3 μ m	Reverse treated / Electrodeposited
CH	1/2 oz./sq. ft.	~ .0007"	~ 18 μ m	25 μ in	0.6 μ m	Very Low Profile / Electrodeposited
C1	1 oz./sq. ft.	~ .0014"	~ 35 μ m	27 μ in	0.7 μ m	Very Low Profile / Electrodeposited
C2	2 oz./sq. ft.	~ .0028"	~ 70 μ m	77 μ in	2.0 μ m	Standard Profile / Electrodeposited

* Other copper claddings can be made available on request. Please call for information

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

An example of our part number is: TRF-43-0640-CL1/CL1-18" x 24" (457mm x 610mm)



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