FP-518/FP-530 Wideband RF/Pulse Transformers 1-750 MHz/1-100 MHz

SIRENZA MICRODEVICES

DESCRIPTION

Subminiature size, easily solderable or weldable planar ribbon leads and high performance design makes the FP transformer ideal for MIC substrate and printed circuits.

These transformers are high reliability devices designed to meet MIL-T-55631. Typical applications are: Interstage coupling, phase detection, voltage/current step up/step down and pulse transformation.

GUARANTEED MINIMUM PERFORMANCE DATA

SPECIFICATIONS FOR MODEL FP-518

Type: 50 ohm unbalanced
200 ohm unbalanced

−1 dB Bandwidth, MHz		1-750
Midband insertion loss dB		.50
VSWR	1-400 MHz	1.3:1
	400-750 MHz	2.5:1

SPECIFICATIONS FOR MODEL FP-530

Type: 50 ohm unbalanced
450 ohm unbalanced

−1 dB Bandwidth, MHz		1-100
Midband insertion loss dB		.50
VSWR	3-50 MHz	1.3:1

NOTE:
−1 dB bandwidth is measured relative to midband loss.

ABSOLUTE MAXIMUM RATINGS:
Input power *1 w. above 10 MHz, .25 w. below 10 MHz
Temperature range −54° to +100°C

*Includes DC current effects by approx. $(I_{DC}2 + I_{RF}2)Z = Pmax.$

ENVIRONMENTAL CONDITIONS

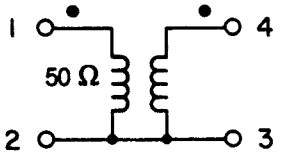
GUARANTEED ENVIRONMENTAL PERFORMANCE:

All units are designed to meet their specifications over −54°C to +100°C and after exposure to any or all of the following tests per MIL-STD-202E.

Exposure	Method	Test Condition
Thermal Shock	107D	B
Altitude	105C	G
H.F. Vibration	204C	D
Mechanical Shock	213B	C
Random Vibration (15 minutes per axis)	214	IIF
Solderability	208C	
Terminal Strength	211A	C
Resistance to Soldering Heat	210A	B

Sealed units, meet the requirements of Method 106D of MIL-STD-202E when exposed to humidity.

FUNCTIONAL SCHEMATIC



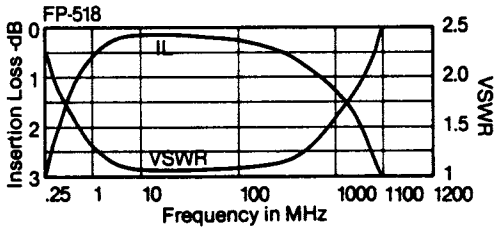
TYPICAL PERFORMANCE

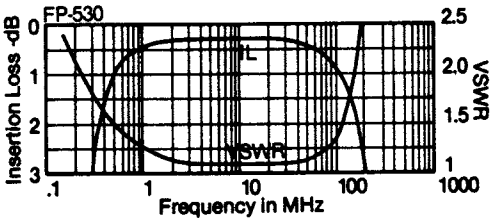
FP-518

Risetime:	.3 nS
Droop: (10%)	250 nS
Group delay:	<1 nS

FP-530

Risetime:	1.5 nS
Droop: (10%)	300 nS
Group delay:	<1.5 nS





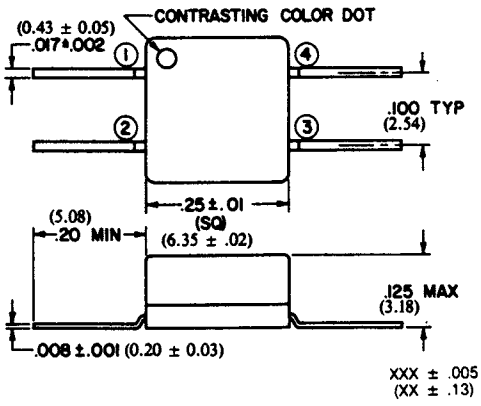
PACKAGE

MATERIAL:

Header: Glass filled epoxy
Leads: Kovar per MIL-STD-1276, Type K

FINISH:

Header: Black epoxy
Leads: Tin Plate per MIL-T-10727, Type 1



Specifications subject to change without notice.

8.10.04 Rev. A