

FP-504/FP-514  
Wideband  
RF/Pulse  
Transformer  
1-500 MHz



### 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-504

Type: 50 ohm unbalanced  
25 ohm unbalanced

- 1 dB Bandwidth, MHz	1-500
Midband insertion loss dB	.50
VSWR	1-350 MHz 1.3:1 350-500 MHz 2.5:1

#### SPECIFICATIONS FOR MODEL FP-514

Type: 50 ohm unbalanced  
75 ohm unbalanced

- 1 dB Bandwidth, MHz	1-500
Midband insertion loss dB	.50
VSWR	1.4:1

#### 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.

$$(IDC^2 + I_{RF}^2)Z = P_{max}$$

### ENVIRONMENTAL CONDITIONS

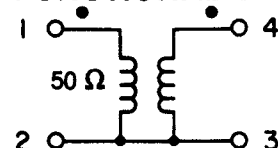
#### GUARANTEED ENVIRONMENTAL PERFORMANCE:

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	214	IIF
(15 minutes per axis)		
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



Specifications subject to change without notice.

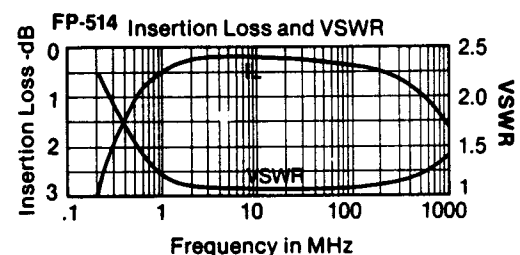
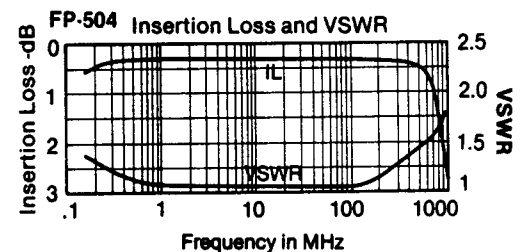
### TYPICAL PERFORMANCE

#### FP-504

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

#### FP-514

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

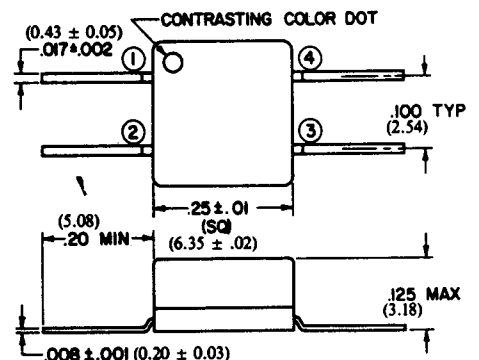


### PACKAGE MATERIAL:

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



XXX ± .005  
(XX ± .13)