



### 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, DC decoupling, voltage/current step up/step down and pulse transformation.

### GUARANTEED MINIMUM PERFORMANCE DATA SPECIFICATIONS FOR MODEL FP-528

Type: 50 ohm unbalanced  
200 ohm balanced  
DC isolated C.T.

|                                       |                                    |
|---------------------------------------|------------------------------------|
| - 1 dB Bandwidth, MHz                 | 1-250                              |
| Midband insertion loss dB             | .75                                |
| Amplitude unbalance dB                | 1.0                                |
| Phase unbalance (deviation from 180°) | 12                                 |
| VSWR                                  | 1-50 MHz 1.3:1<br>50-250 MHz 2.5:1 |

#### 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.  $(I_{DC}^2 + I_{RF}^2)Z \cong P_{max}$ .

### ENVIRONMENTAL CONDITIONS

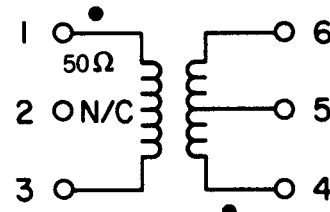
#### GUARANTEED ENVIRONMENTAL PERFORMANCE:

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            |
| <small>(15 minutes per axis)</small> |        |                |
| 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.

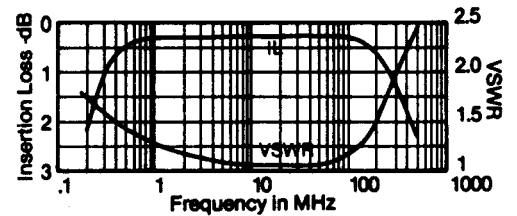
### FUNCTIONAL SCHEMATIC



### TYPICAL PERFORMANCE

#### FP-528

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



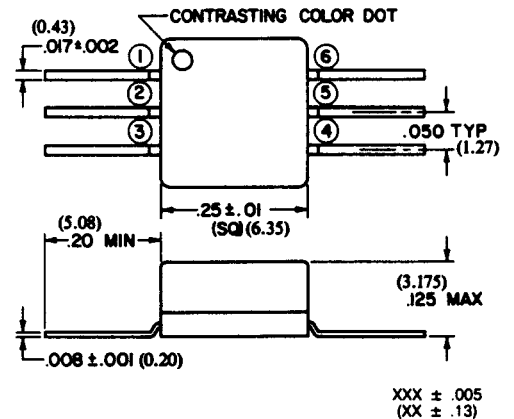
### PACKAGE

#### MATERIAL:

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

#### FINISH:

Header: Black epoxy  
Leads: Hot dipped solder, tin lead underplate.



Specifications subject to change without notice.