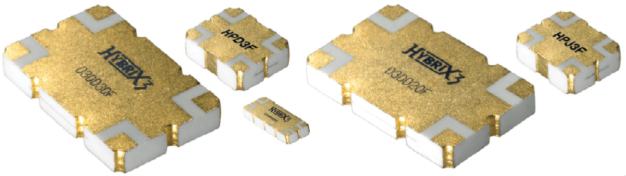
LTCC DIRECTIONAL COUPLERS



DATA SHEET **D3DP30F** 6.23.2010

FEATURES

- Low Profile Surface Mount Package
- High Power
- Low Insertion Loss
- High Isolation
- RoHS Compliant
- Tape and Reel available for High Volume Production
- 100% RF Tested

APPLICATIONS

- Power Amplifiers
- Power Monitors
- Reflectometers
- Signal Distribution Networks
- Switch Networks
- Phase Shifters

GENERAL DESCRIPTION

The D3DP30F is a high performance directional coupler in a surface mount package. This low profile coupler handles up to 200 watts of CW power. The D3DP30F is designed for those demanding applications where high power, low loss and excellent directivity are required.

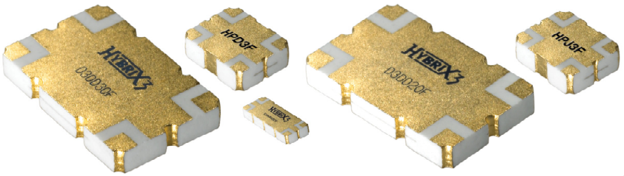
The D3DP30F is manufactured with materials that have thermal expansion characteristics compatible with industry standard board materials like RO3003, RO4350, FR4 and others. The couplers are available in a RoHS compliant finish and packaged in tape and reel.

ELECTRICAL SPECIFICATIONS*

Frequency MHz	Coupling (dB)	Directivity dB (min)	Insertion Loss dB (max)	VSWR (max)	Power Handling Watts CW	Operating Temperature °C
2300-2700	30 ± 1.5	18	0.2	1.2	200	-55 to +125

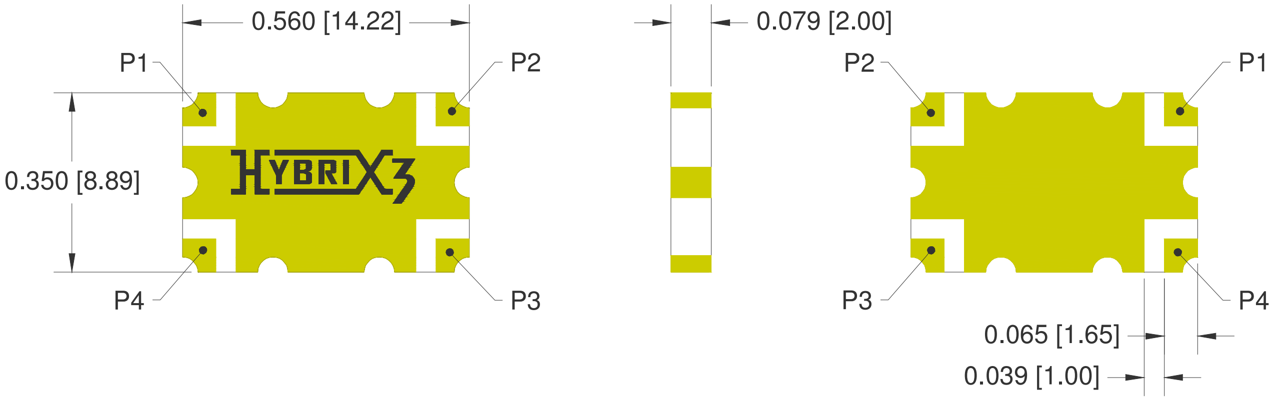
Specification Notes:

* Measured on Florida RF Labs test fixture. Specifications are subject to change without notice.



COUPLER PIN CONFIGURATION AND MECHANICAL OUTLINE

PORTS	P1	P2	P3	P4
P1	-	OUT	ISO	COUP
P2	OUT	-	COUP	ISO
P3	ISO	COUP	-	OUT
P4	COUP	ISO	OUT	-



COMMONLY USED ATTACHMENT MATERIALS

Material	Composition	Thermal Conductivity (Watts/cm/°C)	Melting Temperature (°C)
Gold-Tin Solder	80% Gold / 20% Tin	0.58	280
Lead-Free Solder	99.3% Tin – 0.7% Copper	N/A	227
Lead-Free Solder	96.5% Tin / 3.5% Silver	0.33	221
Lead-Free Solder	96.5% Tin / 3% Silver / 0.5% Copper	N/A	217 - 220
Sn63 Solder	63% Tin / 37% Lead	0.49	183
Conductive Epoxy	Silver Filled	0.01 to 0.29	N/A