

DIRECTIONAL COUPLER - CSD-10H-1.5G

TECHNICAL FEATURE

FEATURES

- 1.0 - 2.0 GHz
- Low loss
- High directivity
- Excellent coupling accuracy
- Surface mount
- Tape & reel available



ROHS Compliant

PERFORMANCE

Frequency Range	1000 - 2000 MHz
Insertion Loss	0.25 dB Max,
Mean Coupling	10 ± 1 dB
VSWR.....	1.22:1 Max, All ports
Frequency Sensitivity	± 0.75 dB Max.
Directivity	17 dB Min.
Average Power.....	100 (Avg. CW Watts)
Operating Temperature	-55° to +85° C

DESCRIPTION

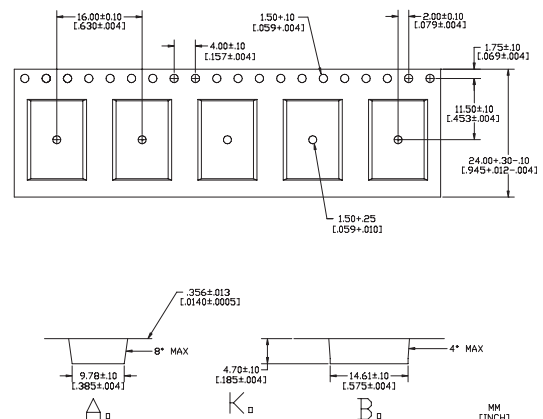
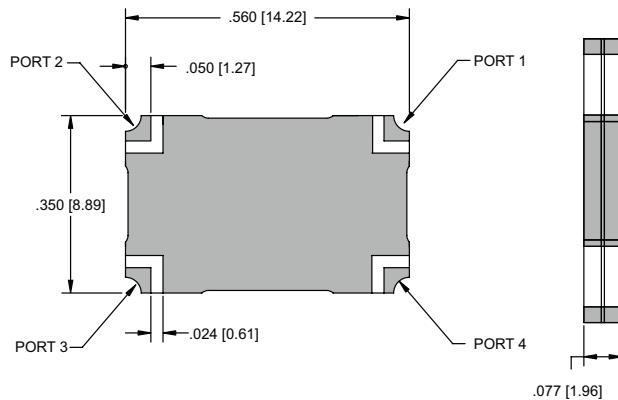
The Multi-Mix® CSD-10H-1.5G provides a 10 dB coupling with low insertion loss, low VSWR, and high directivity. Accurate coupling factors make this series ideal for use in power amplifiers and RF signal distribution and processing equipment.

CSD - 10 directional couplers are fusion bonded multilayer stripline devices. The fusion bonding process yields a homogeneous monolithic dielectric structure with reliability, ruggedness, and electrical performance that is superior to conventional adhesive bonding techniques.

Applications:

- DCS 1800 base station RF subsystems
- PCS 1900 base station RF subsystems
- Telemetry
- GPS

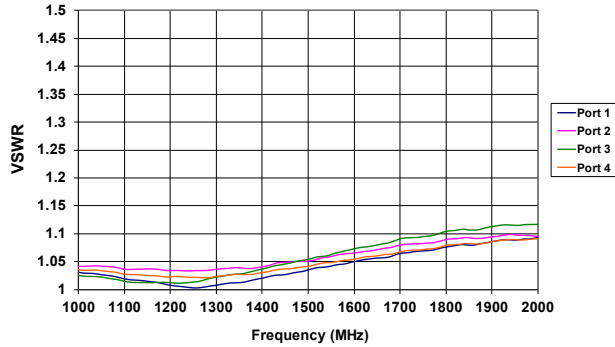
PACKAGE OUTLINE / TAPE & REEL ORIENTATION



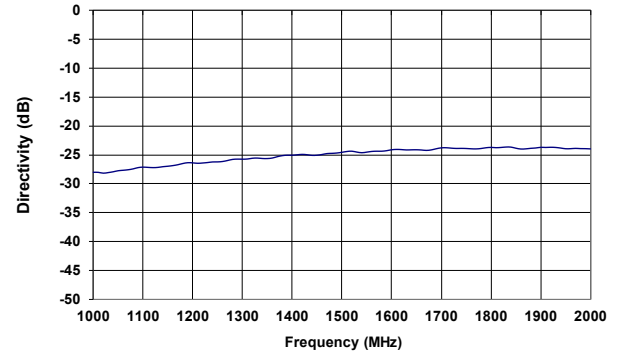
DIRECTIONAL COUPLER - CSD-10H-1.5G

PERFORMANCE DATA

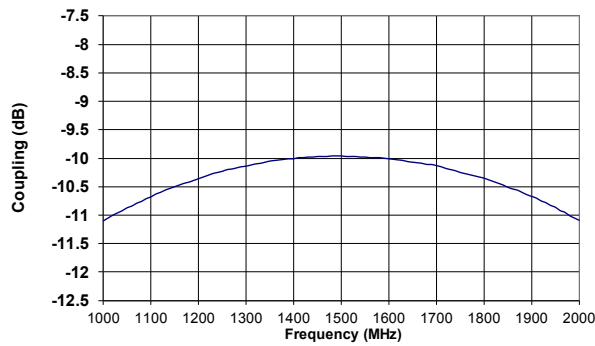
VSWR



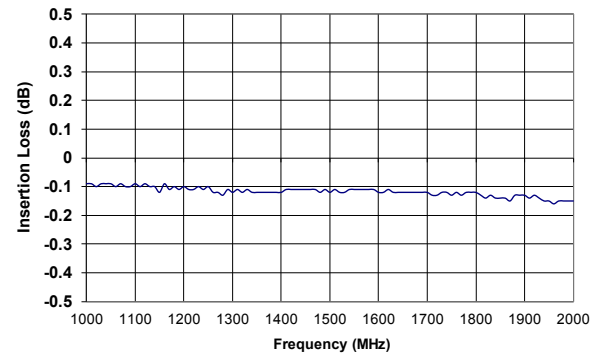
DIRECTIVITY



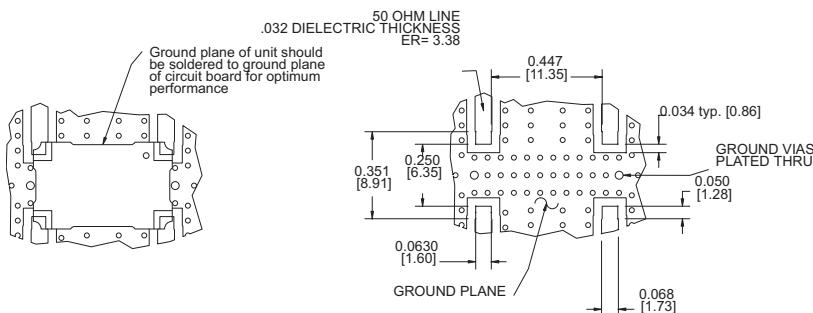
COUPLING



INSERTION LOSS



MOUNTING GUIDELINES



TRUTH TABLE

	1	2	3	4
1	Input	Output	Isolated	Coupled
2	Output	Input	Coupled	Isolated
3	Isolated	Coupled	Input	Output
4	Coupled	Isolated	Output	Input

DIRECTIONAL COUPLER - CSD-10M-3G

TECHNICAL FEATURE

FEATURES

- 2.0 - 4.0 GHz
- Low loss
- High directivity
- Excellent coupling accuracy
- Surface mount
- Tape & reel available

PERFORMANCE

Frequency Range	2.0 - 4.0 GHz
Insertion Loss	0.35 dB Max.
Mean Coupling	10 ± 1 dB
VSWR	1.35:1 Max, All ports
Frequency Sensitivity	± 1 dB Max.
Directivity	14 dB Min.
Average Power	100 (Avg. CW Watts)
Operating Temperature	-55° to +85° C



DESCRIPTION

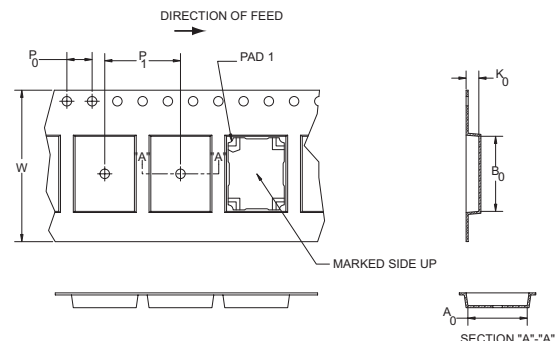
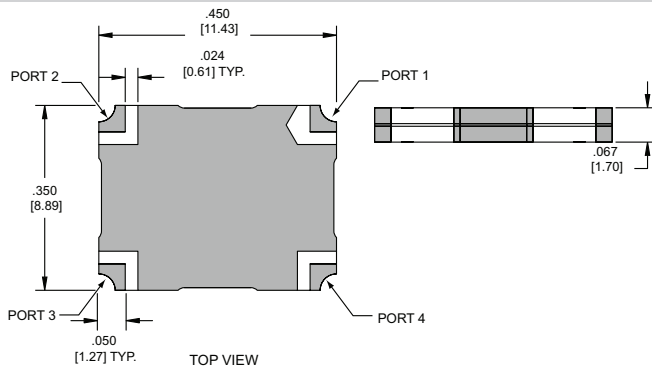
The Multi-Mix® CSD series provides a 20 dB coupling with low insertion loss, low VSWR, and high directivity. Accurate coupling factors make this series ideal for use in power amplifiers and RF signal distribution and processing.

CSD - 20 directional couplers are fusion bonded multilayer stripline devices. The fusion bonding process yields a homogeneous monolithic dielectric structure with reliability, ruggedness, and electrical performance that is superior to conventional adhesive bonding techniques.

Applications:

- WCDMA base station RF systems
- SATCOM

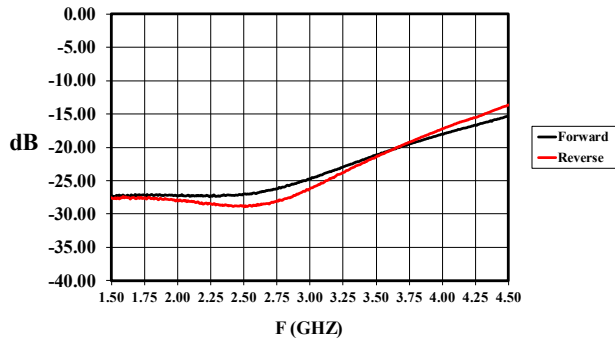
PACKAGE OUTLINE / TAPE & REEL ORIENTATION



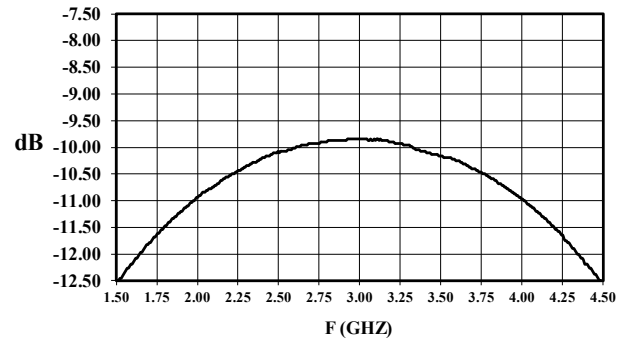
DIRECTIONAL COUPLER - CSD-10M-3G

PERFORMANCE DATA

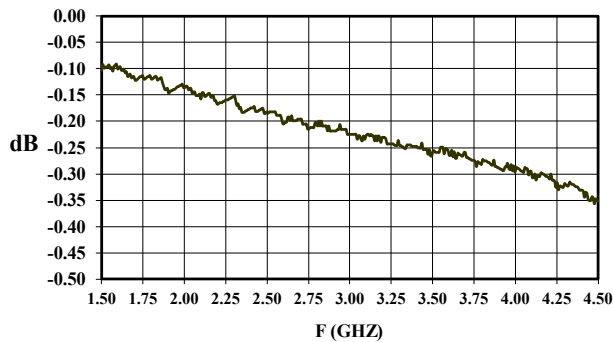
Directivity



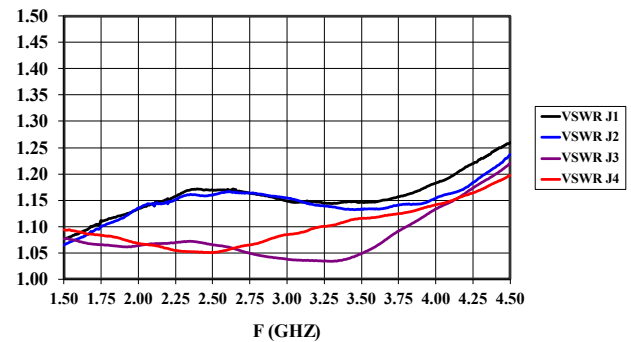
Coupling



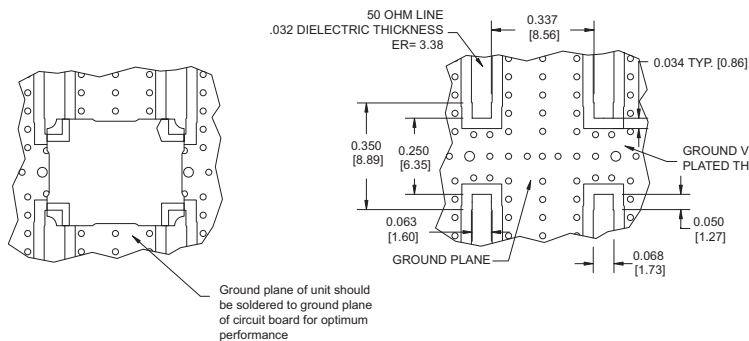
Insertion Loss



VSWR



MOUNTING GUIDELINES



TRUTH TABLE

	1	2	3	4
1	Input	Output	Isolated	Coupled
2	Output	Input	Coupled	Isolated
3	Isolated	Coupled	Input	Output
4	Coupled	Isolated	Output	Input

DIRECTIONAL COUPLER - CSD-20M-3G

TECHNICAL FEATURE

FEATURES

- 2.0 - 4.0 GHz
- Low loss
- High directivity
- Excellent coupling accuracy
- Surface mount
- Tape & reel available

PERFORMANCE

Frequency Range	2.0 - 4.0 GHz
Insertion Loss	0.35 dB Max.
Mean Coupling	20 ± 1 dB
VSWR	1.35:1 Max, All ports
Frequency Sensitivity	± 1 dB Max.
Directivity	12 dB Min.
Average Power	100 (Avg. CW Watts)
Operating Temperature	-55° to +85° C



DESCRIPTION

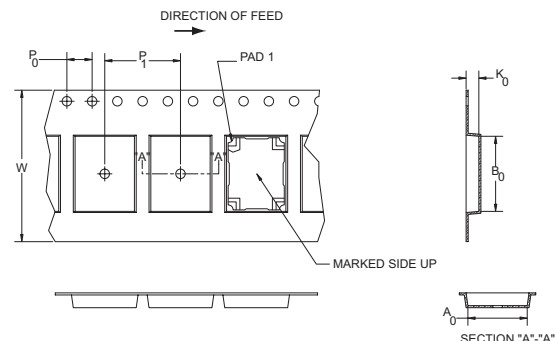
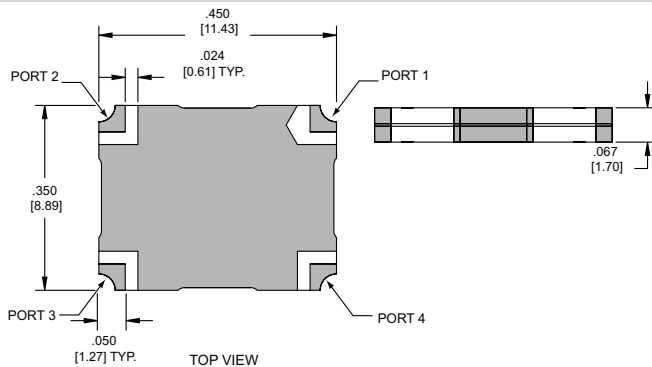
The Multi-Mix® CSD series provides a 20 dB coupling with low insertion loss, low VSWR, and high directivity. Accurate coupling factors make this series ideal for use in power amplifiers and RF signal distribution and processing.

CSD - 20 directional couplers are fusion bonded multilayer stripline devices. The fusion bonding process yields a homogeneous monolithic dielectric structure with reliability, ruggedness, and electrical performance that is superior to conventional adhesive bonding techniques.

Applications:

- WCDMA base station RF systems
- SATCOM

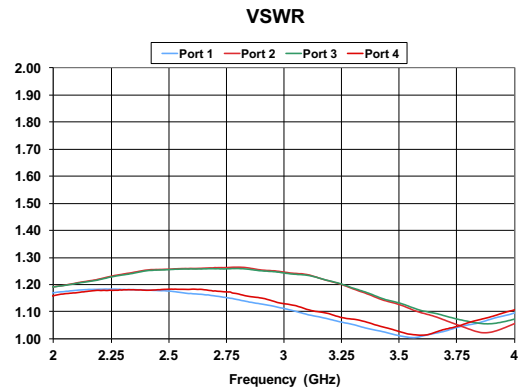
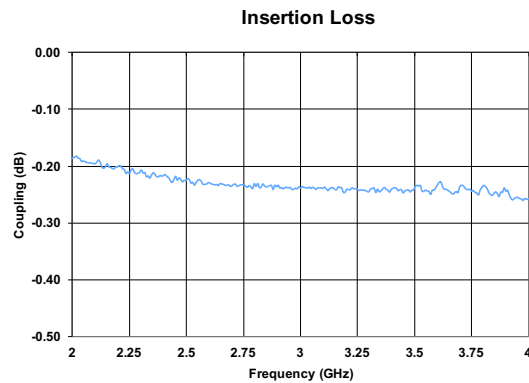
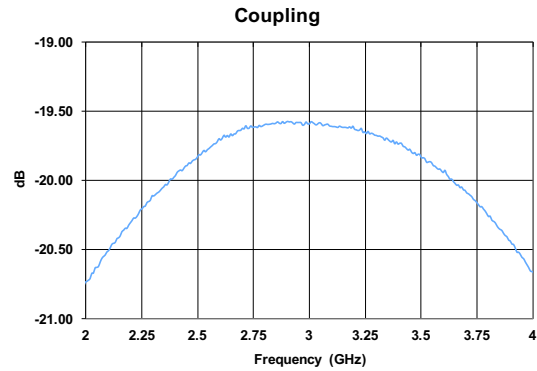
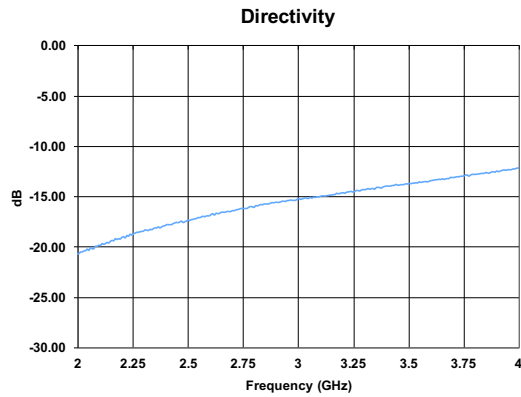
PACKAGE OUTLINE / TAPE & REEL ORIENTATION



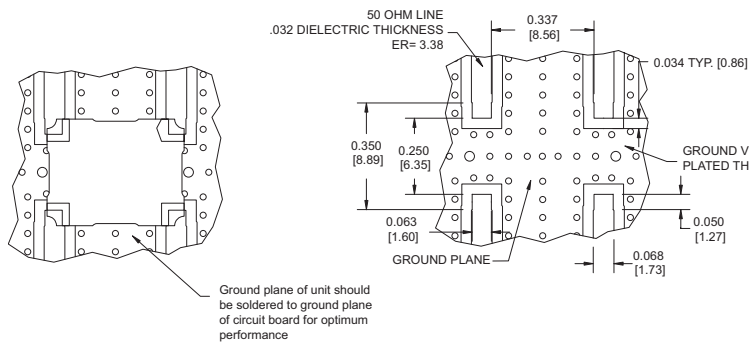
	W	P ₁	P ₀	A ₀	B ₀	K ₀
ENGLISH (in)	0.9449	0.4724	0.1575	0.3701	0.4685	0.0795
METRIC (mm)	24.00	12.00	4.00	9.40	11.90	2.02

DIRECTIONAL COUPLER - CSD-20M-3G

PERFORMANCE DATA



MOUNTING GUIDELINES



TRUTH TABLE

	1	2	3	4
1	Input	Output	Isolated	Coupled
2	Output	Input	Coupled	Isolated
3	Isolated	Coupled	Input	Output
4	Coupled	Isolated	Output	Input

DIRECTIONAL COUPLER - CSD-30BH-2.5G

TECHNICAL FEATURE

FEATURES

- 2.0 - 3.0 GHz
- Low loss
- High directivity
- Excellent coupling accuracy
- Surface mount



PERFORMANCE

Frequency Range	2000 - 3000 MHz
Insertion Loss	0.13 dB, Max.
Mean Coupling	30 ± 1.8 dB
VSWR.....	1.22:1, Max., All ports
Frequency Sensitivity	± 0.75 dB, Max.
Directivity	14 dB, Min.
Average Power.....	450 Watts, Max.
RF Interface.....	Leadless Surface Mount
Operating Temperature	-55° to +85° C

DESCRIPTION

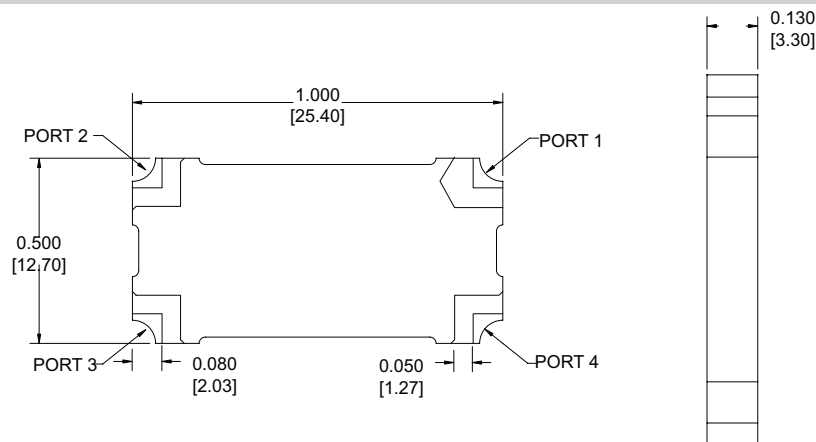
The Multi-Mix® CSD series provides a 30 dB coupling with low insertion loss, low VSWR, and high directivity. Accurate coupling factors make this series ideal for use in power amplifiers and RF signal distribution and processing equipment.

CSD - 30 directional couplers are fusion bonded multilayer stripline devices. The fusion bonding process yields a homogeneous monolithic dielectric structure with reliability, ruggedness, and electrical performance that is superior to conventional adhesive bonding techniques.

Applications

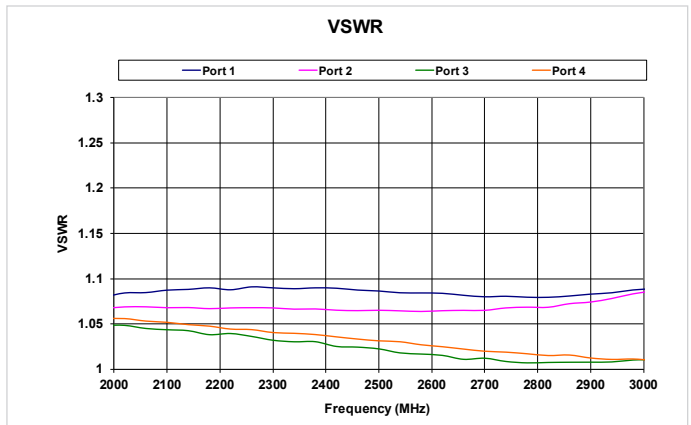
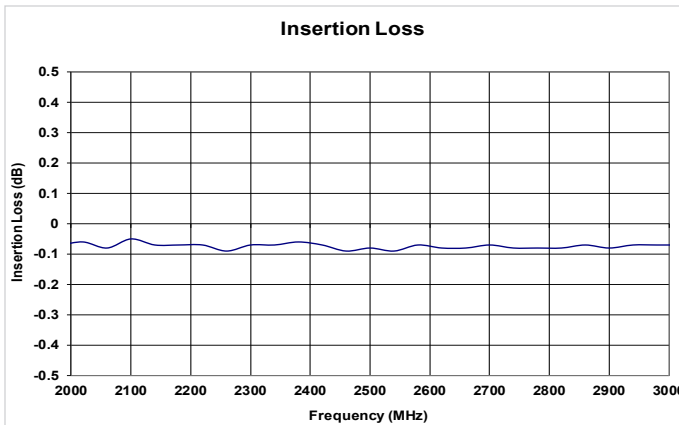
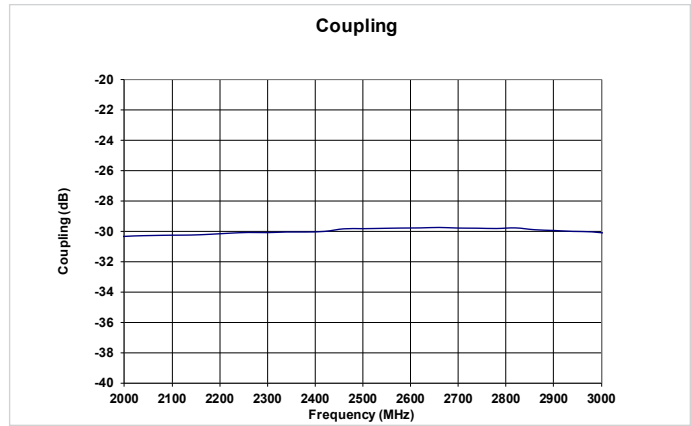
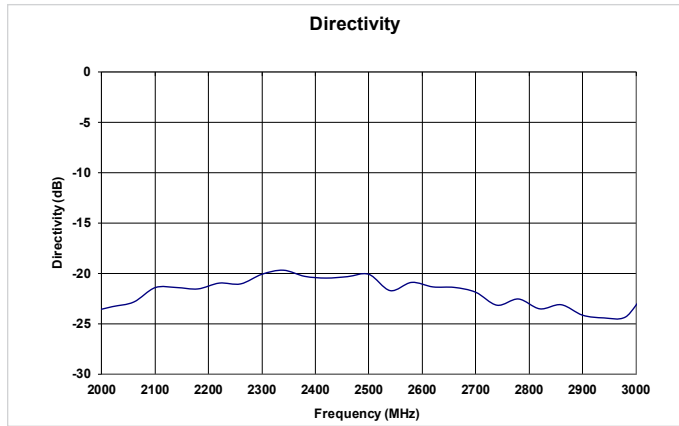
- WCDMA base station RF subsystems
- Satcom
- MMDS
- WLAN

PACKAGE OUTLINE

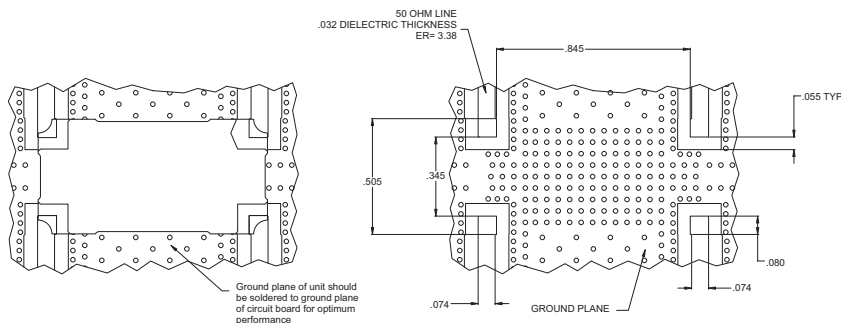


DIRECTIONAL COUPLER - CSD-30BH-2.5G

PERFORMANCE DATA



MOUNTING GUIDELINES



TRUTH TABLE

	1	2	3	4
1	Input	Output	Isolated	Coupled
2	Output	Input	Coupled	Isolated
3	Isolated	Coupled	Input	Output
4	Coupled	Isolated	Output	Input

DIRECTIONAL COUPLER - CSDZ-10Z-3.5G

TECHNICAL FEATURE

FEATURES

- 3.3 - 3.7 GHz
- High Power - 25 WattsCW
- Low Loss
- Low VSWR
- Surface Mount
- Tape & Reel



PERFORMANCE

Frequency Range	3.3 - 3.7 GHz
Mean Coupling	10.0 ± 1.0 dB
Insertion Loss	0.25 dB max.
VSWR	1.3:1 max.
Frequency Sensitivity	±0.25 dB max.
Directivity	15 dB min.
Average Power	25 watts max.
Size	0.175 x 0.175 x 0.043 inches
Weight	0.09g / 0.003 oz.
RF Interface	Surface mount
Operating Temperature Range	-55 to 95°C

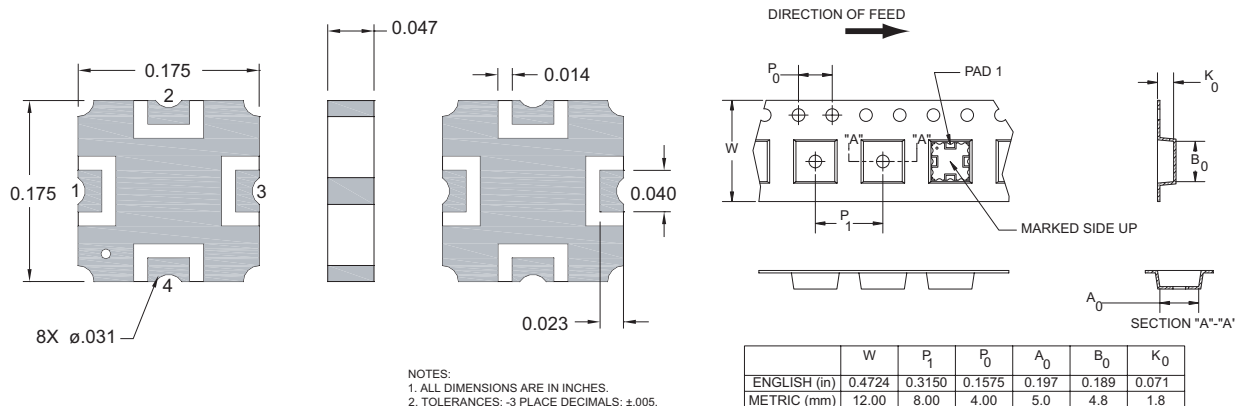
DESCRIPTION

The Multi-Mix® PICO Zapper® CSDZ-Z series provides directional couplers with low insertion loss, low VSWR, and high directivity. Accurate coupling factors make this series ideal for use in power amplifiers and RF signal distribution and processing.

CSDZ-Z directional couplers are fusion bonded multilayer stripline devices. The fusion bonding process yields a homogeneous monolithic dielectric structure with reliability, ruggedness, and electrical performance that is superior to conventional adhesive bonding techniques.

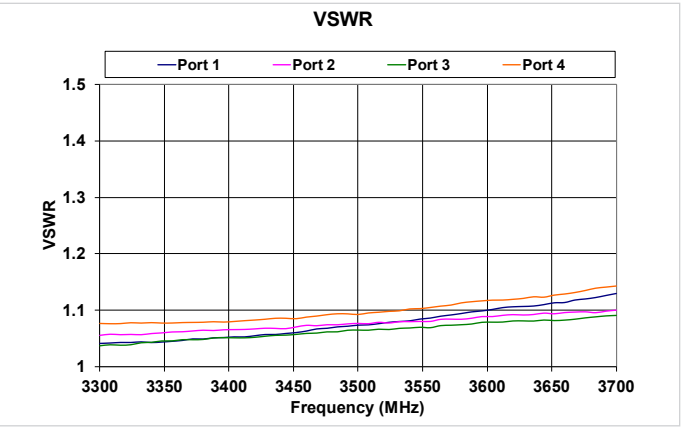
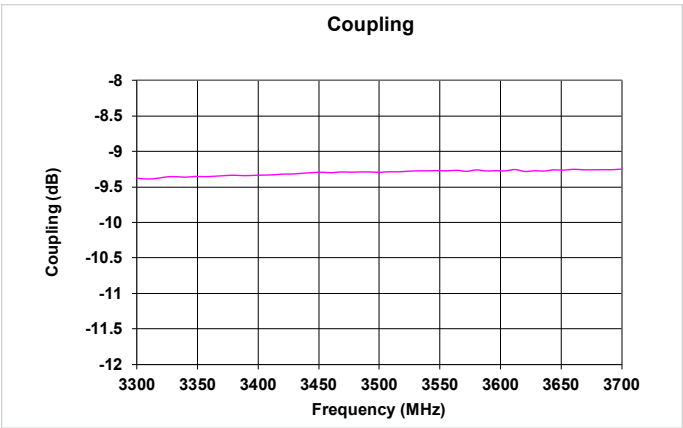
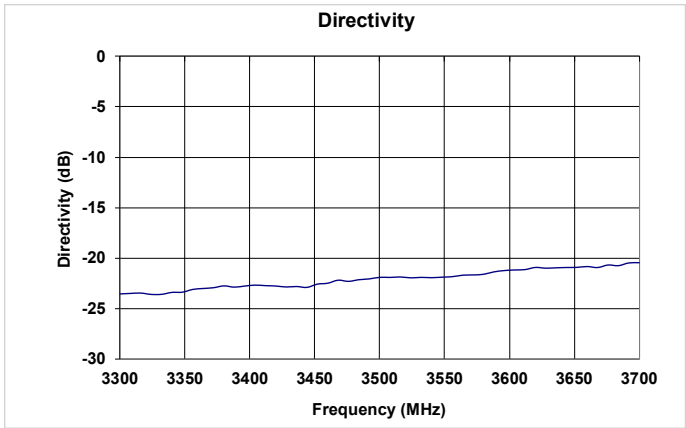
Beginning 05/02/13, individual units will not be marked, but tape and reel packaging will include the Merrimac part # and date code. Individual units will have an index mark etched as shown on the data sheets.

PACKAGE OUTLINE / TAPE & REEL ORIENTATION

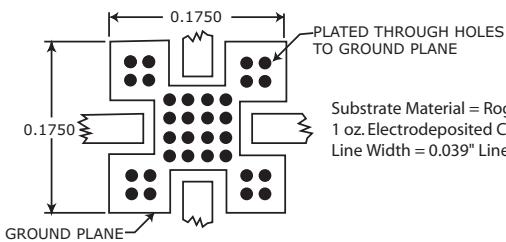


DIRECTIONAL COUPLER - CSDZ-10Z-3.5G

PERFORMANCE DATA



MOUNTING GUIDELINES



Substrate Material = Rogers RO4003; 0.020" Thickness;
 1 oz. Electrodeposited Copper Feed Transmission Lines = Grounded CPW;
 Line Width = 0.039" Line-Ground Spacing = 0.015"

TRUTH TABLE

	1	2	3	4
1	In	Coupled	Isolated	Out
2	Coupled	In	Out	Isolated
3	Isolated	Out	In	Coupled
4	Out	Isolated	Coupled	In