

## DESCRIPTION

A two-way in-phase hybrid power combiner/divider is a 180° hybrid power combiner/divider with the difference port (A) internally terminated.

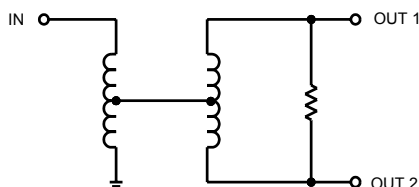
As a two-way power divider, a signal fed into the input port yields two in-phase output signals 3 dB down from the input power.

As a two-way power combiner, signals applied to the output ports yield a Vector sum at the input port.

## FREQUENCY BANDS IN MHz

PARAMETER	20-70	70-1000	1000-2000	2000-3000	3000-4000
Input Return Loss (dB min)	14	14	14	14	14
Output Return Loss (dB min)	11.3	11.3	11.3	11.3	11.3
Insertion Loss (dB max)	1.0	1.0	1.5	2.0	2.8
Amplitude Imbalance (dB max)	± 0.1	± 0.2	± 0.3	± 0.6	± 1.0
Phase Imbalance (° max)	± 1	± 3	± 4	± 6	± 8
Isolation (dB min)	13	20	20	20	17

## FUNCTIONAL SCHEMATIC



## PACKAGE

### MATERIAL:

Frame and leads: F15 Kovar per ASTM standard F15-68, (Chemical composition per MIL-STD-1276, Type K).

**PLATING (all metal parts):** Gold per MIL-G-45204, Type 1, Grade A, Class 1 over nickel per MIL-C-26074, Class 1.

## ENVIRONMENTAL CONDITIONS

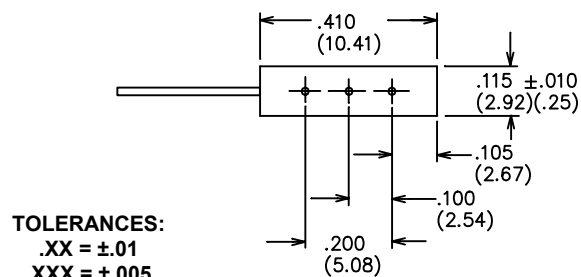
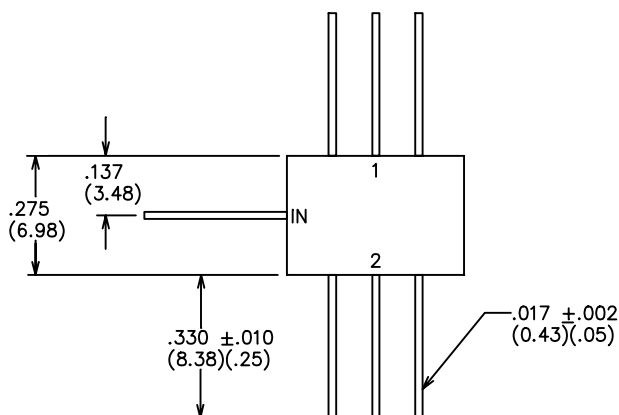
### GUARANTEED ENVIRONMENTAL PERFORMANCE:

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

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

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

ALL DIMENSIONS ARE IN INCHES [mm].



**TOLERANCES:**  
.XX = ±.01  
.XXX = ±.005

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