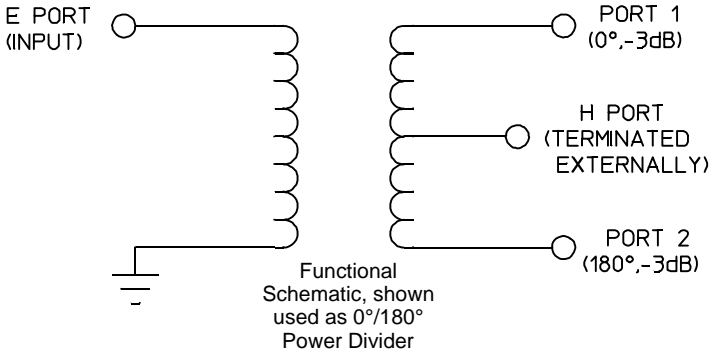


# HJF-A Series 0°/180° POWER DIVIDERS/COMBINERS

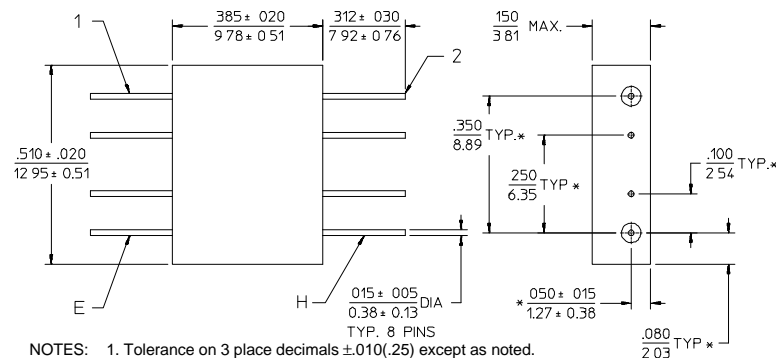
5 to 500 MHz / 4-Port Hybrid Junction / High Isolation / Low Insertion Loss / Hi-Rel Hermetic Pkg



## PRINCIPAL SPECIFICATIONS

Model Number	Frequency Range, MHz	Performance Bandwidth, MHz	Isolation, E - H Ports, dB, Min	Insertion Loss, dB, Max.	Amplitude Balance, dB, Max.	Phase Balance, Max.	VSWR, Max.
HJF-A-200	5 - 400	5 - 10	30	1.5	0.4	± 3°	1.5:1
		10 - 200	30	1.0	0.3	± 3°	1.3:1
		200 - 400	30	1.5	0.4	± 3°	1.5:1
HJF-A-300	100 - 500	100 - 500	25	1.5	0.4	± 4°	1.4:1

## A-Size Flatpack Outline



- NOTES: 1. Tolerance on 3 place decimals ±.010(.25) except as noted.  
 2. Dimensions in inches over millimeters.  
 3. All unmarked pins are case ground.  
 4. Dimensions marked with \* apply only at body.

## GENERAL SPECIFICATIONS

Impedance:	50 Ω nom.
Coupling:	- 3 dB nom.
CW Input:	1 Watt max.
Weight:	0.1 oz (2.8 g) nom.
Operating Temperature:	- 55° to +85°C

## Input/Output Relationships

	E	H	1	2
Isol.	In	0° ref.	0°	0°
In	Isol.	0° ref.	- 180°	

## General Notes:

1. The HJF-A series of four port hybrid junctions uses lumped element circuits to provide a variety of signal processing functions. Among these are:

- Power division with phase shift:** Signals applied to the delta ( $\Delta$ ) port, or E-arm, will divide equally between output ports 1 and 2 (co-linear arms) and be 180° out of phase.
- Power division with no phase shift:** Signals applied to the sum ( $\Sigma$ ) port, or H-arm, will divide equally between output ports 1 and 2 (co-linear arms) and be in phase.
- Vector addition:** Simultaneous application of signals to both E and H arms results in their vector addition to one co-linear port and vector subtraction at the other. Correction for the phase difference between E and H paths to the co-linear ports must be made. This phase equalization may be applied externally or factory installed within the unit at additional cost.

2. All units comply with MIL-P-23971 and can be supplied screened for compliance with additional specifications for military and aerospace applications requiring the highest reliability.

## Typical HJF-A-200 Performance

