

Werlatone® High Power 180° RF Hybrid Combiners/Dividers balance traditional technologies with disruptive microwave techniques. The outcome is a microwave component which provides an order of magnitude improvement over current capabilities. Our newest line of high power, patented 180° RF Hybrid Combiners/Dividers provides an incredible 5:1 bandwidth, while exhibiting exceptionally low loss and superior port-to-port isolation.

Features:

High Power Wide Bandwidths Small Size Excellent Amplitude Balance

Electrical Specifications:

Frequency: 2000 - 6000 MHz
 Power: 150 W CW
 Insertion Loss: 0.65 dB Max.
 VSWR: 1.50:1 Max.
 Phase Balance: 180° ± 8° Max.
 Amplitude Balance: ± 0.4 dB Max.
 Isolation: 20 dB Min.

Mechanical Specifications:

Type: Connectorized
 Material: Aluminum 6061-T6
 Plating Options: H12489-Ag: Immersion Silver (RoHS)
 Operating Temperature: -55°C to +75°C
 Storage Temperature: -60°C to +85°C
 Size: 1.26 x 0.65 x 0.13"

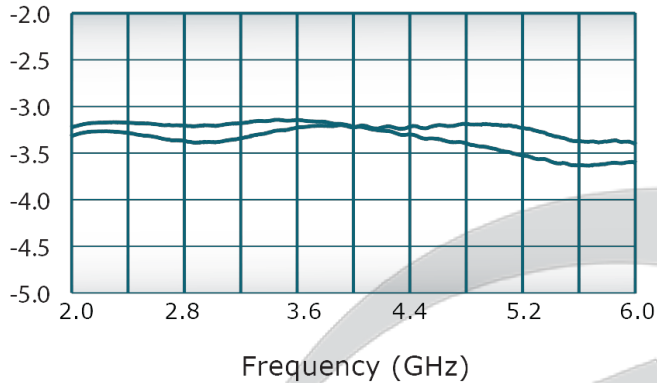
Port Configurations:

Model	J1	J2, J3	J4
H12489	Difference Port	Input Ports	Sum Port

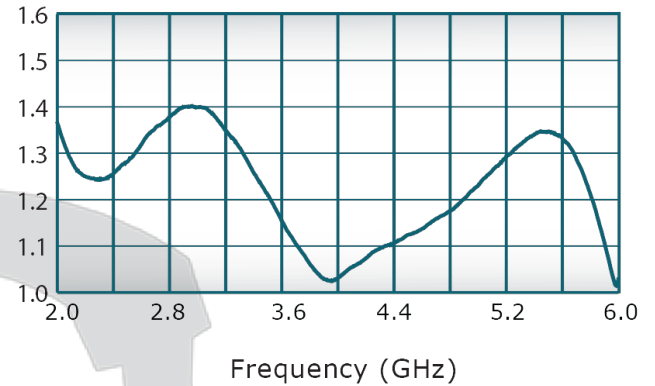
Werlatone's standard line of High Power 180° RF Hybrid Combiners/Dividers covers multiple octaves within a microwave device. Low frequency 180° Hybrid Combiner/Dividers employ proprietary ferrite transmission line techniques, similar to our 0° Combiners/Dividers. Insertion loss in both sum and difference ports is minimal, allowing the hybrid to handle high power over its frequency range. Custom requirements are welcome.

Performance Data (Specifications subject to change without notice):

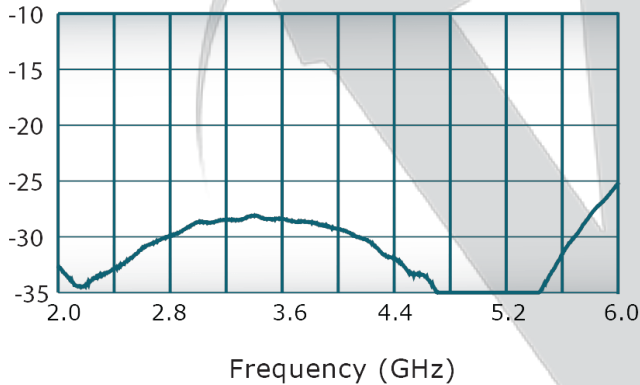
Coupling:



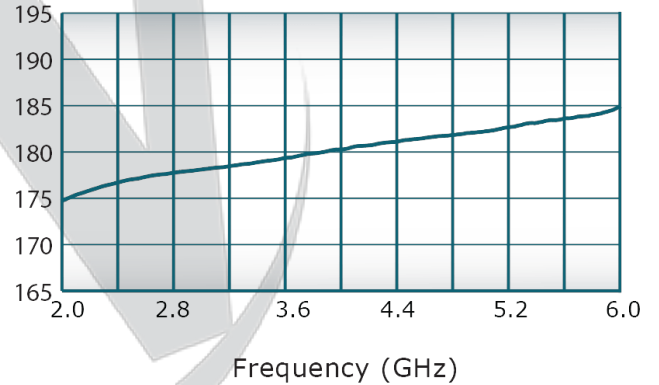
VSWR:



Isolation:



Phase Balance:



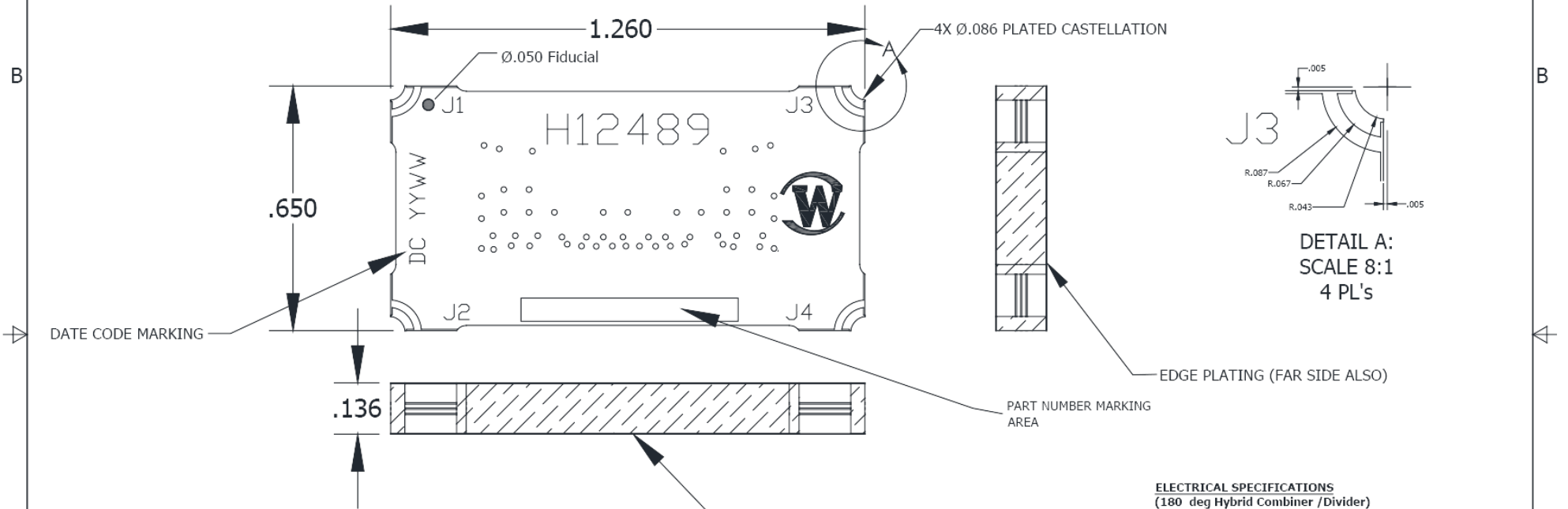
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Werlatone, Inc.

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REVISION HISTORY				
REV	REVISION RECORD	DATE	APPROVED	
-	INITIAL RELEASE	1/13/2022	BW	



NOTES: UNLESS OTHERWISE SPECIFIED

- SURFACE MOUNT UNIT
- PLATING OPTIONS:
 H12489-Ag: Immersion Silver
 H12489-HL: Tin/Lead HASL (HOT AIR SOLDER LEVELED)
 H12489-Au: ENIG
- UNIT INTENDED TO BE SOLDERED TO A MICROSTRIP RF PC BOARD. FOR MORE INFO, REQUEST APPLICATION NOTE AND SUGGESTED MOUNTING FOOTPRINT
- PORTS
 J1 = DIFFERENCE PORT
 J2 = 0° INPUT
 J3 = 180° INPUT
 J4 = SUM PORT

HATCHING DENOTES EDGE PLATING
 EDGE PLATE 4 CASTELLATIONS AND
 WHERE SHOWN ON BOARD EDGES

ELECTRICAL SPECIFICATIONS

(180 deg Hybrid Combiner / Divider)
 Frequency: 2000 - 6000 MHz
 Power: 150 Watts CW
 Insertion Loss: 0.65 dB Max.
 Amplitude Balance: ± 0.40 dB Max.
 Phase Balance: ± 8° Max.
 VSWR: 1.5:1
 Isolation: 20 dB Min.
 Operating Temperature: -55°C To +65°C

UNLESS OTHERWISE SPECIFIED		DWN	DATE	WERLATONE SINCE 1965 17 Jon Barrett Rd Patterson, NY 12563
• INTERPRET DRAWING IAW MIL-STD-100 • DIMENSIONING PER ASME Y14.5M-2009 • PARENTHEetical INFO FOR REF ONLY • DIMENSIONS ARE IN INCHES • TOLERANCES: ANGLE ± 2° 3 PL ± .010 2 PL ± .015		GP	1/13/2022	
NEXT ASSY		CHK	DATE	TITLE H12489 180° HYBRID
USED ON		MS	1/13/2022	
APPLICATION		ENGR	DATE	SIZE CASE CODE DWG NO B 28812 21904-500
THIRD ANGLE PROJECTION		GP	1/13/2022	
		NGR	DATE	SCALE 4:1
		QA	DATE	
		RLSE	DATE	SHEET 1 OF 1
		SCALE	4:1	

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