

DC Pass Directional Coupler

ZADC-40-27HP+

50Ω Up to 40W 1400 to 2700 MHz



Generic photo used for illustration purposes only

CASE STYLE: F14

Connectors Model
N-Type ZADC-40-27HP+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Maximum Ratings

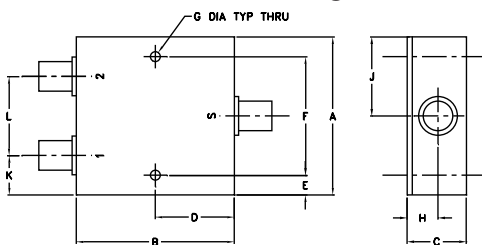
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	2A

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

INPUT	1
OUTPUT	S
COUPLED	2

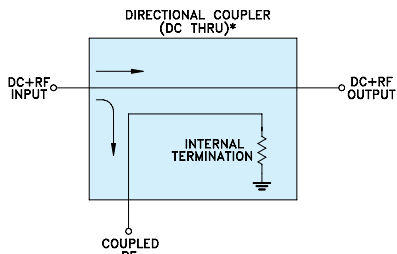
Outline Drawing



Outline Dimensions (inch/mm)

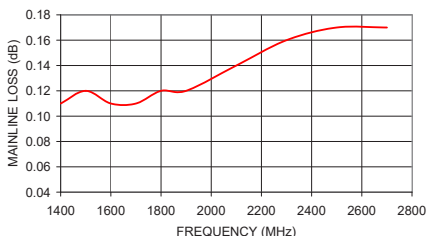
A	B	C	D	E	F	G	H	J	K	L	wt
2.00	2.00	0.75	1.00	0.25	1.500	0.125	0.39	1.00	0.50	1.00	grams
50.80	50.80	19.05	25.40	6.35	38.10	3.18	9.91	25.40	12.70	25.40	170.0

Electrical Schematic

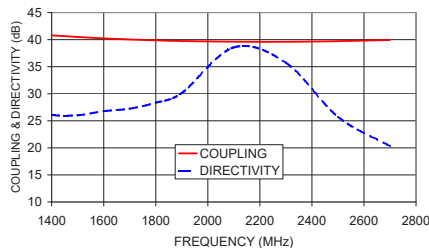


* ELECTRICAL SCHEMATIC FOR DIRECTIONAL COUPLER THAT IS DESIGNED WITHOUT INTERNAL TRANSFORMERS.

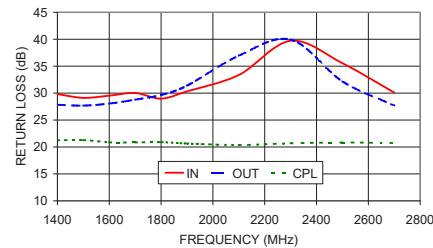
ZADC-40-27HP+ MAINLINE LOSS



ZADC-40-27HP+ COUPLING & DIRECTIVITY



ZADC-40-27HP+ RETURN LOSS



Features

- low mainline loss, 0.2 dB typ.
- excellent VSWR, 1.15:1 typ.
- coupling variation with temperature, from -55°C to 100°C is very small, ±0.1 dB typ.
- useable over 1400-2700 MHz
- DC current through input to output 2A Max. at 40 watt RF output power

Applications

- PCS
- GPS
- PCN

Electrical Specifications at 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		1400	—	2700	MHz
Mainline Loss	1400 - 1700	—	0.15	0.30	dB
	1700 - 2000	—	0.17	0.30	
	2000 - 2300	—	0.19	0.35	
	2300 - 2700	—	0.22	0.35	
Coupling	1400 - 1700	—	41±1.5	—	dB
	1700 - 2000	—	40.5±1.5	—	
	2000 - 2300	—	40±1.5	—	
	2300 - 2700	—	40.5±1.5	—	
Coupling Flatness(±)	1400 - 1700	—	—	±0.8	dB
	1700 - 2000	—	—	±0.4	
	2000 - 2300	—	—	±0.2	
	2300 - 2700	—	—	±0.5	
Directivity	1400 - 1700	20	25	—	dB
	1700 - 2000	20	25	—	
	2000 - 2300	18	25	—	
	2300 - 2700	15	24	—	
Return Loss (Input)	1400 - 1700	—	26	—	dB
	1700 - 2000	—	25	—	
	2000 - 2300	—	24	—	
Return Loss (Output)	1400 - 1700	—	25	—	dB
	1700 - 2000	—	24	—	
	2000 - 2300	—	23	—	
Return Loss (Coupling)	1400 - 1700	—	24	—	dB
	1700 - 2000	—	20	—	
	2000 - 2300	—	20	—	
Input Power	1400 - 2700	—	—	40	W

Typical Performance Data

Frequency (MHz)	Mainline Loss (dB) In-Out	Coupling (dB) In-Cpl	Directivity (dB)	Return Loss (dB)		
				In	Out	Cpl
1400	0.11	40.79	25.99	29.82	27.68	21.24
1500	0.12	40.49	26.02	29.12	27.68	21.28
1600	0.11	40.23	26.78	29.53	28.06	20.86
1700	0.11	40.03	27.24	30.02	28.78	20.85
1800	0.12	39.87	28.34	28.98	29.66	20.9
1900	0.12	39.75	30.13	30.32	31.38	20.65
2100	0.14	39.62	38.57	33.37	36.95	20.37
2300	0.16	39.60	35.73	39.72	39.94	20.68
2500	0.17	39.72	25.74	35.55	32.18	20.83
2700	0.17	39.93	20.32	30.10	27.69	20.73

Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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