HenryTech

Power Splitter/Combiner

HT-ZX10-2-183-S+

2 Way-0° 50Ω 30W 1500 to 18000 MHz

Features

- very wideband, 1500 to 18000 MHz
- low insertion loss, 0.8 dB typ.
- good isolation, 22 dB typ.
- up to 30W power input as splitter
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 2 deg. typ.
- rugged shielded case

Applications

- PCS/DCS
- defense & federal communications
- instrumentation

Electrical Specifications at 25°C

Parameter		Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency			1500		18000	MHz
Insertion Loss (above theoretical 3.0 dB)		1500 - 8000	—	0.4	0.8	dB
		8000 - 13000	—	0.8	1.2	
		13000 - 17000	—	1.0	1.5	
		17000 - 18000	—	1.7	2.5	
Isolation		1500 - 8000	18	22	—	dB
		8000 - 13000	16	20	—	
		13000 - 17000	16	20	—	
		17000 - 18000	—	14	—	
Phase Unbalance		1500 - 8000	—	1.0	4	Degree
		8000 - 13000	—	2.0	5	
		13000 - 17000	—	4.0	9	
		17000 - 18000	—	4.0	9	
Amplitude Unbalance		1500 - 8000	—	0.1	0.3	dB
		8000 - 13000	—	0.15	0.4	
		13000 - 17000	—	0.2	0.6	
		17000 - 18000	—	0.4	0.9	
VSWR (Port S)		1500 - 8000	—	1.22	1.5	:1
		8000 - 13000	—	1.43	1.7	
		13000 - 17000	—	1.60	—	
		17000 - 18000	—	2.00	—	
VSWR (Port 1-2)		1500 - 8000	—	1.25	1.6	:1
		8000 - 13000	—	1.50	1.7	
		13000 - 17000	—	1.50	—	
		17000 - 18000	—	1.70	—	
Power Handling[3]	As Splitter[1]	1500 - 8000	—	—	30	W
		8000 - 13000	—	—	16	
		13000 - 17000	—	—	12.5	
		17000 - 18000	—	—	10	
	As Combiner[2]	1500-18000	—	—	1.0	

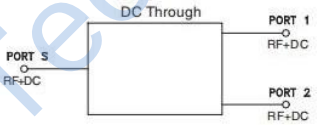
1. All outputs must terminate 50 ohm (VSWR 1.5:1 or better)
2. As a combiner of non-coherent signals, max. power per port is 1.0 watt power rating divided by number of ports.
3. Alternative heat sinking and heat removal must be provided by the user to limit maxmum base-plate temperature to 60°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 10°C/W.

Maximum Ratings
Operating Temperature(@<30W) -55°C to 60°C
Operating Temperature(@<10W) -55°C to 100°C
Storage Temperature -55°C to 100°C
DC Current 600 mA (300mA for each port)
Permanent damage may occur if any of these limits are exceeded.

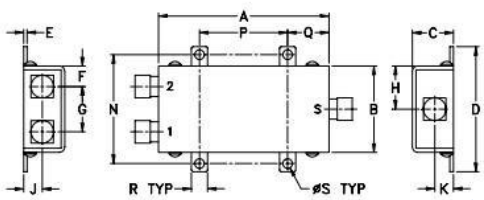
Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	2

Electrical Schematic



Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
1.90	.96	.46	1.39	.04	.23	.50	.48	.21
48.26	24.38	11.68	35.31	1.02	5.84	12.70	12.19	5.33

K	L	M	N	P	Q	R	S	wt
.21	--	--	1.205	.980	.46	.18	.106	grams
5.33	--	--	30.61	24.89	11.68	4.57	2.69	50

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Typical Performance Data

Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
1500	3.22	3.24	0.02	23.11	0.07	1.32	1.16	1.16
2000	3.17	3.18	0.01	26.34	0.09	1.10	1.14	1.13
4000	3.26	3.30	0.04	38.19	0.33	1.07	1.09	1.10
5000	3.33	3.36	0.03	20.51	0.31	1.20	1.12	1.11
6000	3.32	3.37	0.05	26.65	0.28	1.05	1.15	1.15
7000	3.43	3.51	0.08	22.66	0.59	1.29	1.28	1.31
8000	3.41	3.42	0.01	23.36	0.76	1.13	1.30	1.31
9000	3.62	3.67	0.05	36.23	0.34	1.43	1.47	1.46
10000	3.54	3.63	0.09	27.17	0.66	1.26	1.26	1.27
11000	3.61	3.68	0.06	20.42	0.88	1.20	1.12	1.13
12000	3.70	3.77	0.07	18.79	1.37	1.40	1.29	1.30
14000	3.87	3.95	0.08	19.02	1.33	1.47	1.21	1.23
15000	3.72	3.84	0.12	31.12	1.27	1.07	1.10	1.12
16000	3.96	4.08	0.12	23.79	1.25	1.58	1.40	1.44
18000	4.39	4.58	0.19	12.93	1.24	1.86	1.44	1.47

1. Total Loss = Insertion Loss + 3dB splitter loss.