

Power Splitter/Combiner

Features

- isolation resistor, external 100 ohms
- low insertion loss, 0.7 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- excellent phase unbalance, 1.5 deg. typ.
- high isolation, 22 dB typ.
- excellent power handling, 4W as splitter
- small size, 0.12"×0.06"×0.035"
- ESD non-sensitive
- temperature stable LTCC technology
- wrap around terminations for excellent solderability
- low cost

Applications

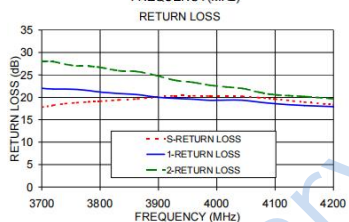
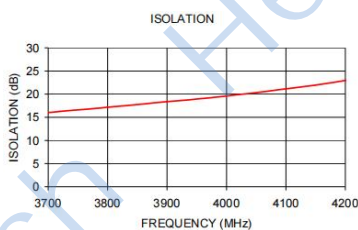
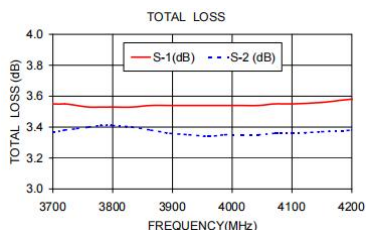
- maritime mobile

Electrical Specifications at 25°C

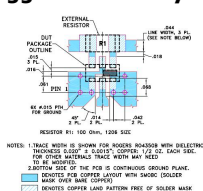
Parameter	Frequency(MHz)	Min.	Typ.	Max.	Unit
Frequency Range		3700		4200	MHz
Insertion Loss, above 3.0 dB	3700-4200 3800-4100		0.7 0.7	1.0 1.0	dB
Isolation	3700-4200 3800-4100	13 15	22 22		dB
Phase Unbalance	3700-4200 3800-4100		1.5 1.5	4.0 4.0	Degree
Amplitude Unbalance	3700-4200 3800-4100		0.2 0.2	0.4 0.4	dB
Return Loss (Input)	3700-4200 3800-4100		14 17		dB
Return Loss (Output)	3700-4200 3800-4100		16 17		dB

TYPICAL PERFORMANCE DATA

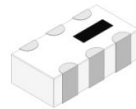
Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	Return Loss (dB)	
	S-1	S-2				S	1 2
3700.00	3.55	3.37	0.18	16.04	1.57	17.81	22.02 28.10
3720.00	3.55	3.38	0.17	16.28	1.65	18.21	21.85 27.94
3740.00	3.54	3.39	0.15	16.49	1.66	18.58	21.83 27.36
3460.00	3.53	3.40	0.13	16.69	1.60	18.81	21.77 27.02
3780.00	3.53	3.41	0.12	16.91	1.46	18.96	21.52 26.95
3800.00	3.53	3.42	0.12	17.16	1.31	19.12	21.17 26.69
3864.00	3.54	3.38	0.16	17.92	1.09	19.67	20.59 25.75
3896.00	3.54	3.36	0.18	18.33	1.16	20.06	20.04 24.89
3960.00	3.54	3.34	0.19	19.05	1.26	20.35	19.56 23.33
4016.00	3.54	3.35	0.19	19.83	1.35	20.24	19.39 22.30
4044.00	3.54	3.35	0.19	20.24	1.35	20.20	19.35 21.98
4072.00	3.55	3.36	0.19	20.68	1.35	19.94	18.95 21.14
4100.00	3.55	3.36	0.19	21.14	1.38	19.60	18.59 20.57
4150.00	3.56	3.37	0.19	21.95	1.40	18.95	18.16 20.17
5200.00	3.58	3.38	0.19	22.97	1.44	18.34	17.92 19.66



Suggested PCB Layout



HT-SCN-2-45+



2 Way-0° 50Ω 3700 to 4200 MHz

Maximum Ratings

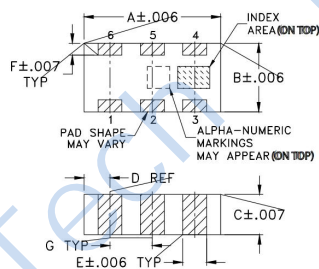
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	4W max. at 25°C

*Derate linearly to 1.3W at 100°C ambient. Power input as combiner is limited by rating of external 100Ω Resistor. Permanent damage may occur if any of these limits are exceeded.

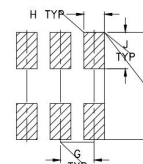
Pin Connections

SUM PORT	2
PORT 1	6
PORT 2	4
GROUND	1,3,5
PORT 1-2	resistor external 100 OHMS

Outline Drawing



PCB Land Pattern



Suggested Layout
Tolerance to be within ±0.05

Outline Dimensions: Unit (mm)

A	3.20	B	1.60	C	0.89
D	0.61	E	0.56	F	0.28
G	0.99	H	0.61	J	1.07
K	3.12	wt		0.02g	

electrical schematic

