

Non-Catalog Model

Power Splitter/Combiner

SYPQ-113-1

2 Way-90°

Important Note

This is a non-catalog model and can be manufactured on specific request.
Pricing and delivery information can be supplied upon request.



Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : AH202

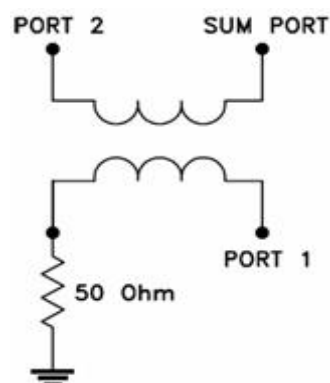
ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		108		118 MHz
Isolation	108 - 118 MHz	20	25	
Insertion Loss				
Average of Coupled Outputs	108 - 118 MHz		0.15	0.40 dB
above 3.0 dB				
Phase Unbalance	108 - 118 MHz		0.034	3.000 deg.
Amplitude Unbalance	108 - 118 MHz		0.186	1.000 dB
VSWR	SUM Port		1.07	(:1)
	OUT Ports		1.07	(:1)

Notes: Matched power rating: 1 Watt.
Internal load dissipation: 0.125 Watt.
Non-hermetic.

MAXIMUM RATINGS	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

PIN CONNECTIONS	
SUM PORT	1
PORT 1	5
PORT 2	8
GND EXT	2, 3, 6, 7
50Ω TERMINATION	4

Functional Diagram



2 Way-90° Power Splitter/Combiner

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Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)			AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2	AVG.					S	1	2
108.0	2.93	3.32	3.13	0.39	27.29	89.99	108.0	1.06	1.06	1.07
108.3	2.94	3.32	3.13	0.38	27.29	90.01	108.3	1.06	1.06	1.07
108.5	2.95	3.31	3.13	0.36	27.29	89.94	108.5	1.06	1.06	1.07
108.8	2.95	3.30	3.13	0.35	27.28	89.98	108.8	1.07	1.06	1.07
109.0	2.97	3.29	3.13	0.32	27.29	90.00	109.0	1.07	1.06	1.07
109.3	2.98	3.28	3.13	0.30	27.29	89.99	109.3	1.07	1.06	1.07
109.5	2.98	3.27	3.13	0.29	27.29	89.94	109.5	1.07	1.06	1.07
109.8	2.99	3.26	3.13	0.27	27.31	89.98	109.8	1.07	1.06	1.07
110.0	3.00	3.25	3.13	0.25	27.30	90.00	110.0	1.07	1.06	1.07
110.3	3.01	3.25	3.13	0.24	27.29	89.96	110.3	1.07	1.06	1.07
110.5	3.03	3.23	3.13	0.20	27.29	90.01	110.5	1.07	1.06	1.07
110.8	3.04	3.23	3.14	0.19	27.28	89.96	110.8	1.07	1.06	1.07
111.0	3.04	3.21	3.13	0.17	27.30	90.00	111.0	1.07	1.06	1.07
111.3	3.04	3.20	3.12	0.16	27.28	89.99	111.3	1.07	1.06	1.07
111.5	3.06	3.19	3.13	0.13	27.29	89.94	111.5	1.07	1.06	1.07
111.8	3.07	3.18	3.13	0.11	27.30	90.00	111.8	1.07	1.07	1.07
112.0	3.08	3.17	3.13	0.09	27.30	89.99	112.0	1.07	1.06	1.07
112.3	3.09	3.16	3.13	0.08	27.26	89.95	112.3	1.07	1.07	1.07
112.5	3.10	3.16	3.13	0.06	27.29	89.91	112.5	1.07	1.07	1.07
112.8	3.11	3.15	3.13	0.04	27.28	89.94	112.8	1.07	1.07	1.07
113.0	3.12	3.14	3.13	0.02	27.28	89.97	113.0	1.07	1.07	1.07
113.3	3.13	3.13	3.13	0.00	27.27	89.94	113.3	1.07	1.07	1.07
113.5	3.14	3.11	3.13	0.02	27.28	89.97	113.5	1.07	1.07	1.07
113.8	3.14	3.11	3.13	0.04	27.29	89.91	113.8	1.07	1.07	1.07
114.0	3.14	3.10	3.12	0.04	27.27	89.94	114.0	1.07	1.07	1.07
114.3	3.16	3.10	3.13	0.06	27.27	90.01	114.3	1.07	1.07	1.07
114.5	3.17	3.09	3.13	0.09	27.28	89.93	114.5	1.07	1.07	1.07
114.8	3.18	3.07	3.13	0.10	27.28	89.90	114.8	1.07	1.07	1.07
115.0	3.19	3.07	3.13	0.11	27.29	89.94	115.0	1.07	1.07	1.07
115.3	3.20	3.07	3.14	0.13	27.28	89.95	115.3	1.07	1.07	1.07
115.5	3.21	3.06	3.14	0.15	27.29	89.96	115.5	1.07	1.07	1.07
115.8	3.21	3.05	3.13	0.17	27.30	89.94	115.8	1.07	1.07	1.07
116.0	3.23	3.04	3.14	0.19	27.28	89.96	116.0	1.07	1.07	1.07
116.3	3.23	3.02	3.13	0.21	27.28	89.94	116.3	1.07	1.07	1.07
116.5	3.24	3.02	3.13	0.22	27.28	90.00	116.5	1.07	1.07	1.07
116.8	3.25	3.01	3.13	0.24	27.29	89.98	116.8	1.07	1.07	1.07
117.0	3.26	3.01	3.14	0.25	27.28	89.99	117.0	1.07	1.07	1.07
117.3	3.27	3.00	3.14	0.28	27.27	89.96	117.3	1.07	1.07	1.07
117.5	3.29	2.99	3.14	0.29	27.29	89.97	117.5	1.07	1.07	1.07
117.8	3.29	2.98	3.14	0.31	27.28	89.96	117.8	1.07	1.07	1.07
118.0	3.30	2.98	3.14	0.32	27.28	90.01	118.0	1.07	1.07	1.07

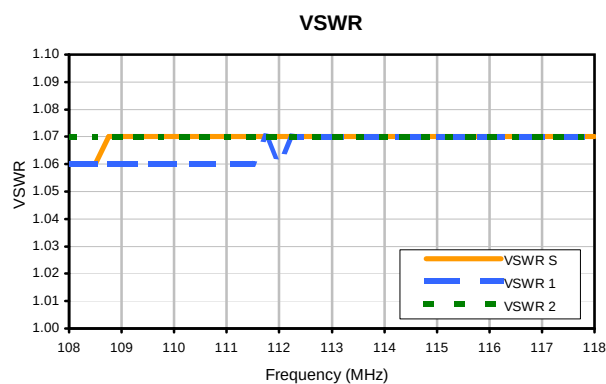
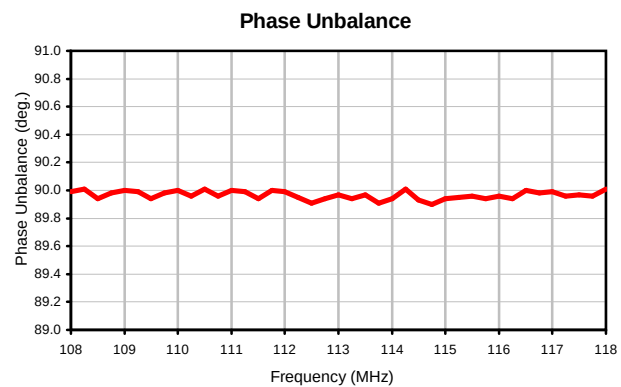
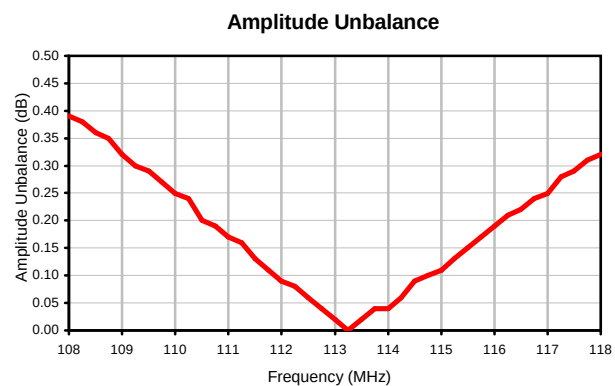
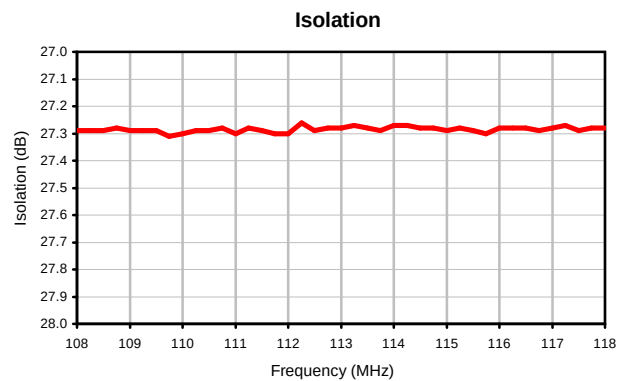
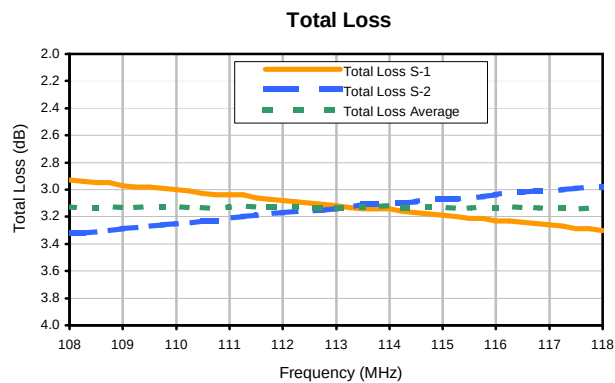
¹ Total Loss = Insertion Loss+ 3dB Splitter Loss

REV. X2
SYPQ-113-1
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Page 1 of 1

2 Way-90° Power Splitter/Combiner

SYPQ-113-1

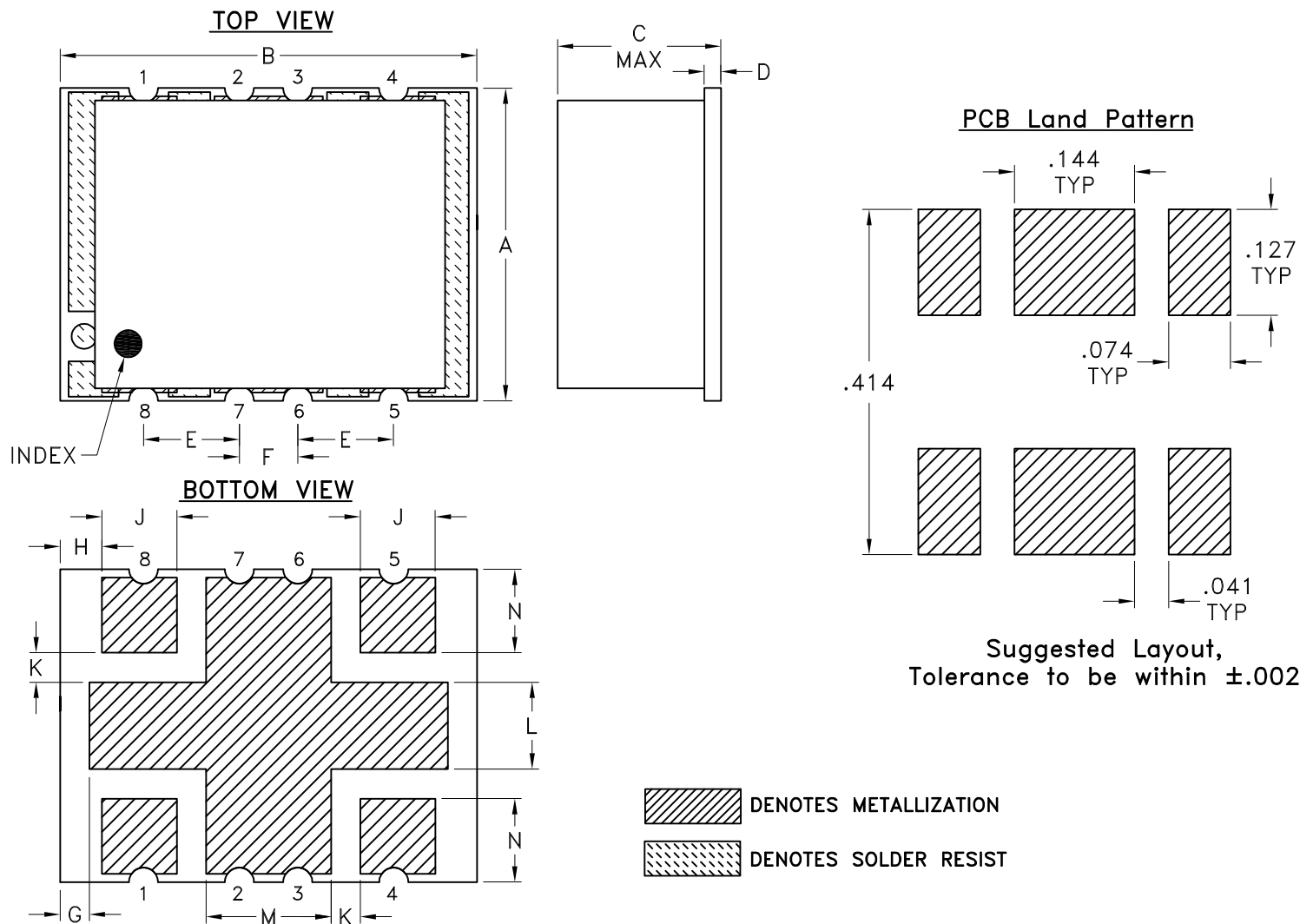
Typical Performance Curves



REV. X2
SYPQ-113-1
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Page 1 of 1

Outline Dimensions

AH202



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N	WT, GRAM
AH202	.38 (9.65)	.50 (12.70)	.25 (6.35)	.020 (0.51)	.115 (2.92)	.070 (1.78)	.035 (0.89)	.050 (1.27)	.090 (2.29)	.040 (1.02)	.105 (2.67)	.140 (3.56)	.095 (2.41)	.80

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm.01$; 3 Pl. $\pm.005$

Notes:

- Case material: Plastic.
- Base material: Printed wiring laminate.
- Termination finish:
 - For RoHS 3-5 μ inch (.08-.13 microns) Gold over 120-240 μ inch (3.05-6.10 microns) Nickel plate.
 - All models, (+) suffix.
 - For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.

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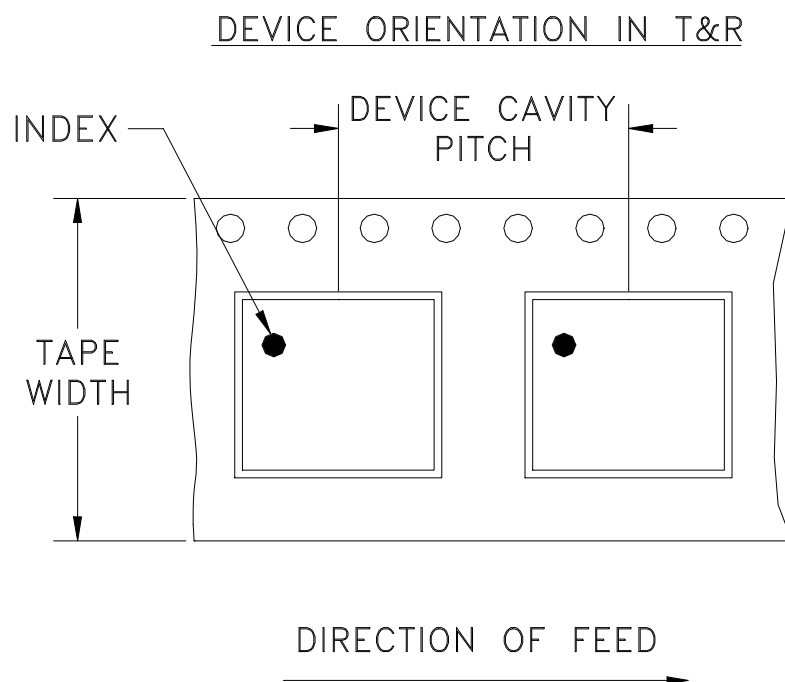
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Tape Width, mm	Device Cavity Pitch, mm	Reel Size, inches	Devices per Reel
24	12	13	200

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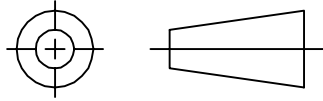
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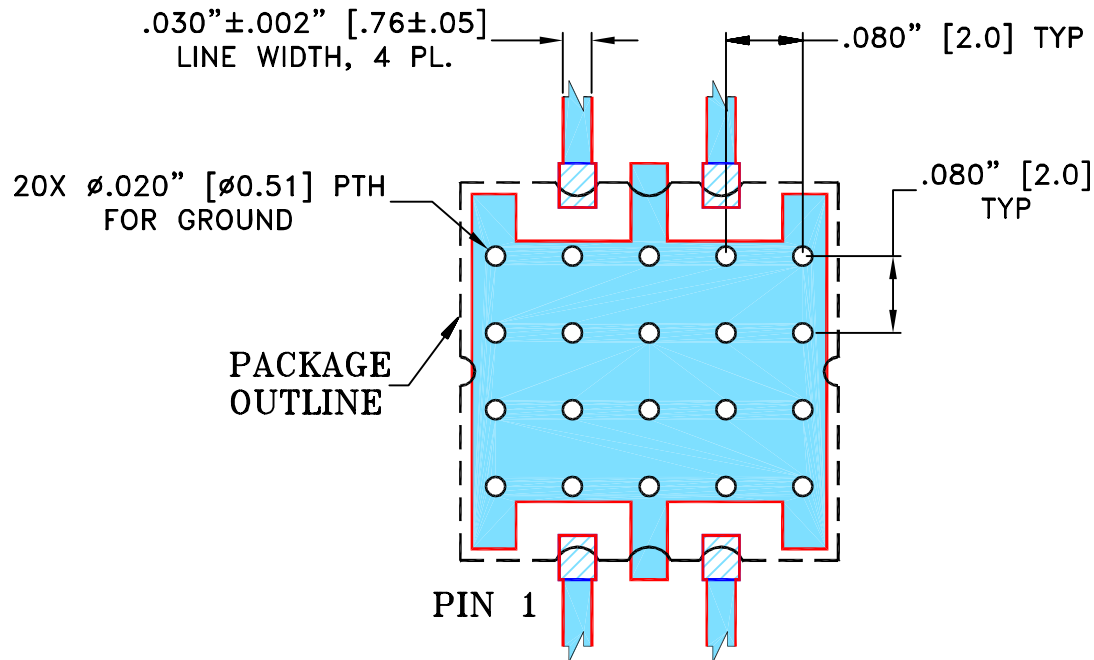
THIRD ANGLE PROJECTION



REVISIONS

REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	M103787	NEW RELEASE (FROM RAVON)	03/06	RZ	HH
A	M121588	UPDATE GROUND PLANE	02/09	EM	KN
A	R75766	UPDATE GROUND PLANE	02/09	EM	KN

SUGGESTED MOUNTING CONFIGURATION
FOR HE1135 CASE STYLE, qg PIN CONNECTION, 75 OHM

**NOTE:**

1. TRACE WIDTH IS SHOWN FOR R04350 WITH DIELECTRIC THICKNESS. $.030'' \pm .002''$. COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.



DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)



DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

UNLESS OTHERWISE SPECIFIED

INITIALS

DATE

DIMENSIONS ARE IN INCHES

DRAWN

RZ (RAVON)

2 MAR 06

TOLERANCES ON:

CHECKED

RZ (RAVON)

2 MAR 06

2 PL DECIMALS ±
3 PL DECIMALS ± .005

APPROVED

HH (RAVON)

2 MAR 06

ANGLES ±
FRACTIONS ±

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ASHEETA1.DWG REV:A DATE:01/12/95



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PL, qg, HE1135, TB-381, 75 OHM

SIZE
A

CODE IDENT
15542

DRAWING NO:
98-PL-238

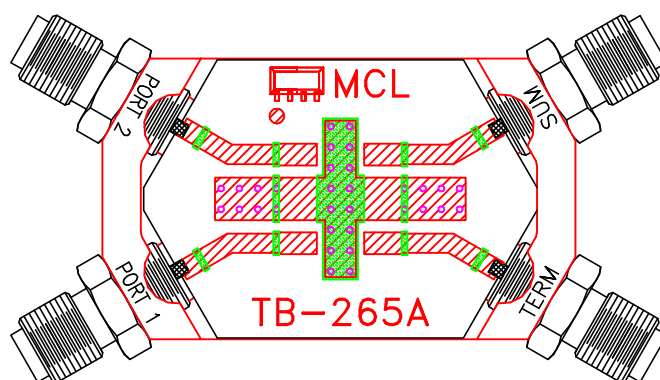
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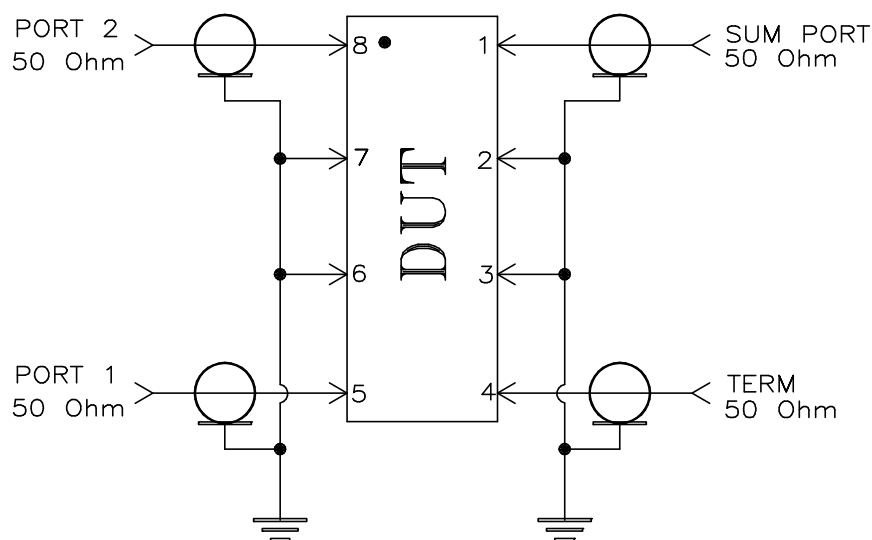
SCALE: 5:1

SHEET: 1 OF 1

Evaluation Board and Circuit



TB-265



Schematic Diagram

Notes:

1. SMA Female connectors.
2. PCB Material: Rogers R04350 or equivalent,
Dielectric Constant=3.5, Thickness=.030 inch.

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