

High Isolation

Switches

SPDT, DC to 4.5 GHz

NEW!

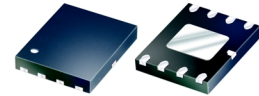
SWM-2-50DR
SWMA-2-50DR

Features

- high isolation, 65 dB typ. at 1 GHz
- low insertion loss, 0.7 dB typ. at 1 GHz
- integral TTL driver

Applications

- transmitter/receiver isolation
- automated switching networks



CASE STYLE: DL1020
PRICE: \$5.30 ea. QTY. (10-49)

Electrical Specifications (T_{AMB}= 25°C)

MODEL NO.	FREQ. (GHz)	REFLECTIVE	ABSORPTIVE	INSERTION LOSS (dB)								IN-OUT ISOLATION (dB)								1 dB COMPRESSION (dBm)							
				FREQUENCY BAND								FREQUENCY BAND								FREQUENCY BAND							
				A1	A	B	C	A1	A	B	C	A1	A	B	C	A1	A	B	C	A1*	A	B	C	A1*	A	B	C
SWM-2-50DR	DC-4.5	•	•	0.6	0.9	0.7	1.2	0.9	1.4	1.6	1.9	75	65	55	45	45	37	35	27	20	25	25	24	20	25	25	24
SWMA-2-50DR	DC-4.5	•	•	0.6	0.9	0.7	1.1	0.9	1.4	1.4	1.9	80	65	65	55	55	45	38	27	20	25	25	24.7	20	25	25	24.7

A1= DC-100 MHz, A= 0.1-1 GHz, B= 1-2 GHz, C= 2-4.5 GHz

* Drops to 17.0 dBm at 10 MHz.

Switching Specifications

Power Supply Voltage	Current, mA
+5V±.20	9 max.
-5V±.20	9 max.
TTL Control	Voltage, V Current, mA Control Logic
low threshold	0 min., 0.8 max. 0.2 RF1 RF2
high threshold	2 min., 5 max. 5 OFF ON
VS _{WR} * (:1)	1.15 typ. to 2 GHz, 1.3 typ. to 4.5 GHz
Rise/Fall Time, ns	5 typ., 15 max.
Switching Time, ns turn on/off	10 typ., 20 max.
Video leakage**, mv p-p	30 typ.

NOTES:

Operating Temperature, -40°C to 85°C

Storage Temperature, -55°C to 100°C

* For all states of absorptive switch, and for reflective switch in "ON" condition; for reflective switch "OFF" port, 5:1 VS_{WR} typ.

** Video leakage or break through is defined as leakage of TTL switching signal to RF output ports.

1. Absolute maximum power and voltage ratings:

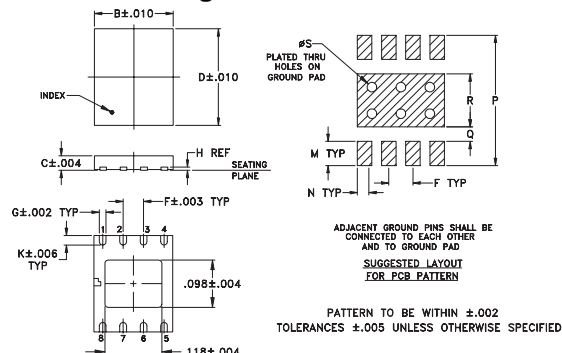
RF input power, 250 mW

Supply voltage: ±6 V DC

2. OFF state of RF output is low impedance.

3. Prices and specifications subject to change without notice.

Outline Drawing



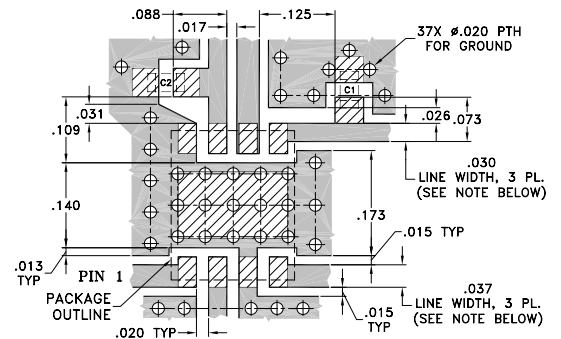
Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	wt.										
— .193	.035	.236	— .050	.017	.008	— .024	— .050	.030	.270	.030	.110	.020	grams	— 4.90	0.90	6.00	— 1.27	0.43	0.20	— 0.60	— 1.27	0.76	6.86	0.76	2.79	0.51	.08

Pin Configuration

RF IN	6
RF OUT 1	1
RF OUT 2	4
TTL IN	2
+5V	5
-5V	7
TTL GND	3
GND	8
GND	PADDLE

Demo Board MCL P/N: TB-161 Suggested PCB Layout (PL-122)



- NOTE:
1. TRACE WIDTH IS SHOWN FOR ROGERS R04350 WITH DIELECTRIC THICKNESS .020" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. LOCATION OF PTH'S DESIGNATED ACCORDING TO ARTWORK OF TEST BOARD B14-TB-161 (CONTACT WITH MINI-CIRCUITS)
 3. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

— DENOTES PCB COPPER LAYOUT
— DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Mini-Circuits®

INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified

REV. C
M93585
ED-10679
SWM-2-50DR
RS/YB/CP
040726