

MiCM Pin Diode Switch

0.5 - 18.0 GHz

ML 6590-200 Series

V3.00

Features

- MiCM 20 Compatible
- Def Stan & CECC Specifications
- Direct 50 ohm Microstrip Interface
- Low Insertion Loss
- Broad Frequency Ranges

Description

The M/A-COM range of MiCM SPDT switches are miniaturized carrier mounted components providing high isolation, low loss and fast switching speed in the frequency range 0.5 to 18 GHz. Devices provide for direct integration with other MiCM components as well as existing microstrip circuitry. The package styles are compatible with the MiCM 20 standard, DEF STAN 59-90 (Part 1) Microwave Common Modules, Part 1: Interfaces and Fixings for use up to 20 GHz and Draft Basic Specification CECC 00 017 Microwave Common Modules, General Requirements and Interfaces and Fixings for use up to 20 GHz.

Specifications @ +25°C

Frequency Range (GHz)	Max. Insertion Loss (dB)	Max. VSWR	Min. Isolation (dB)	Max. Transition Time (ns)	Max. Peak Power (W)	Max. CW Power (W)	Part Number
0.5 - 2.0	0.7	1.4	50	10	0.1	0.1	ML6593-201
				50	1.0	0.5	ML6593-202
2.0 - 6.0	1.0	1.6	45	10	0.1	0.1	ML6594-201
				50	1.0	0.5	ML6594-202
6.0 - 12.0	1.5	1.8	40	10	0.1	0.1	ML6595-201
				50	1.0	0.5	ML6595-202
12.0 - 18.0	1.9	2.0	35	10	0.1	0.1	ML6596-201
				50	1.0	0.5	ML6596-202
6.0 - 18.0	1.9	2.0	35	10	0.1	0.1	ML6597-201
				50	1.0	0.5	ML6597-202
0.5 - 18.0	1.9	2.0	35	10	0.1	0.1	ML6598-201
				50	1.0	0.5	ML6598-202

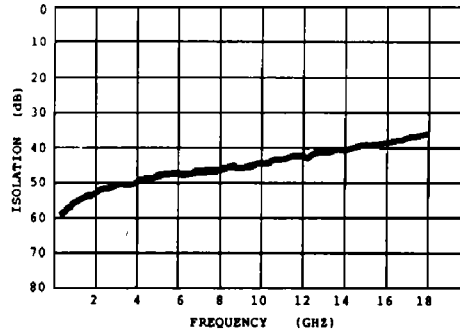
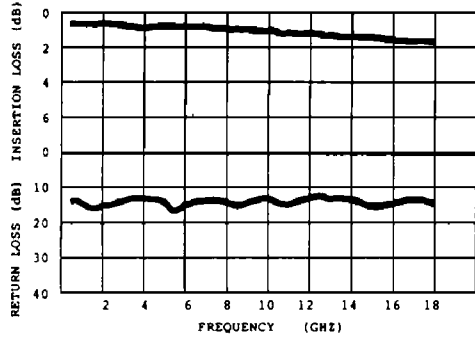
Specifications Subject to Change Without Notice.

M/A-COM, Inc.

North America: Tel. (800) 366-2266 ■ Asia/Pacific: Tel. +81 (03) 3226-1671 ■ Europe: Tel. +44 (1344) 869 595
 Fax (800) 618-8883 Fax +81 (03) 3226-1451 Fax +44 (1344) 300 020

Typical Performance

ML6598-202



Outline Drawing – MiCM Type Code S2A2-12F6-2-7,9-N

Third Angle Projection

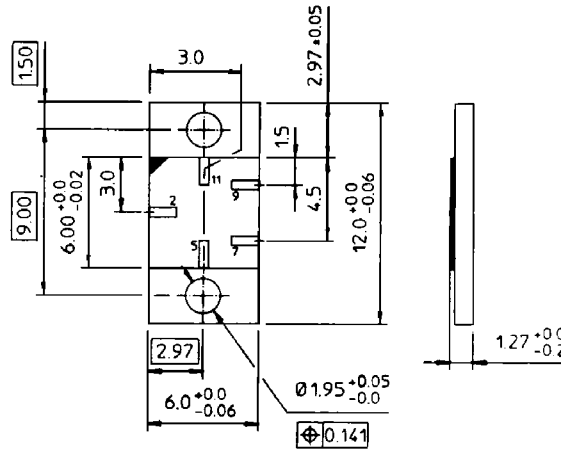
All dimensions in mm

Tolerances X.X = $\pm 0.2\text{mm}$
X.XX = $\pm 0.1\text{mm}$

Carrier Material: Kovar with gold plate finish

Substrate Material: RT Duroid 5870

PORT	FUNCTION
2	RF Common (J1)
5	Bias (J3)
7	RF Output (J3)
9	RF Output (J2)
11	Bias (J2)



NOTES:

- 1) J1 is RF common, J2, J3 are RF input/outputs.
- 2) Devices contain internal bias network and dc blocking capacitors on both input and output.
- 3) DC bias requirements +1V @ 50mA typical, 100mA maximum for isolation
-1V @ 50mA typical, 100mA maximum for low loss
- 4) Transition time is defined as 10% to 90% detected RF as measured with standard M/A-COM driver.
- 5) Flanged package styles have clearance holes for M1.6 screw (maximum head diameter 2.7mm).
- 6) Bonding pads are typically 0.5mm x 0.5mm.
- 7) Case operating temperature -55°C to +85°C
- 8) Storage temperature -55°C to +125°C.
- 9) Maximum solder/epoxy attachment temperature +130°C.

This data sheet describes a standard range of PIN diode switch modules available from M/A-COM. An extensive library of non standard devices backed by in-house design and engineering support is available to meet specialized customer requirements, please contact the factory for applications assistance on MiCM compatible devices.

Specifications Subject to Change Without Notice.