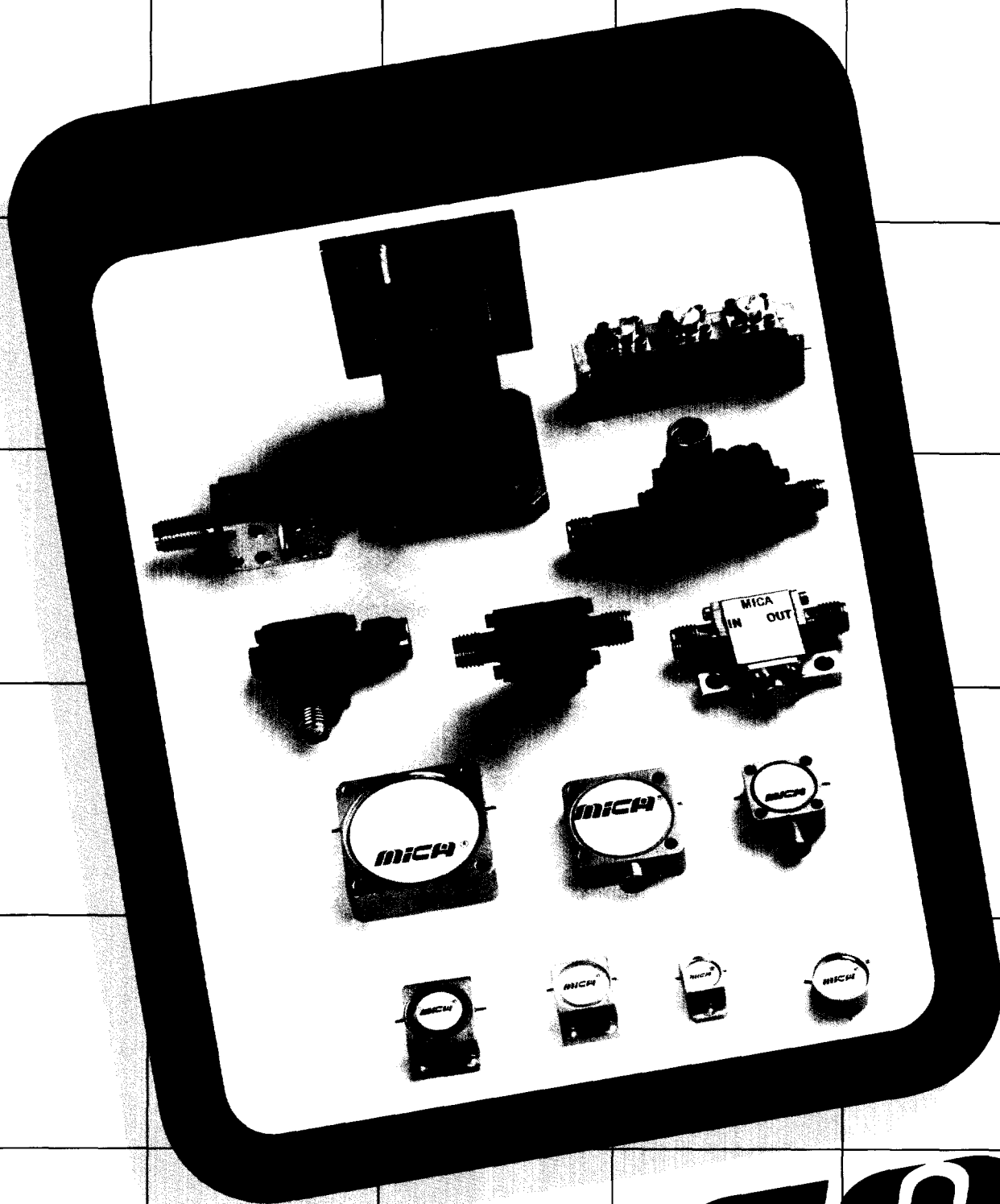




MICRA[®]
MICROWAVE COMPONENTS



PHILOSOPHY

Mica Microwave's goal is to become a leader in the design, application, and manufacture of microwave components.

Mica's team of microwave specialists is dedicated to achieving this goal by providing accurate, on time products that meet your requirements.

Our success in the manufacture of ferrite components is due largely to the company's approach toward engineering design and manufacturing technology with each customer order. If we can improve the performance, we will!

FACILITIES

Mica Microwave has shown a steady growth pattern since its start in 1983. Our new facility is now complete and includes a high capacity manufacturing clean room with laminar flow work stations.

Capabilities include an Engineering Vector Network Analyzer set up to 40 GHz., Environmental Test Equipment for thermal analysis, and a Quality Assurance Test Station with automated test data capability.

INTERFACES

The microwave components in this catalog can be easily interfaced with other system components. However, increasingly complex and tighter packaging system requirements mandate additional interface techniques.

Mica Microwave specializes in these techniques. We provide components that interface with switches, filters, diplexers, oscillators, mixers, etc., in stripline, microstrip, or other transmission media. All components can be supplied as circulators (without terminations). Mica Microwave 4-port circulators and isolators are realized by integrating two circulator junctions in a single package. Multiple junction units with five, six, or more ports are available for all bands. Contact the factory for any special configurations needed.

CONNECTORS

SMA female connectors are standard for Mica Microwave ferrite components. Male connectors can be provided, as well as field replaceable SMA connectors. Removable shells are available for most units. Other connectors, such as type N, TNC, and "K" type are also available.

POWER

Most standard components can handle up to 1 kw peak power to 10,000 feet altitude. Average power is typically 50 watts cw. Our standard isolator termination is 2 watts cw. Higher peak and average power components are readily available. Consult our engineering department for your high power needs.

QUALITY ASSURANCE AND PRODUCT RELIABILITY

Mica Microwave is an approved supplier in the military systems market. This unique application demands a professional Quality Management System.

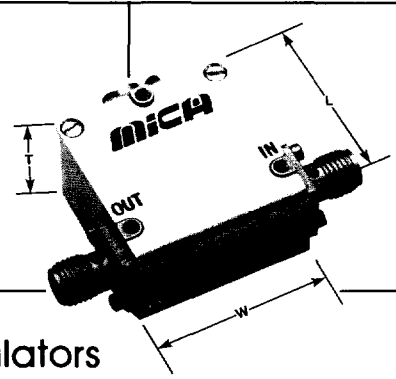
Mica maintains this quality program with Real-Time System Audits that take place throughout the life of a program. This system is in accordance with the provisions of MIL-I-45208 and MIL-C-45662.

Our management team has a distinct background in the development and manufacture of High Reliability Products. This allows us to manufacture and comply with provisions of MIL-Q-9858 on a program-unique basis. This system is subject to similar real-time audits.

WARRANTY

Mica Microwave warrants to the original purchaser that all components manufactured and sold to be free from defects in material and workmanship. Our obligation under this warranty is limited to the repair or exchange of the component for a period of one year beginning on the date of the original shipment.

MICA[®]



Coaxial Isolators/Circulators

R.F. Bands

R.F. BANDS

RF BANDS

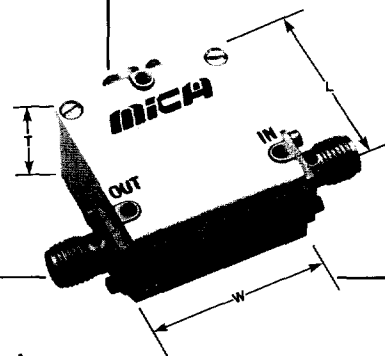
The RF band products are available with standard bandwidths and octave bandwidths. The devices are physically small, with low loss and can operate at very high power levels with excellent temperature stability. The internal structure is rugged steel construction and provides an efficient magnetic shield. The octave band units are convenient for low power applications.

Frequency GHz	Model Number	Isolation dB	Insertion Loss, dB	VSWR	Size			
					W	L	T	
0.150	0.175	T-100S01	18	0.7	1.30:1	4.25	4.25	1.50
0.175	0.215	T-200S04	18	0.5	1.30:1	3.75	3.75	1.50
0.220	0.300	T-300S01	18	0.5	1.30:1	4.25	4.25	1.50
0.300	0.400	T-200S06	18	0.5	1.30:1	3.25	3.25	1.50
0.330	0.400	T-100S03	18	0.5	1.30:1	2.00	2.00	1.00
0.400	0.500	T-200S07	18	0.5	1.30:1	2.25	2.25	1.00
0.400	0.550	T-300S02	18	0.5	1.30:1	2.50	2.50	1.25
0.500	0.600	T-100S04	20	0.4	1.25:1	2.00	2.00	1.00
0.500	1.000	T-600S01	16	0.9	1.40:1	5.60	5.75	1.30
0.600	0.750	T-200S09	20	0.4	1.25:1	1.75	1.75	1.00
0.700	1.000	T-300S03	17	0.5	1.35:1	2.00	2.00	1.00
0.750	0.900	T-100S05	20	0.4	1.25:1	1.50	1.50	0.75
0.790	0.960	T-100S06	20	0.4	1.25:1	1.50	1.50	0.75
0.900	0.930	T-000S04	23	0.5	1.25:1	0.73	0.73	0.50
0.950	1.225	T-200S03	20	0.5	1.25:1	1.23	1.23	0.75
1.000	1.200	T-101S05	20	0.4	1.25:1	1.00	1.00	0.63
1.000	2.000	T-601S01	17	0.6	1.35:1	2.75	2.57	0.87
1.100	1.300	T-101S06	20	0.4	1.25:1	1.00	1.00	0.63
1.200	1.400	T-101S07	20	0.4	1.25:1	1.00	1.00	0.63
1.300	2.600	T-601S02	17	0.6	1.35:1	2.37	2.38	0.85
1.350	1.480	T-001S07	25	0.3	1.25:1	1.00	1.00	0.50
1.350	1.850	T-301S20	18	0.4	1.35:1	1.50	1.50	0.75
1.400	1.600	T-101S08	20	0.4	1.25:1	1.00	1.00	0.63
1.400	1.700	T-101S02	20	0.4	1.25:1	1.25	1.25	0.63
1.500	1.800	T-101S10	20	0.4	1.25:1	1.00	1.00	0.63
1.500	3.300	T-701S01	17	0.5	1.35:1	2.00	2.00	0.71
1.600	3.200	T-601S03	18	0.4	1.25:1	1.80	1.80	0.72
1.700	2.000	T-101S11	20	0.4	1.25:1	1.00	1.00	0.50

COMMUNICATION BANDS

Frequency GHz		Model Number	Isolation dB	Insertion Loss,dB	VSWR	Size		
						W	L	T
.810	.830	T-000S30	23	.3	1.20:1	1.00	1.00	0.50
.865	.894	T-000S35	23	.3	1.20:1	1.00	1.00	0.50
.890	.960	T-000S40	20	.4	1.25:1	1.00	1.00	0.50
.900	.943	T-000S45	23	.3	1.20:1	1.00	1.00	0.50
.935	.960	T-000S50	23	.3	1.20:1	1.00	1.00	0.50
1.450	1.550	T-001S30	23	.3	1.20:1	1.00	1.00	0.50
1.710	1.790	T-001S35	23	.3	1.20:1	1.00	1.00	0.50
1.800	1.880	T-001S40	23	.3	1.20:1	1.00	1.00	0.50

Taking The Lead...
High Performance Ferrite Devices



Coaxial Isolators/Circulators Standard Bands

STANDARD BANDS

Mica Microwave's standard circulator and isolator product line includes a broad range of designs that extend from 150 MHz to above 30 GHz, with bandwidth variations from fixed frequency through octave band and even ultra bandwidths.

Our products offer full Mil-Spec performance capabilities. Shock and vibration are per MIL-E-5400 Class II. 100% humidity sealing is available. The majority of these components will operate over the Mil-Spec temperature range of -54°C to $+85^{\circ}\text{C}$. Consult the factory for any specific performance and any extended temperature requirements. All units, as designed, provide good RFI and magnetic shielding. Special shielding requirements can be satisfied by special order.

Frequency GHz		Model Number	Isolation dB	Insertion Loss, dB	VSWR	Size		
						W	L	T
2.000	2.300	T-002S02	20	0.4	1.25:1	1.00	1.00	0.50
2.000	2.400	T-102S05	23	0.3	1.15:1	1.50	1.50	0.50
2.000	4.000	T-602S01	20	0.5	1.25:1	1.61	1.61	0.80
2.000	6.000	T-1002S01	12	1.0	1.65:1	1.62	1.62	0.50
2.100	2.400	T-102S06	20	0.4	1.25:1	1.00	1.00	0.50
2.450	2.700	T-102S07	20	0.4	1.25:1	1.00	1.00	0.50
2.400	4.800	T-602S02	17	0.5	1.35:1	1.42	1.40	0.70
2.500	5.500	T-702S03	18	0.5	1.25:1	1.25	1.25	0.67
3.000	6.000	T-603S02	18	0.5	1.25:1	1.10	1.10	0.50
3.200	6.500	T-603S04	18	0.5	1.25:1	1.10	1.10	0.50
3.400	3.600	T-003S01	26	0.20	1.15:1	0.75	0.90	0.50
3.600	4.200	T-103S10	25	0.20	1.15:1	0.75	0.90	0.50
3.700	8.300	T-703S01	17	0.5	1.35:1	1.00	1.00	0.57
4.000	8.000	T-604S01	18	0.4	1.25:1	1.00	1.00	0.57
4.200	5.000	T-104S03	25	0.25	1.15:1	0.75	0.75	0.50
4.500	9.000	T-604S02	17	0.5	1.35:1	0.75	0.75	0.50
4.600	5.400	T-104S04	25	0.25	1.15:1	0.75	0.75	0.50
4.600	9.900	T-704S01	17	0.5	1.35:1	0.75	0.75	0.50
4.700	6.000	T-204S01	23	0.25	1.15:1	0.75	0.75	0.50
5.200	5.400	T-005S06	25	0.25	1.12:1	0.75	0.75	0.50
5.200	10.500	T-605S03	18	0.5	1.25:1	0.63	0.73	0.50
5.600	6.500	T-105S06	20	0.4	1.25:1	0.50	0.67	0.50
5.900	13.000	T-705S02	17	0.6	1.35:1	0.75	0.90	0.50
6.400	7.200	T-106S02	25	0.25	1.15:1	0.75	0.75	0.50
6.500	13.000	T-606S04	17	0.5	1.35:1	0.50	0.67	0.50
6.800	8.000	T-106S03	23	0.25	1.15:1	0.75	0.75	0.50
6.800	17.200	T-806S05	16	0.7	1.50:1	0.50	0.63	0.50
7.000	8.500	T-107S03	23	0.25	1.15:1	0.75	0.75	0.50
7.000	17.000	T-807S01	16	0.7	1.50:1	0.50	0.56	0.38
7.400	17.600	T-807S12	16	0.7	1.50:1	0.50	0.56	0.38
7.600	9.300	T-107S04	23	0.25	1.15:1	0.75	0.75	0.50
7.700	8.300	T-007S02	26	0.4	1.10:1	0.50	0.60	0.38
7.700	14.300	T-607S01	19	0.4	1.25:1	0.50	0.60	0.38
8.000	10.000	T-208S01	20	0.4	1.25:1	0.50	0.67	0.50
10.700	11.700	T-010S04	25	0.25	1.15:1	0.50	0.67	0.50
11.700	12.200	T-011S01	26	0.25	1.15:1	0.50	0.67	0.50
12.200	12.700	T-012S02	26	0.25	1.15:1	0.50	0.67	0.50
13.000	26.500	T-613S01	15	0.8	1.50:1	0.50	0.63	0.50
13.700	15.800	T-113S08	20	0.5	1.30:1	0.50	0.66	0.50
15.000	18.000	T-115S06	22	0.4	1.20:1	0.50	0.56	0.38
17.000	20.000	T-117S03	20	0.5	1.20:1	0.50	0.63	0.50
20.000	22.000	T-120S01	22	0.5	1.20:1	0.50	0.63	0.50
21.200	23.600	T-121S04	25	0.5	1.20:1	0.50	0.63	0.50
26.000	30.000	T-126K01	17	0.8	1.40:1	0.50	0.63	0.50



IN-STOCK BANDS

Mica Microwave maintains a large inventory of selected bands for FAST delivery. Our unique approach allows our customers to choose SMA male or female connectors, direction of circulation, and various finish options without delivery delays. Call our factory-direct sales person for options and pricing.

Coaxial Isolators/Circulators

In-Stock Bands

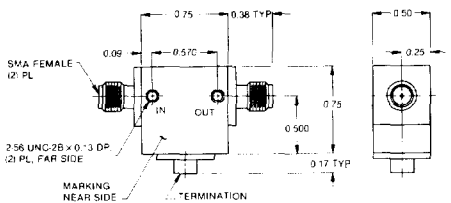
PACKAGE A

Frequency GHz	Model Number	Isolation dB	Insertion Loss, dB	VSWR
2.800 3.300	T-102S08	20	0.4	1.25:1
3.300 3.900	T-103S09	20	0.4	1.25:1
3.600 4.300	T-103S01	25	0.25	1.15:1
4.000 4.400	T-004S20	25	0.4	1.15:1
4.000 8.000	T-604S20	18	0.5	1.30:1
4.400 5.000	T-104S20	25	0.4	1.15:1
5.000 6.000	T-105S20	23	0.4	1.15:1
5.400 5.900	T-005S07	25	0.25	1.15:1
5.800 6.500	T-105S07	25	0.25	1.15:1
6.000 12.000	T-606S01	18	0.4	1.25:1
6.400 8.000	T-206S10	25	0.25	1.15:1
7.000 8.500	T-107S10	25	0.25	1.15:1
7.000 11.000	T-407S02	25	0.4	1.15:1

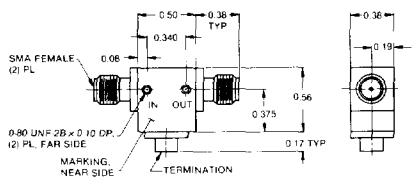
PACKAGE B

Frequency GHz	Model Number	Isolation dB	Insertion Loss, dB	VSWR
6.000 18.000	T-1006S01	13	1.0	1.60:1
8.000 12.400	T-408S01	20	0.5	1.25:1
8.000 16.000	T-608S03	20	0.5	1.25:1
8.000 18.000	T-708S01	17	0.7	1.40:1
8.000 20.000	T-808S01	15	1.0	1.45:1
10.000 15.000	T-410S01	23	0.5	1.15:1
10.000 20.000	T-610S01	17	0.7	1.35:1
10.700 13.300	T-210S01	23	0.25	1.15:1
12.000 18.000	T-412S01	20	0.5	1.25:1
12.400 15.000	T-112S01	23	0.25	1.15:1
18.000 26.500	T-318S01	18	0.5	1.25:1

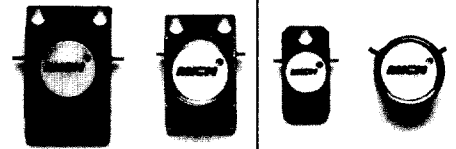
PACKAGE A



PACKAGE B



MICA[®]



MICA • PAC

The Mica • Pac surface mount ferrite isolators cover any narrowband requirements in the 4 to 23 GHz range. These ultra small packages feature rugged steel construction, a threaded housing and cover for good mechanical closing, and stable RF performance. Mica's Engineering Team will, upon request, design and ship a test fixture to verify performance and ensure successful subsystem integration. Call our factory for specific bandwidth requirements.

Mica • PAC

635 SERIES

Frequency GHz		Model Number	Isolation dB	Insertion Loss,dB	VSWR
7.800	8.300	SMF635-F0700	20	0.50	1.25:1
8.300	8.800	SMF635-F0800	20	0.40	1.25:1
9.200	9.700	SMF635-F0900	20	0.40	1.25:1
9.500	10.500	SMF635-F0910	20	0.40	1.25:1
9.700	11.700	SMF635-F0904	18	0.50	1.30:1
10.000	11.000	SMF635-F1000	20	0.50	1.25:1
10.950	12.750	SMF635-F1010	18	0.60	1.30:1
11.200	13.700	SMF635-F1100	18	0.50	1.30:1
11.700	12.300	SMF635-F1105	20	0.40	1.25:1
12.000	18.000	SMF635-F1210	17	0.70	1.35:1
12.200	12.750	SMF635-F1215	20	0.40	1.25:1
12.700	13.200	SMF635-F1200	20	0.40	1.25:1
13.000	13.600	SMF635-F1310	20	0.40	1.25:1
14.000	14.500	SMF635-F1415	20	0.40	1.25:1
15.000	18.000	SMF635-F1510	20	0.60	1.25:1
16.000	21.000	SMF635-F1610	18	0.80	1.30:1
17.700	19.700	SMF635-F1702	20	0.50	1.25:1
18.400	19.000	SMF635-F1805	20	0.40	1.25:1
21.200	23.600	SMF635-F2105	18	0.70	1.30:1

950 SERIES

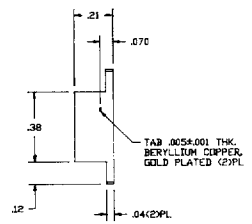
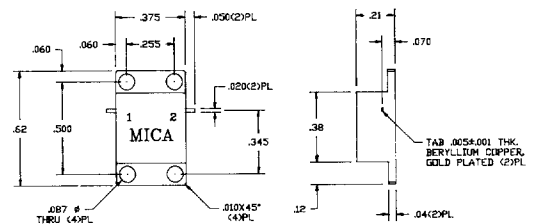
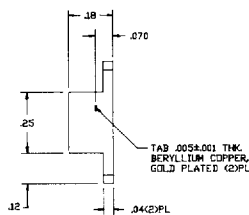
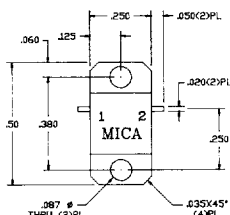
Frequency GHz		Model Number	Isolation dB	Insertion Loss, dB	VSWR
3.600	4.200	SMF950-F0310	18	0.50	1.25:1
3.700	4.300	SMF950-F0300	18	0.50	1.25:1
4.200	4.400	SMF950-F0400	20	0.50	1.25:1
4.400	5.000	SMF950-F0410	20	0.50	1.25:1
4.700	5.300	SMF950-F0406	20	0.40	1.25:1
5.400	5.900	SMF950-F0530	20	0.50	1.25:1
5.800	6.500	SMF950-F0520	20	0.40	1.25:1
6.400	7.000	SMF950-F0600	20	0.50	1.25:1
7.000	11.000	SMF950-F0710	18	0.50	1.25:1
8.000	12.000	SMF950-F0810	18	0.50	1.25:1
10.000	15.000	SMF950-F1010	17	0.50	1.25:1

1150 SERIES

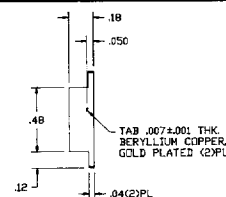
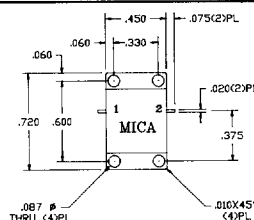
Frequency GHz		Model Number	Isolation dB	Insertion Loss,dB	VSWR
6.000	18.000	SMF1150-F0610	13	1.30	1.70:1
8.000	18.000	SMF1150-F0800	16	0.80	1.40:1

SMF-635 SERIES

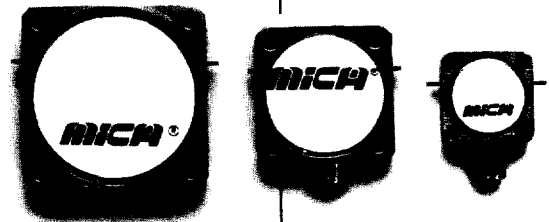
SMF-950 SERIES



SMF-1150 SERIES



MICA®



DROP • IN

The Drop • In ferrite series is available in three standard packages and designed for direct integration to stripline or micro-strip circuitry. The rugged steel housing provides superior magnetic shielding and through hole mounting.

This series is available from .960 to 20 GHz in various bandwidths. Please contact our engineering staff for special bands or unique requirements.

Drop • In

1300 SERIES

Frequency GHz	Model Number	Isolation dB	Insertion Loss, dB	VSWR
4.400	DNF1300-T0410	20	0.4	1.25:1
5.000	DNF1300-T0500	20	0.4	1.25:1
5.400	DNF1300-T0501	23	0.4	1.15:1
5.800	DNF1300-T0520	20	0.4	1.25:1
6.000	DNF1300-T0610	13	1.2	1.60:1
6.400	DNF1300-T0600	20	0.5	1.25:1
7.200	DNF1300-T0700	18	0.5	1.25:1
8.000	DNF1300-T0800	20	0.5	1.25:1
8.000	DNF1300-T0810	15	1.0	1.50:1
10.700	DNF1300-T1000	20	0.4	1.25:1
14.000	DNF1300-T1400	20	0.6	1.25:1

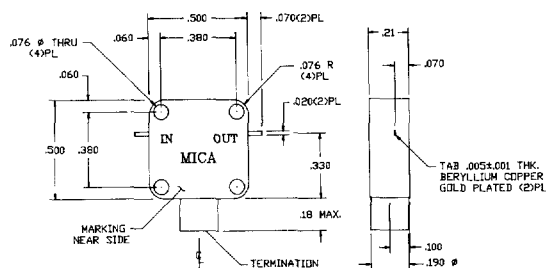
1900 SERIES

Frequency GHz	Model Number	Isolation dB	Insertion Loss, dB	VSWR
1.435	DNF1900-T0100	18	0.5	1.30:1
1.950	DNF1900-T0110	20	0.5	1.25:1
2.000	DNF1900-T0210	20	0.5	1.25:1
2.100	DNF1900-T0220	20	0.5	1.25:1
2.870	DNF1900-T0200	20	0.6	1.25:1
3.000	DNF1900-T0310	20	0.6	1.25:1
3.300	DNF1900-T0302	20	0.5	1.25:1
3.700	DNF1900-T0300	23	0.4	1.15:1
4.000	DNF1900-T0410	17	0.7	1.35:1

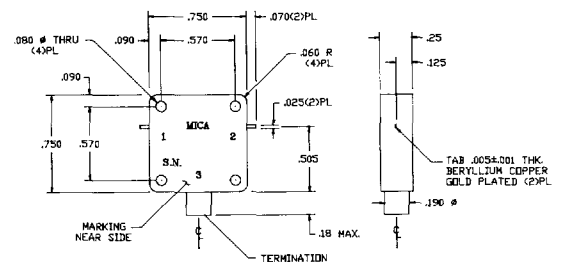
2540 SERIES

Frequency GHz	Model Number	Isolation dB	Insertion Loss, dB	VSWR
0.869	DNF2540-T0015	23	0.3	1.15:1
0.890	DNF2540-T0010	20	0.4	1.25:1
0.935	DNF2540-T0020	23	0.3	1.15:1
0.960	DNF2540-T0001	17	0.6	1.35:1
1.200	DNF2540-T0100	20	0.4	1.25:1
1.400	DNF2540-T0110	20	0.4	1.25:1
1.500	DNF2540-T0120	20	0.4	1.25:1
1.600	DNF2540-T0101	17	0.6	1.35:1

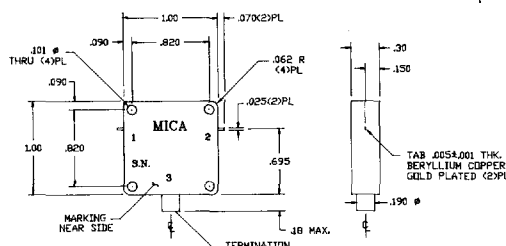
DNF-1300 SERIES



DNF-1900 SERIES



DNF-2540 SERIES





Isodapters

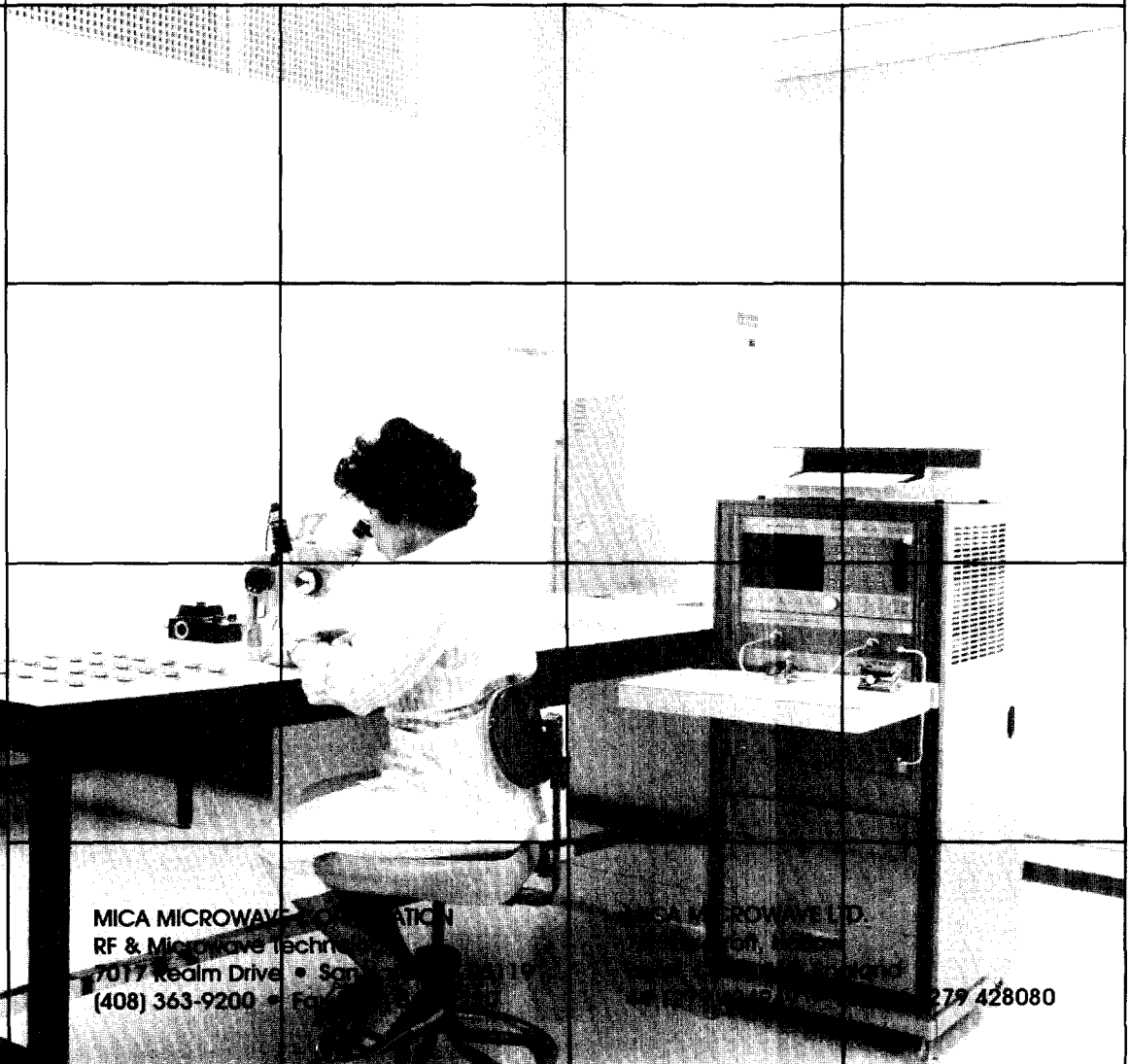
ISODAPTERS

Isodapters provide an isolated interface between waveguide and coaxial transmission line. These components are manufactured to withstand very high vibration levels and are of very rugged construction. Standard flanges are alodined aluminum, type UG or CMR with tapped or clearance holes.

Frequency GHz		Model Number	Isolation dB	Insertion Loss,dB	VSWR	Waveguide Type	Connector Type
5.800	6.500	T-105A00	23	0.3	1.15:1	WR-159	SMA
5.800	7.200	T-205A01	23	0.4	1.15:1	WR-137	SMA
6.400	7.100	T-106A03	23	0.25	1.15:1	WR-137	SMA
7.100	8.500	T-107A01	23	0.3	1.15:1	WR-137	SMA
7.100	8.500	T-107A02	23	0.3	1.15:1	WR-112	SMA
9.000	9.500	T-009A00	25	0.2	1.20:1	WR-90	SMA
10.700	13.250	T-210A01	20	0.4	1.25:1	WR-75	SMA
11.700	12.700	T-011A01	25	0.3	1.15:1	WR-75	SMA
14.000	14.500	T-014A01	23	0.4	1.15:1	WR-62	SMA
15.000	17.000	T-115A01	23	0.5	1.15:1	WR-62	SMA
18.000	20.000	T-118A01	23	0.5	1.15:1	WR-42	SMA
20.000	24.000	T-120A01	22	0.6	1.20:1	WR-42	SMA
21.200	23.600	T-121A00	20	0.5	1.25:1	WR-42	SMA

CUSTOM COMPONENTS

Mica Microwave's reputation is based on our ability to design and produce custom components to state-of-the-art specifications. A large part of our standard product listings are derivatives of custom engineered components. Our capability has broadened to custom subsystems which integrate circulators, couplers, detectors, limiters, high power terminations, etc. Our Hi-Rel Engineering has developed products that meet the needs of all space environments. Our highly experienced engineering staff, with their CAD capabilities and 40 GHz Vector Network Analyzer, stand ready to support virtually any requirement.



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