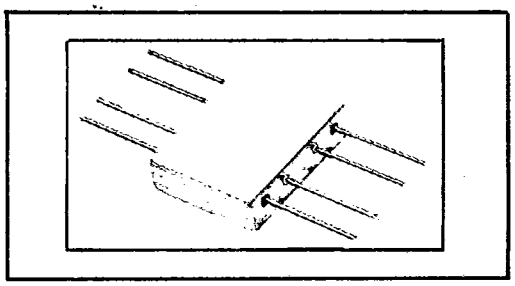
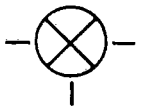
TOROIDAL mixers
FLAT PACK • 100 KHz to 4200 MHz

T-77-05-07





GENERAL SPECIFICATIONS

Impedance:	50 ohms Nominal
DC Offset:	1mV Typical
Input Power:	Low Level 50 MW Max.
(RF + LO):	Med Level 200 MW Max.
	High Level 500 MW Max.
Temperature Range:	-55 to +100°C (operating & storage)
Peak IF Input Current:	40 MA (Low Level Only)
Finish:	Gold Plate

1 db COMPRESSION POINT (Typical)

Low-level	+ 1dbm
Med-level	+ 7dbm
High-level	+ 15dbm

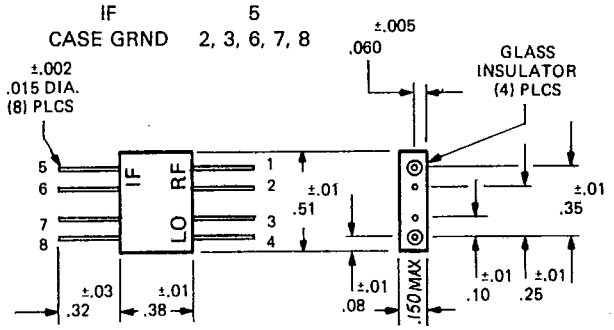
2-TONE INTERMODULATION DISTORTION
3rd Order Intercept Point (Typical)

Low-level	+ 13dbm
Med-level	+ 23dbm
High-level	+ 30dbm

HERMETICALLY SEALED
PIN CONNECTIONS

RF	1
LO	4
IF	5
CASE GRND	2, 3, 6, 7, 8

OUTLINE 101



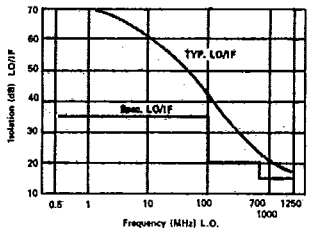
ENVIRONMENTAL SPECS. MIL-STD-202E

Moisture Resistance:	Method 106D
Salt Spray:	Method 101D
Vibration High Frequency:	Method 204C
Shock Test:	Method 213B

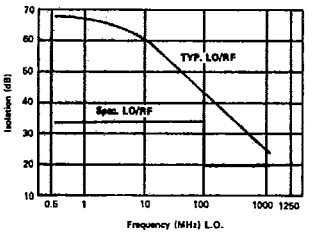
Workmanship in Accordance with MIL-STD-454D
Requirements 5 and 9

TYPICAL PERFORMANCE FOR MODEL MLF102

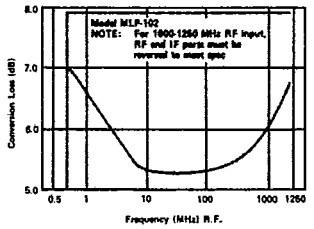
Model MLF—102 (flat pack)
500kHz—1250MHz
LO/IF Isolation



Model MLF—102 (flat pack)
500kHz—1250MHz
LO/RF Isolation



500kHz—1250MHz
Conversion Loss



LO Input Level	Model	Frequency LO/RF (MHz)	Frequency I.F. (MHz)	Conversion Loss (dB Max.)	Isolation (dB Min.) LO-RF	Isolation (dB Min.) LO-IF	Outline No.
LOW LEVEL +7 dBm	MLF101	0.25-2500	0.25-600	9.0	25	20	101
	MLF102	0.5-1250	DC-1000	8.0	20	15	101
	MLF106*	0.01-200	DC-200	8.0	30 (TYP.)	30 (TYP.)	101
	MLF107	0.1-500	DC-500	7.5	25	20	101
+10 - +13	MLF124	1000-4200	500-3000	8.5	20	20	101
+10 - +13	MLFA40	3700-4200	700-1500	(6.5 TYP.)	(30dB TYP.)		101
MED LEVEL +17 dBm	MHF106	1-2500	1-2000	9.5	20	20	101
HIGH LEVEL +23 dBm	MVF106	1-2500	1-2000	9.0	20	20	101

*LO-LEVEL +10 dBm

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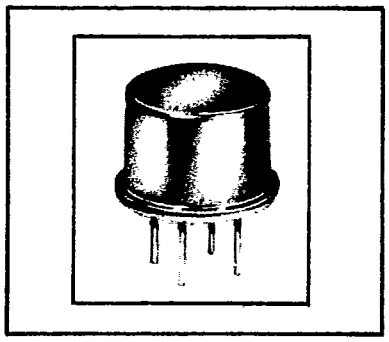
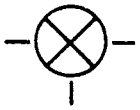


TOROIDAL mixers
TO-5 & TO-8 • 0.01 - 2500 MHz

T-77-05-07



GENERAL SPECIFICATIONS

Impedance:	50 ohms Nominal
DC Offset:	1Mv Typical
Input Power:	Low Level 50 MW Max.
(RF + LO):	Med Level 200 MW Max.
	High Level 500 MW Max.
Temperature Range:	-55 to +100°C (operating & storage)
Peak IF Input Current:	40 MA (Low Level Only)
Finish:	Nickel Plate

1 db COMPRESSION POINT (Typical)

Low-level	+ 1dbm
Med-level	+ 7dbm
High-level	+ 15dbm

2-TONE INTERMODULATION DISTORTION
3rd Order Intercept Point (Typical)

Low-level	+ 13dbm
Med-level	+ 23dbm
High-level	+ 30dbm

ENVIRONMENTAL SPECS. MIL-STD-202E

Moisture Resistance:	Method 106D
Salt Spray:	Method 101D
Vibration High Frequency:	Method 204C
Shock Test:	Method 213B

Workmanship in Accordance with MIL-STD-454D Requirements 5 and 9

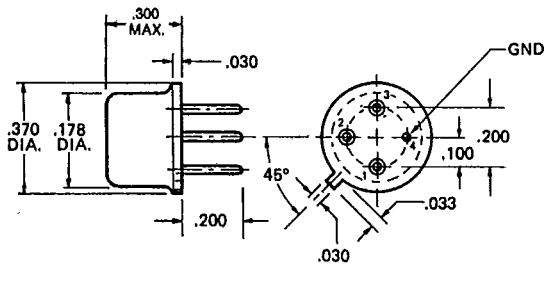
TO-5 MODELS

LO Input Level	Model	Frequency LO/RF (MHz)	Frequency I.F. (MHz)	Conversion Loss (dB Max.)	Isolation (dB Min.) LO-RF	Isolation (dB Min.) LO-IF	Outline No.
LOW LEVEL +7 dBm	MLT-502	0.5-1000	DC-1000	8.5	20	15	108
	MLT-507	0.1-500	DC-500	7.5	25	20	108

TO-8 MODELS

LO Input Level	Model	Frequency LO/RF (MHz)	Frequency I.F. (MHz)	Conversion Loss (dB Max.)	Isolation (dB Min.) LO-RF	Isolation (dB Min.) LO-IF	Outline No.
LOW LEVEL + dBm	MLT-801	0.25-2500	0.25-600	9.0	20	17	109
	MLT-802	0.5-1250	DC-1000	8.5	20	15	109
	MLT-803	0.01-200	DC-200	8.0	25	25	109
	MLT-806*	1.0-2500	1-1000	9.0	20	20	109
	MLT-807	0.1-500	DC-500	7.5	25	20	109
	MLT-809	1-1000	DC-1000	8.0	25	15	109
MED LEVEL +17 dBm	MHT-806	1-2500	1-2000	10.0	20	20	109
HIGH LEVEL +23 dBm	MVT-806	1-2500	1-2000	9.0	20	20	109

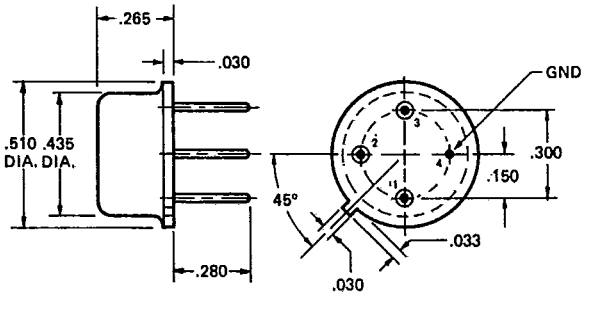
*LO-LEVEL +10 dBm



OUTLINE 108

PIN CONNECTIONS

RF	1
IF	2
LO	3
CASE GRND	4



OUTLINE 109

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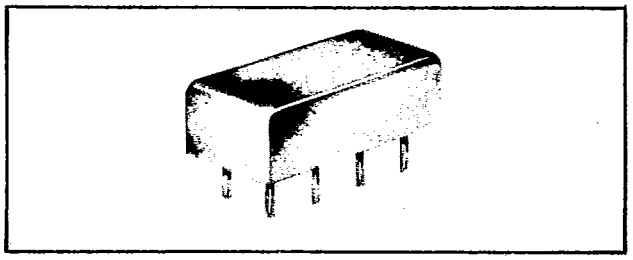
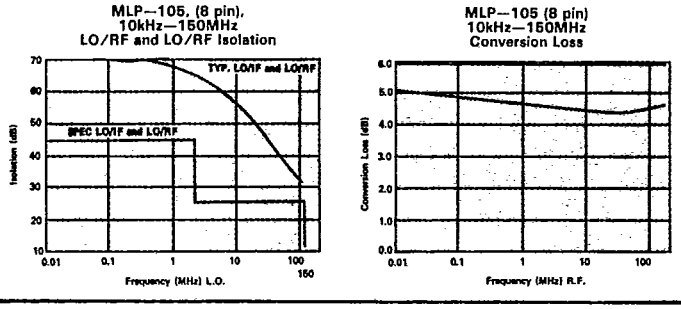
TOROIDAL mixers
6 & 8-PIN • 0.0005 - 2500 MHz

T-77-05-07





GENERAL SPECIFICATIONS

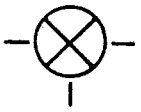
Impedance:	50 ohms Nominal
DC Offset:	1 mV Typical
Input Power:	Low Level 50 MW Max.
(RF + LO):	Med Level 200 MW Max.
	High Level 500 MW Max.
Temperature Range:	-55 to +100°C (operating & storage)
Peak IF Input Current:	40 MA (Low Level Only)

1 db COMPRESSION POINT (Typical)

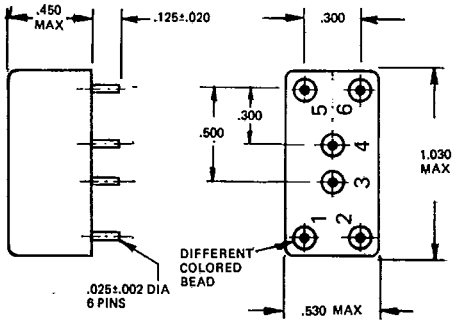
Low-level	+ 1dbm
Med-level	+ 7dbm
High-level	+ 15dbm

2-TONE INTERMODULATION DISTORTION
3rd Order Intercept Point (Typical)

Low-level	+ 13dbm
Med-level	+ 23dbm
High-level	+ 30dbm

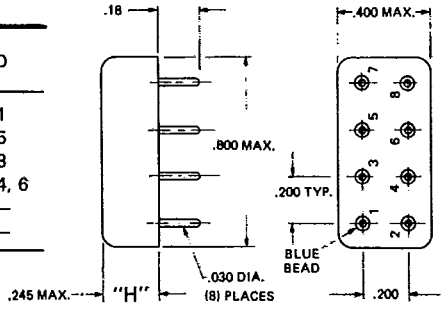


LO Input Level	Model	Frequency LO.RF (MHz)	Frequency I.F. (MHz)	Conversion Loss (dB Max.)	Isolation (dB Min.) LO-RF	Isolation (dB Min.) LO-IF	Outline No.
7-10 dBm	MLP-101	0.25-2500	0.25-600	9.0	25	20	102C
	MLP-102	0.5-1250	DC-1000	8.5	20	15	102A
	MLP-105	0.01-150	DC-150	6.0	25	25	103B
	MLP-107	0.1-500	DC-500	7.5	25	20	102B
	MLP-109	1-1000	DC-1000	8.0	25	15	102B
	MLP-112	0.0005-10	DC-10	8.5	35	35	103B
	MLP-707	0.1-500	DC-500	7.5	25	20	117D
	MLP-709	1-1000	DC-1000	8.0	25	15	117D
MED LEVEL +17 dBm	MHP-105	0.01-200	DC-200	7.0	25	25	103B
	MHP-106	1-2500	1-2000	9.0	20	20	102C
HIGH LEVEL +23 dBm	MVP-106	1-2500	1-2000	9.0	20	20	102C
	MVP-107	0.1-500	DC—500	7.5	25	20	103B



OUTLINE 117
6 PIN

PIN CONNECTIONS	A	B	C	D
RF	1	1	1	1
LO	8	8	8	5
IF	3, 4	3, 4	3	3
CASE GRND	2, 5, 6, 7	2	2, 5, 6, 7	2, 4, 6
EXT. GRND	—	5, 6, 7	—	—
NO CONN	—	—	4	—



H = .245" MAX. OUTLINE 102 8 PIN
H = .410" MAX. OUTLINE 103

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