

## MEDIUM BARRIER (CONT'D)

MODEL NUMBER <sup>1, 2</sup>	CASE STYLE <sup>2</sup>	TEST FREQ. (GHz)	MAX. NOISE FIGURE <sup>3</sup> (dB)	MAX. VSWR <sup>4</sup> (RATIO)	ZIF RANGE <sup>5</sup> (OHMS)	PACK. DESC.
MA-4861F	11	16.0	7.5	2.0	300-550	Coaxial
MA-4861E	11	16.0	8.0	2.5	300-550	Coaxial
MA-40015	100	16.0	6.5	1.6	200-500	Glass MQM
MA-40014	100	16.0	7.0	1.6	200-500	Glass MQM
MA-40013	100	16.0	7.5	1.6	200-500	Glass MQM
MA-40012	100	16.0	8.0	1.8	200-500	Glass MQM
MA-40160	119	16.0	6.5	1.5	250-450	Ceramic MQM
MA-40161	119	16.0	7.0	2.0	250-450	Ceramic MQM
MA-40165	120,276	16.0	6.5	1.5	250-450	Ceramic Pill
MA-40166	120,276	16.0	7.0	2.0	250-450	Ceramic Pill

See notes on page 4.

## HIGH BARRIER

High barrier diodes are required for application where the local oscillator drive level is between 0 dBm and +20 dBm.

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MA-40050	3	9.375	6.5	1.5	325-475	Ceramic Cartridge
MA-4E184	54	9.375	7.0	2.0	250-450	Glass Axial Lead
MA-4E193	81	9.375	6.5	—	—	LID
MA-4E180	119	9.375	6.0	1.5	250-450	Ceramic MQM
MA-4E181	119	9.375	6.5	1.5	250-450	Ceramic MQM
MA-4E182	119	9.375	7.0	2.0	250-450	Ceramic MQM
MA-4E185	120,276	9.375	6.0	1.5	250-450	Ceramic Pill
MA-4E186	120,276	9.375	6.5	1.5	250-450	Ceramic Pill
MA-4E187	120,276	9.375	7.0	2.0	250-450	Ceramic Pill
MA-4E197	186	9.375	6.0	—	—	Hermetic Stripline
MA-4E198	186	9.375	6.5	—	—	Hermetic Stripline
MA-4E199	186	9.375	7.0	—	—	Hermetic Stripline
MA-4E188	119	16.0	6.5	1.5	250-450	Ceramic MQM
MA-4E189	119	16.0	7.0	2.0	250-450	Ceramic MQM
MA-4E190	120,276	16.0	6.5	1.5	250-450	Ceramic Pill
MA-4E191	120,276	16.0	7.0	2.0	250-450	Ceramic Pill

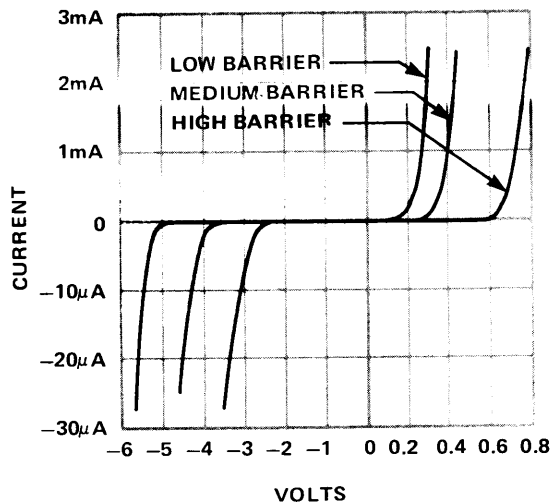
See notes on page 4.

# 4 PACKAGED MIXER DIODES

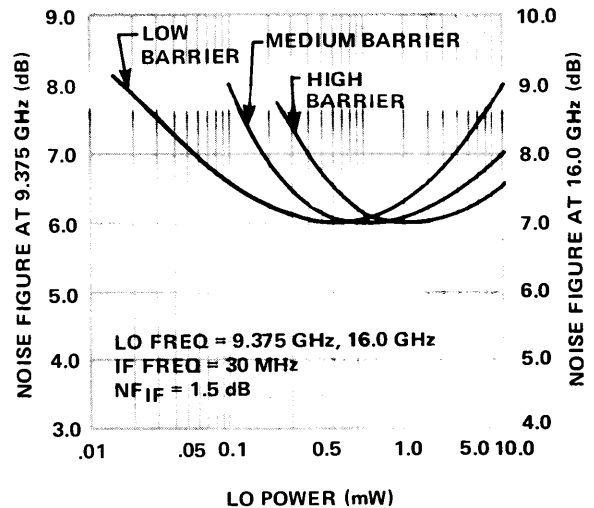
## NOTES:

1. All mixer diodes are available as matched pairs and can be ordered by adding the suffix "M" to the diode model number. Also, forward and reverse single diodes can be ordered as matched pairs by adding the suffix "MR" to the diode model number. Bin matching is available upon request. Matching criteria:  $\Delta NF = 0.3$  dB maximum.  
 $\Delta Z_{IF} = 25$  ohms maximum.
2. These diodes are thermocompression bonded in all case styles except in case styles, 3, 11 and 54. The maximum solder temperature for all cases except 120 and 276 is 230°C for 5 seconds. For case styles 120 and 276, maximum solder temperature is 200°C for 5 seconds. Case styles other than those indicated are available on request.
3. Test conditions:  $P_{LO} = 1.0$  mW (for low and medium barrier);  $P_{LO} = 2.0$  mW (for high barrier);  $IF = 30$  MHz;  $NF_{IF} = 1.5$  dB;  $R_L = 22$  ohms.
4. VSWR for low and medium barrier diodes is tested at a peak power of 1.0 mW. High barrier diodes are tested at a peak power level of 2.0 mW.  $R_L = 22$  ohms.
5. IF impedance is measured by modulating the specified test frequency with a 1000 Hz signal.  $R_L = 22$  ohms. Low and medium barrier diodes are tested at an incident power level of 1.0 mW. High barrier diodes are tested at an incident power level of 2.0 mW.

## TYPICAL PERFORMANCE



I-V CHARACTERISTICS AND BARRIER HEIGHTS FOR SCHOTTKY MIXER DIODES



SCHOTTKY BARRIER NOISE FIGURE VS LO POWER