T-01-13

M100 SERIES

MINIATURE PLASTIC SILICON RECTIFIER

GENERAL INSTRUMENT

VOLTAGE RANGE
50 to 1000 Volts

CURRENT
1.0 Ampere

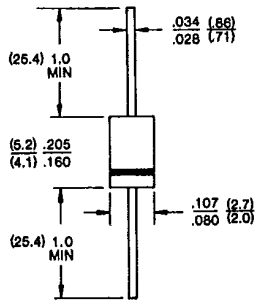
FEATURES:

- Low cost
- Diffused junction
- High surge current capability
- Plastic material carries U/L recognition 94V-0. It is General Instrument's proprietary 4B Flame-retardant epoxy molding compound.
- Typical I_R less than 0.5μA
- Exceeds environmental standards of MIL-STD-19500.
- High temperature soldering guaranteed: 350°C/10 seconds/.375", 9.5mm lead length/5 lbs, 11 kg tension.

MECHANICAL DATA:

Case: JEDEC DO-41, molded case
Terminals: Plated axial leads, solderable per MIL-STD 202, Method 208
Polarity: Color band denotes cathode end
Weight: 0.012 ounce, 0.3 gram
Mounting position: Any

DO-41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

At T_A = 25°C unless otherwise specified. Single phase, half-wave, 60 Hz, resistive or inductive load.

	M100A	M100B	M100D	M100G	M100J	M100K	M100M	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length at T_A = 100°C	1.0							A
Maximum Overload Surge Current 1 Cycle	50							A
Maximum Forward Voltage at 1.0Adc	1.0					1.1		V
Maximum Full Load Reverse Current Full Cycle Average .375" (9.5mm) Lead Length at T_A = 100°C	100							μA
Maximum DC Reverse Current at Rated DC Blocking Voltage	1.0							μA
Typical Reverse Recovery Time (Note 1)	20							μS
Typical Junction Capacitance (Note 2)	25							pF
Operating and Storage Temperature Range T_A	-65 to +175							°C

NOTES:
1. Measured on Tektronix Type "S" recovery plug-in Tektronix 545 Scope (or equiv). I_{FM} = 20mA, I_{RM} = 1.0mA
2. Measured at 1MHZ and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES
M100 SERIES

Fig. 1—TYPICAL FORWARD CHARACTERISTICS

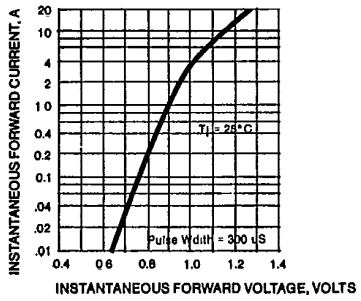


Fig. 2 — TYPICAL JUNCTION CAPACITANCE

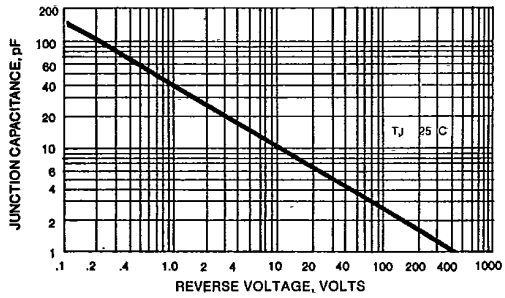


Fig. 3—MAXIMUM OVERLOAD SURGE—CURRENT

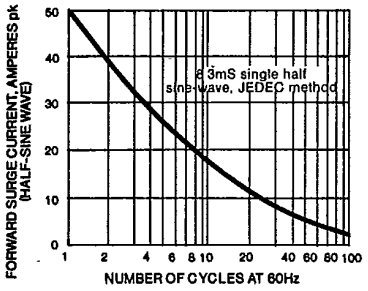


Fig. 4—PEAK FORWARD SURGE CURRENT

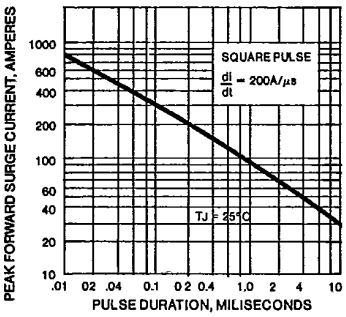


Fig. 5—FORWARD DERATING CURVE