Silicon Diode

M100A

50V / 1A

DATASHEET

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OEM – General Semiconductor

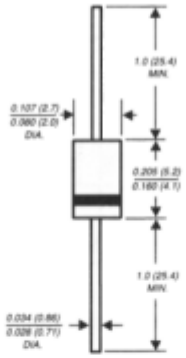
Source: General Semiconductor Databook 1998

M100A THRU M100M

GENERAL PURPOSE PLASTIC RECTIFIER

***Reverse Voltage** - 50 to 1000 Volts* ***Forward Current** - 1.0 Ampere*

DO-204AL



Dimensions in inches and (millimeters)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-204AL, molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	M100 A	M100 B	M100 D	M100 G	M100 J	M100 K	M100 M	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T_A=100°C	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T_A=75°C	I_{FSM}	50.0							Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.0					1.1		Volts
Maximum full load reverse current full cycle average 0.375" (9.5mm) lead length at T_A=55°C	$I_{R(AV)}$	100.0							µA
Maximum DC reverse current at rated DC blocking voltage T_A=25°C / T_A=100°C	I_R	1.0 50.0							µA
Typical reverse recovery time (NOTE 1)	t_{rr}	2.0							µs
Typical junction capacitance (NOTE 2)	C_J	15.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 25.0							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150							°C

NOTES:
(1) Measured with I_F=0.5A, I_R=0.1A, I_{rr}=0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES M100A THRU M100M

FIG. 1 - FORWARD CURRENT DERATING CURVE

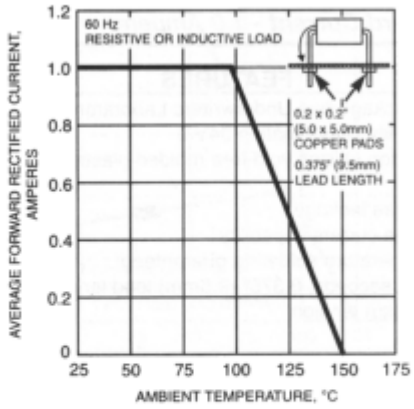


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

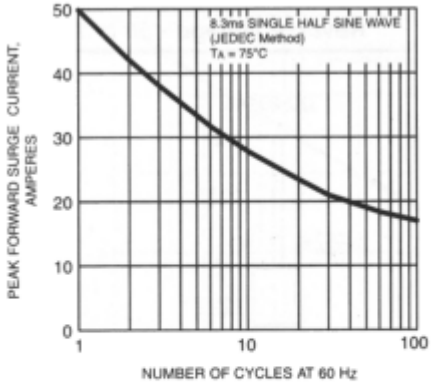


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

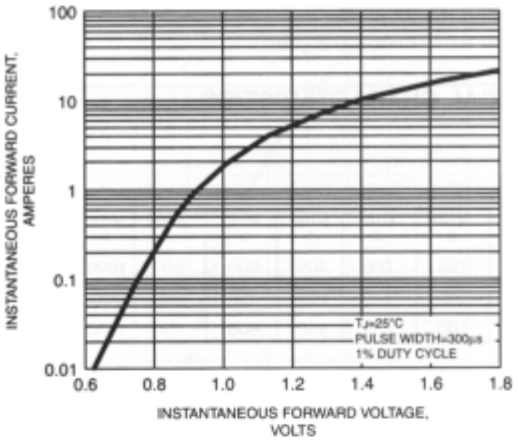


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

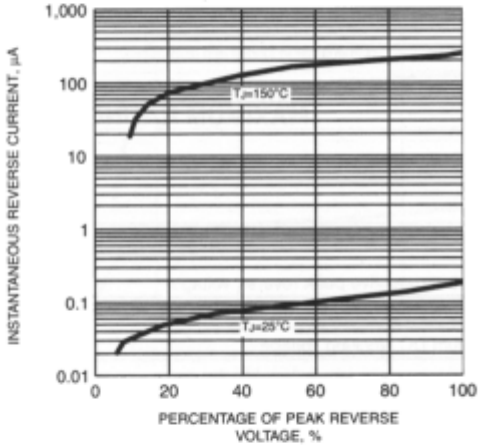


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

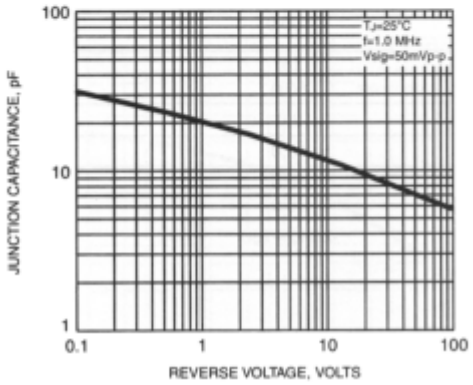


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE