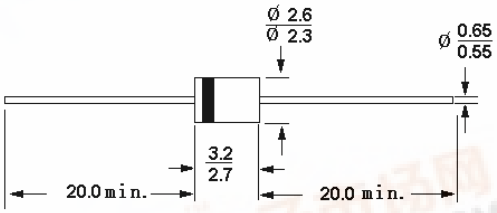
1A1 THRU 1A7

SILICON RECTIFIERS
Voltage Range – 50 to 1000 Volts
Current – 1.0 Amperes

R-1



Dimensions in mm

Features

- High reliability
- Low leakage
- Low forward voltage drop
- High current capability

Mechanical Data

- **Case:** Molded plastic black body
- **Lead:** MIL-STD 202E method 208C guaranteed.
- **Mounting Position:** Any

Absolute Maximum Ratings and Characteristics

Ratings at 25°Cambient temperature unless otherwise specified.. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	1A1	1A2	1A3	1A4	1A5	1A6	1A7	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T_A = 25 °C	I_O	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25							A
Maximum instantaneous forward voltage at 1A DC	V_F	1.1							V
Maximum DC reverse current at rated DC blocking voltage @T_A = 25 °C	I_R	5.0							uA
Maximum DC reverse current at rated DC blocking voltage @T_A = 100°C	I_R	50							uA
Maximum full load reverse current full cycle average 0.375" (9.5mm) lead length at T_L=75°C	I_R	100							uA
Typical junction capacitance (note)	C_J	15							pF
Typical thermal resistance	$R_{\theta JA}$	60							°C/W
Operating and storage temperature range	T_J ,T_S	-65 to +150							°C

Note: Measured at 1MHz and applied reverse voltage of 4V.

RATING AND CHARACTERISTIC CURVES (1A1 thru 1A7)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

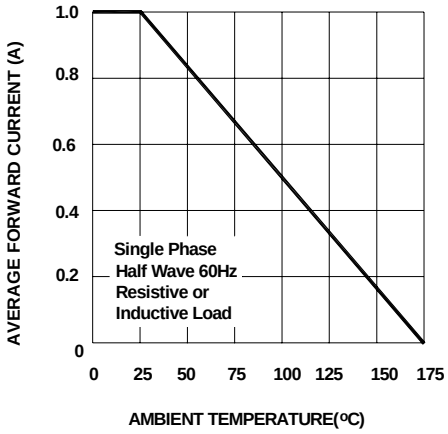


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

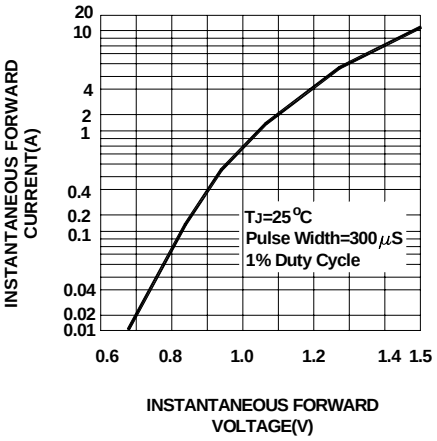


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

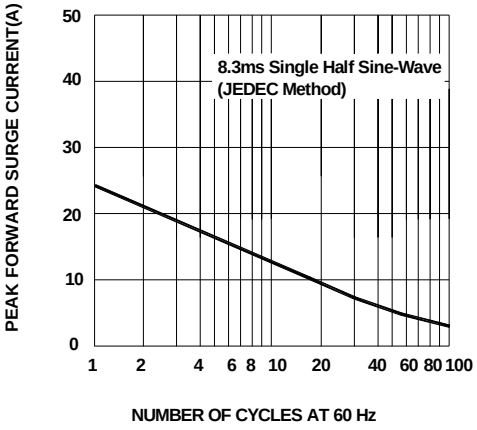


FIG.4-TYPICAL REVERSE CHARACTERISTICS

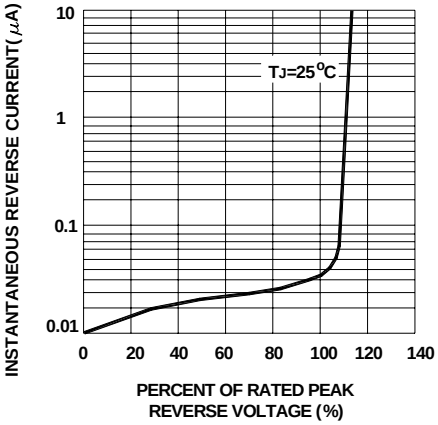


FIG.5-TYPICAL JUNCTION CAPACITANCE