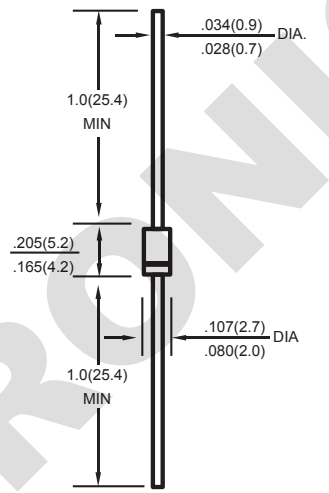
GENERAL PURPOSE SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.0 Ampere

FEATURES

- Low cost construction
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds/0.375″(9.5mm)lead length at 5 lbs (2,3kg) tension



Dimensions in inches and (millimeters)

MECHANICAL DATA

- **Case:**Transfer molded plastic
- **Epoxy:**UL94V-0 rate flame retardant
- **Polarity:**Color band denotes cathode end
- **Lead:**Plated axial lead ,solderable per MIL-STD-202E method 208C
- **Mounting position:**Any
- **Weight:**0.012 ounce,0.33 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	IN 4001	IN 4002	IN 4003	IN 4004	IN 4005	IN 4006	IN 4007	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=75°C	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.1							Volts
Maximum DC Reverse Current at rated DC blocking voltage T_A=25°C	I_R	5.0							μAmps
Maximum DC Reverse Current at rated DC blocking voltage T_A=100°C	I_R	50							μAmps
Maximum Full Load Reverse Current,full cycle average 0.375” (9.5mm) lead length at T_L=75°C	$I_{R(AV)}$	30							μAmps
Typical Junction Capacitance(NOTE1)	C_J	15							pF
Typical Thermal Resistance(NOTE2)	$R_{\theta JA}$	50							°C/W
Operating and Storage Temperature Range	T_J,T_{STG}	-65 to +150							°C

NOTES:
1.Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2.Thermal Resistance from Junction to Ambient at 0.375” (9.5mm) lead length,P.C.board mounted with 0.2″X0.2″ (5.0X5.0mm)copper pads.

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

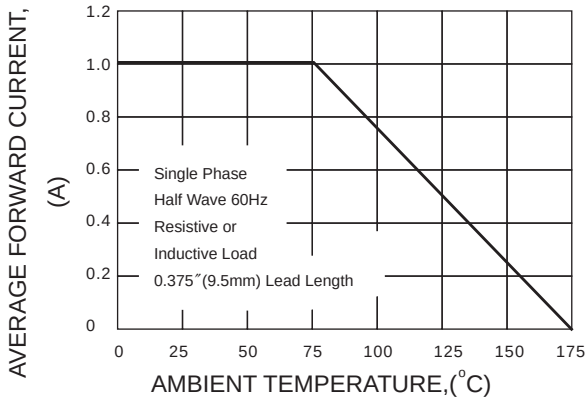


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

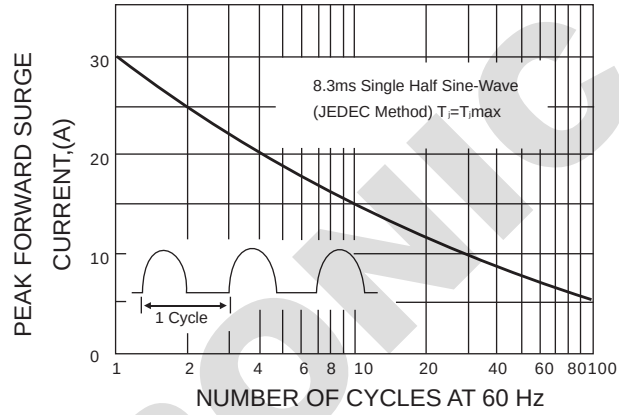


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

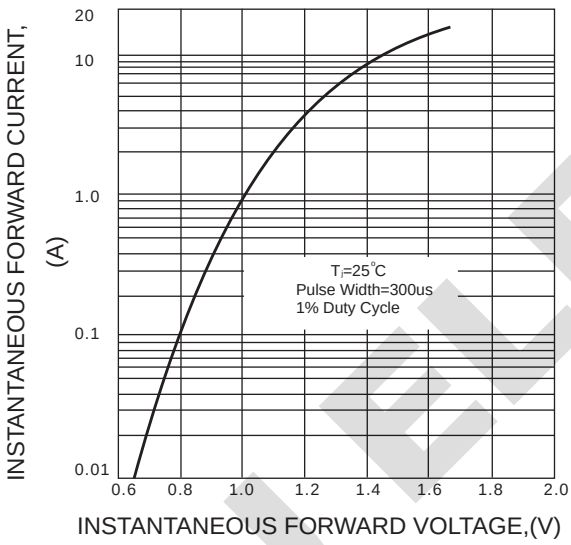


FIG.4-TYPICAL REVERSE CHARACTERISTICS

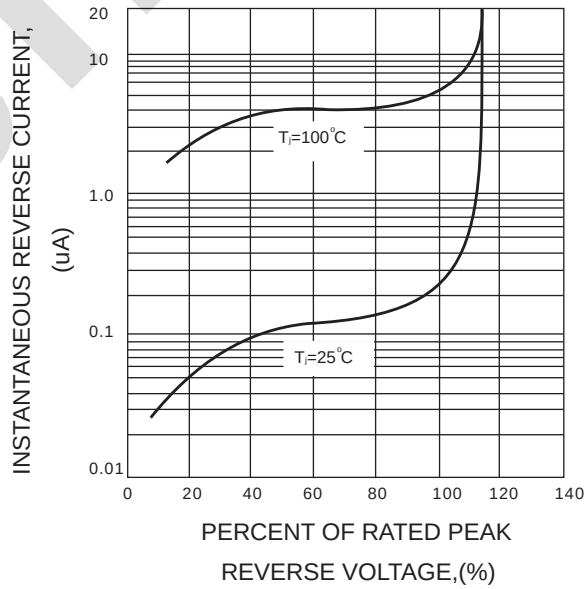


FIG.5-TYPICAL JUNCTION CAPACITANCE