3A Silicon Rectifiers

PRODUCT SUMMARY

Voltage ratings available from 50 Volts to 1000 Volts

FEATURES

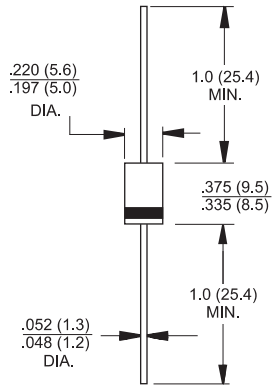
Low forward voltage drop
High current capability
High reliability
High surge current capability

MECHANICAL DATA

Case: Molded plastic
Epoxy: UL 94V-O rate flame retardant
Lead: Axial leads, matte tin plating
Polarity: Color band denotes cathode end
High temperature soldering guaranteed:
260°C for 10 seconds with 0.375" (9.5mm)
lead lengths at 5 lbs. (2.3kg) tension
Weight: 1.2 grams

Pb-free; RoHS-compliant

DO-201AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	1N 5400	1N 5401	1N 5402	1N 5404	1N 5406	1N 5407	1N 5408	Units
Maximum recurrent 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 0.375 (9.5mm) lead length at T_A = 75°C	$I_{(AV)}$	3.0							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	200							A
Maximum instantaneous forward voltage at 3.0A	V_F	1.2							V
Maximum DC reverse current at T_A=25°C at rated DC blocking voltage at T_A=100°C	I_R	10.0 500							uA uA
Maximum full load reverse current, full cycle average 0.5"(12.5mm) lead length at T_L=90°C	HT_{IR}	500							uA
Typical junction capacitance (Note 1)	Cj	30							pF
Typical thermal resistance (Note 2)	$R\theta_{JA}$	20							°C/W
Operating temperature range	T_J	-55 to +125							°C
Storage temperature range	T_{STG}	-55 to +150							°C

Notes: 1. Measured at 1 MHz and applied reverse voltage of 4.0 V D.C.
2. Mounted with 0.375" (9.5mm) lead length on copper pads, size 20mm x 20mm, on P.C.B.

RATINGS AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

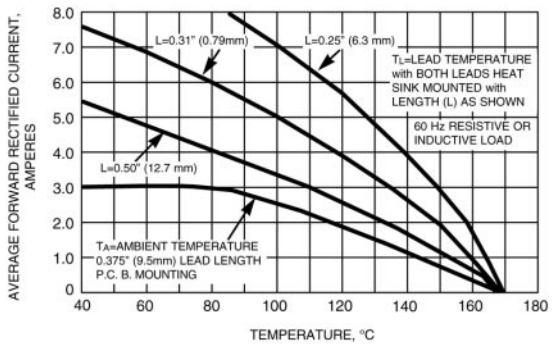


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

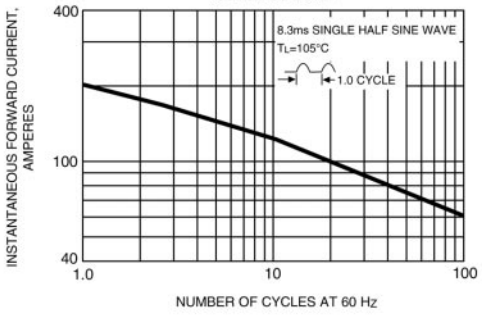


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

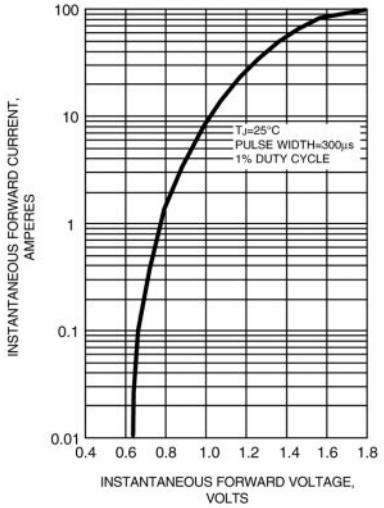


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

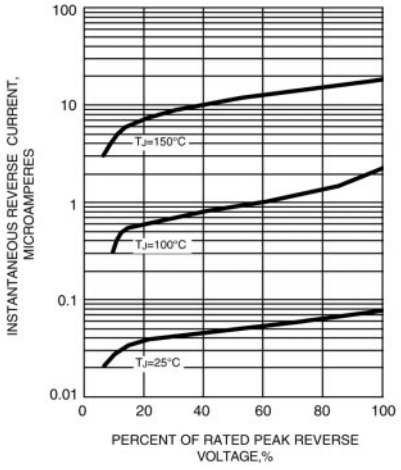


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

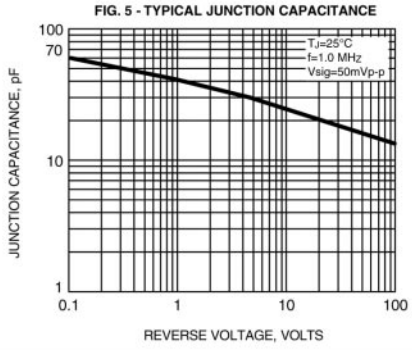


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE