

## GENERAL PURPOSE SILICON RECTIFIER

<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Low cost construction</li> <li>• Low forward voltage drop</li> <li>• Low reverse leakage</li> <li>• High forward surge current capability</li> <li>• High temperature soldering guaranteed: 260°C/10 seconds/0.375" (9.5mm) lead length at 5 lbs (2,3kg) tension</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• <b>Case:</b> Transfer molded plastic</li> <li>• <b>Epoxy:</b> UL94V-0 rate flame retardant</li> <li>• <b>Polarity:</b> Color band denotes cathode end</li> <li>• <b>Lead:</b> Plated axial lead, solderable per MIL-STD-202E method 208C</li> <li>• <b>Mounting position:</b> Any</li> <li>• <b>Weight:</b> 0.042 ounce, 1.19 grams</li> </ul>	<p>VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Ampere</p> <div style="text-align: right;">DO-27</div> <p style="text-align: center;">Dimensions in inches and (millimeters)</p>								
<p><b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b></p> <p>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%.</p>									
	<b>SYMBOLS</b>	<b>IN 5400</b>	<b>IN 5401</b>	<b>IN 5402</b>	<b>IN 5404</b>	<b>IN 5406</b>	<b>IN 5407</b>	<b>IN 5408</b>	<b>UNITS</b>
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 0.5" (12.5mm) lead length at $T_L=105^\circ\text{C}$	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	200							Amps
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.0							Volts
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	10							$\mu\text{Amps}$
	$T_A=150^\circ\text{C}$	500							
Maximum Full Load Reverse Current, full cycle average 0.5" (12.5mm) lead length at $T_L=105^\circ\text{C}$	$I_{R(AV)}$	500							$\mu\text{Amps}$
Typical Junction Capacitance(NOTE1)	$C_J$	40							pF
Typical Thermal Resistance(NOTE2)	$R_{\theta JA}$	30							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +175							$^\circ\text{C}$
<p><b>NOTES:</b></p> <p>1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts. 2. Thermal Resistance from Junction to Ambient at 0.5" (12.5mm) lead length, P.C. board mounted with 0.8" X 0.8" (20.0X20.0mm) copper heatsink.</p>									

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

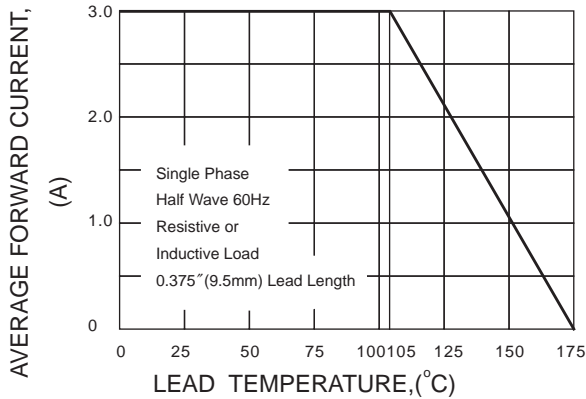


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

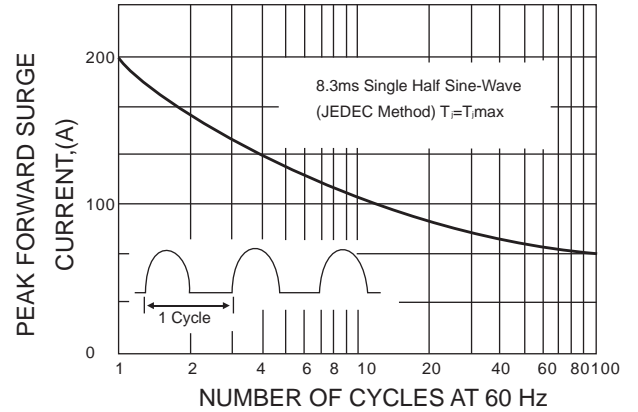


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

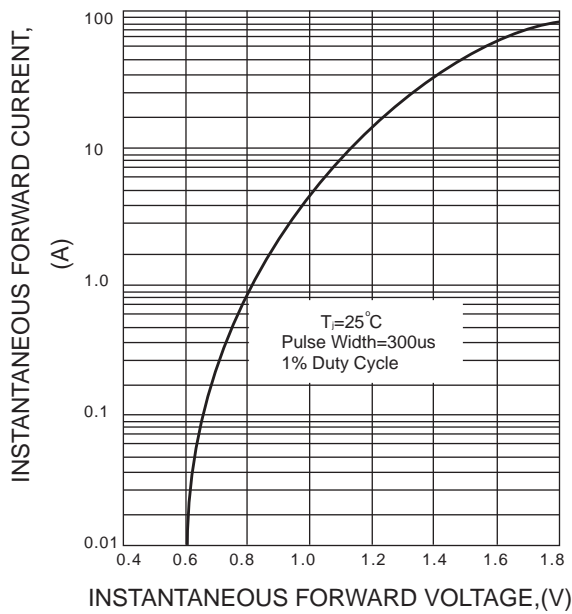


FIG.4-TYPICAL REVERSE CHARACTERISTICS

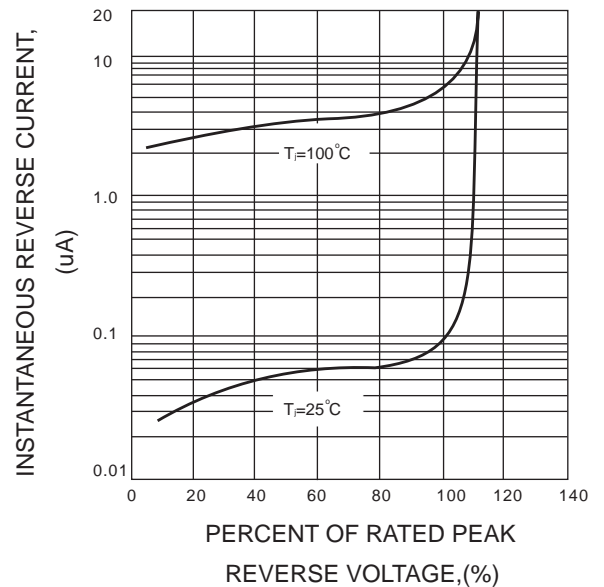


FIG.5-TYPICAL JUNCTION CAPACITANCE

