

**6A05-6A10**

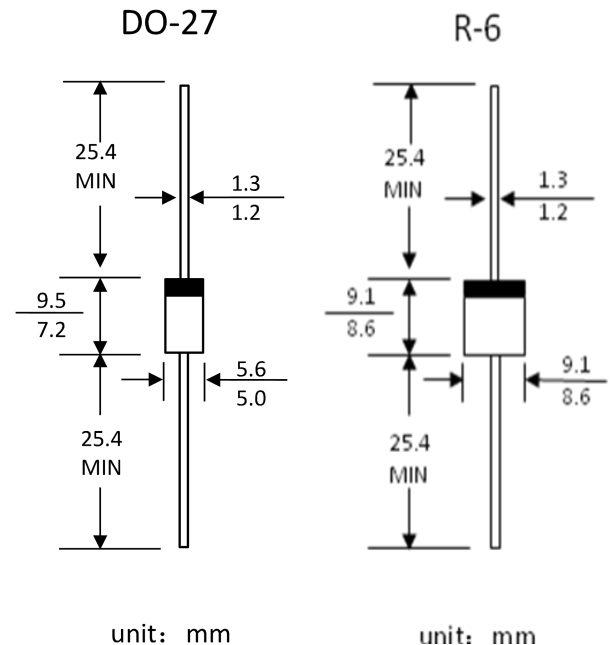
General Purpose Silicon Rectifier
Reverse Voltage 50 to 1000 V
Forward Current 6.0A

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free Molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375"(9.5mm) lead length

Mechanical Data

- **Case:** R-6 DO-27 Molded plastic body
- **Terminals:**Plated axial leads, solderable per MIL-STD-705, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any



Maximum Ratings & Thermal 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%

Parameter	Symbols	6A05	6A1	6A2	6A4	6A6	6A8	6A10	Unit
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 0.375"(9.5mm) lead length at $T_A=60^\circ\text{C}$	$I_{F(AV)}$	6.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400.0							A
Maximum instantaneous forward voltage @ 6.0A	V_F	1.00							V
Maximum DC reverse Current $T_A=25^\circ\text{C}$ At rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	10.0 400							μA
Typical junction capacitance (Note 1)	C_J	200							pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	10.0							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J T_{STG}	-65 to +150							$^\circ\text{C}$

Note: 1. Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.

2. Thermal Resistance from Junction to Ambient 0.375"(9.5mm) lead length,



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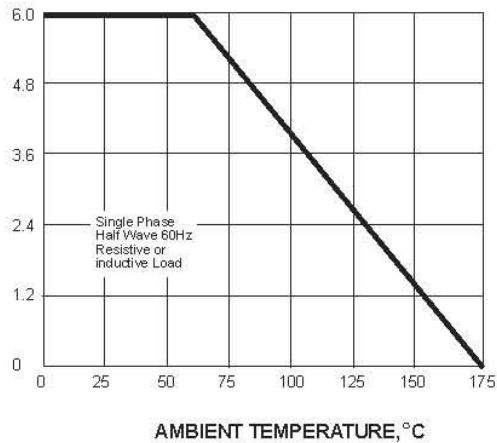
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RATINGS AND CHARACTERISTIC CURVES

($T_A=25^{\circ}\text{C}$ unless otherwise noted)

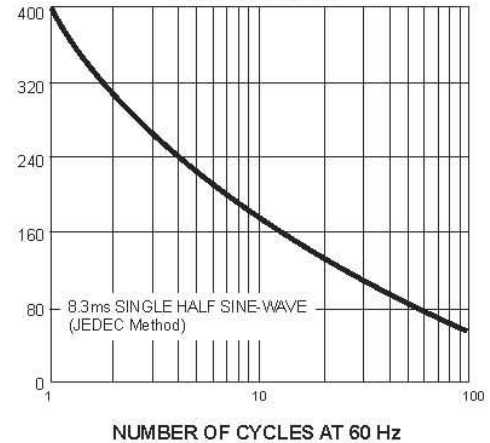
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



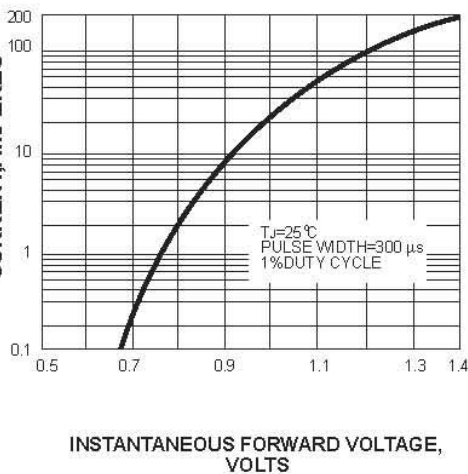
PEAK FORWARD SURGE CURRENT,
AMPERES

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



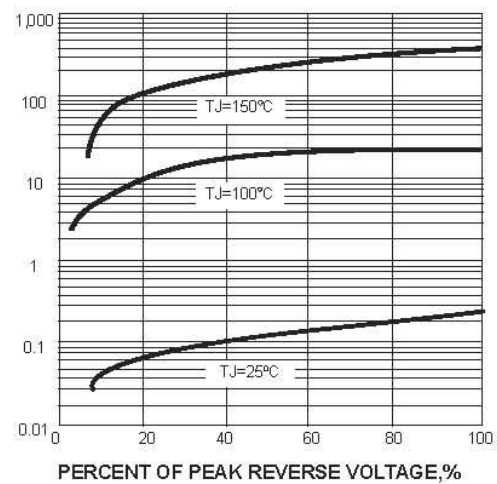
INSTANTANEOUS FORWARD
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



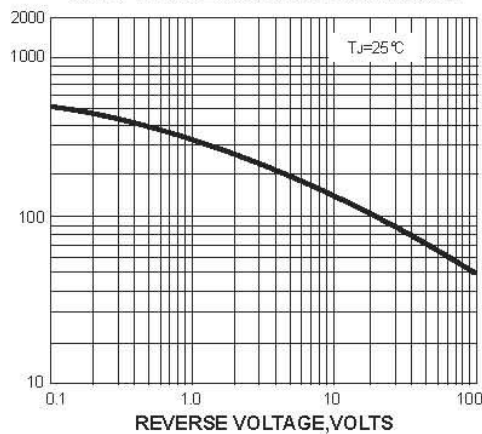
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

