

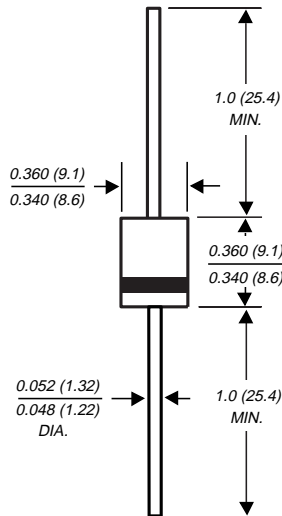
SUF30G AND SUF30J

ULTRAFAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 400 and 600 Volts

Forward Current - 3.0 Amperes

Case Style P600



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junction
- ◆ Ultrafast recovery times for high efficiency
- ◆ High forward surge current capability
- ◆ Low leakage current
- ◆ Low power loss
- ◆ High temperature soldering guaranteed: 260°C/10 seconds at 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



MECHANICAL DATA

Case: Molded epoxy body over passivated chip

Terminals: Plated axial leads solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.07 ounces, 2.1 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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	SYMBOLS	SUF30G	SUF30J	UNITS
Single phase half wave 60Hz, resistive or inductive load, for capacitive load current derate by 20% Maximum repetitive peak reverse voltage	V_{RRM}	400	600	Volts
Maximum RMS voltage	V_{RMS}	280	420	Volts
Maximum DC blocking voltage	V_{DC}	400	600	Volts
Maximum average forward rectified current, 0.200" (5.0mm) lead length at $T_A=60^\circ\text{C}$	$I_{(AV)}$	3.0		Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A=60^\circ\text{C}$	I_{FSM}	80.0		Amps
Maximum instantaneous forward voltage at 3.0A	V_F	1.80	2.0	Volts
Maximum peak reverse current $T_A=25^\circ\text{C}$ at rated peak reverse voltage $T_A=100^\circ\text{C}$	I_R	10.0 100.0		μA
Maximum reverse recovery time (NOTE1)	t_{rr}	35.0		ns
Typical junction capacitance (NOTE 2)	C_J	60		pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	25.0		$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150		$^\circ\text{C}$

NOTES:

(1) Reverse recovery test condition: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $t_{rr}=0.25\text{A}$

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) Thermal resistance from junction to ambient at 0.200" (5.0mm) lead length with both leads attached to heat sink

RATINGS AND CHARACTERISTIC CURVES SUF30G AND SUF30J

FIG. 1 - FORWARD CURRENT DERATING CURVE

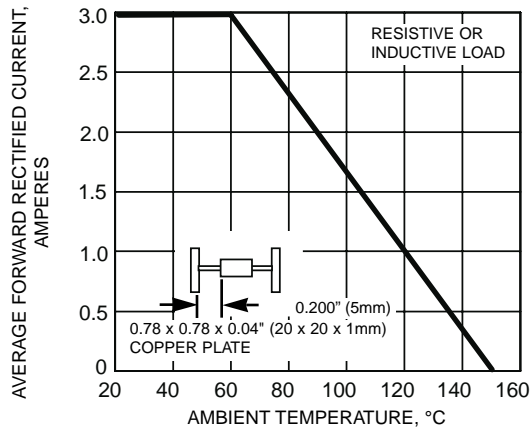


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

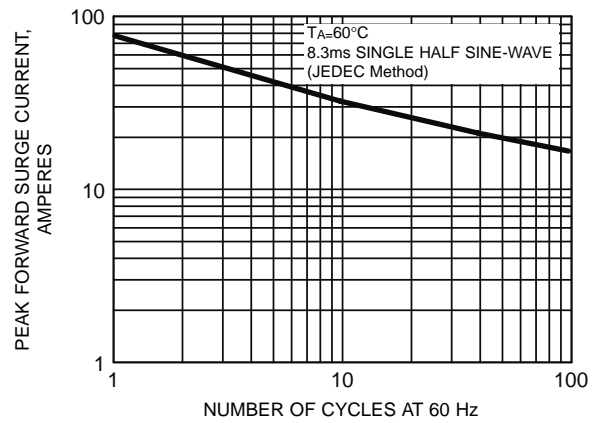
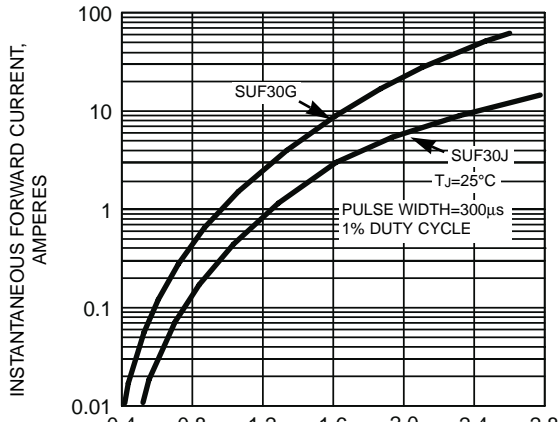


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



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

FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

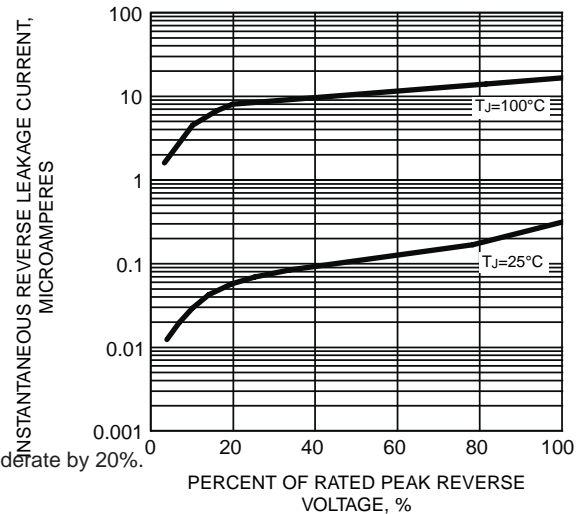


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

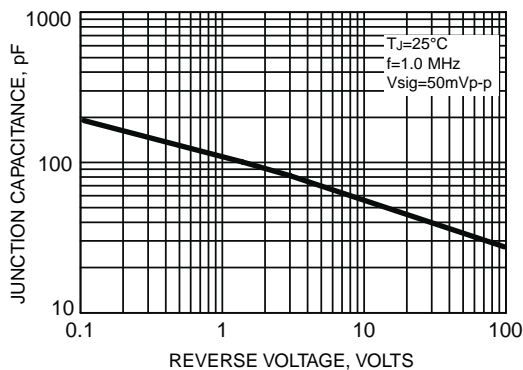


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

