



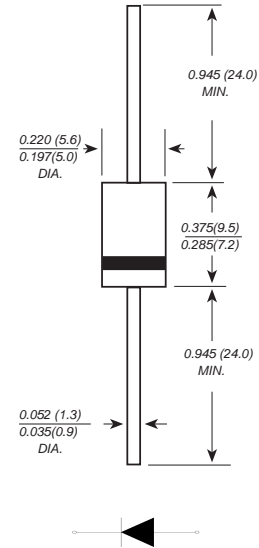
FR301~FR307

3.0Amp Fast Recovery Silicon Rectifiers

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Open Junction chip
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed
250°C/10 seconds at terminals

DO-27



Dimensions in inches and (millimeters)

Mechanical Data

Case : Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

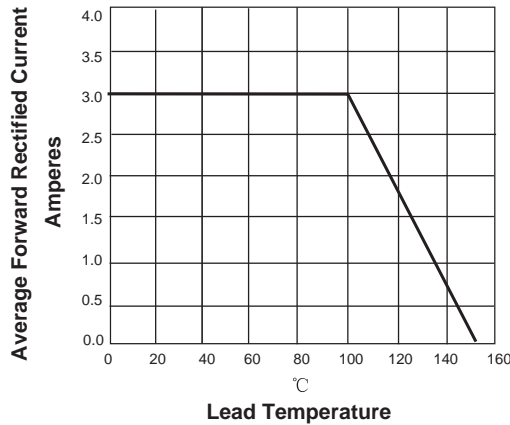
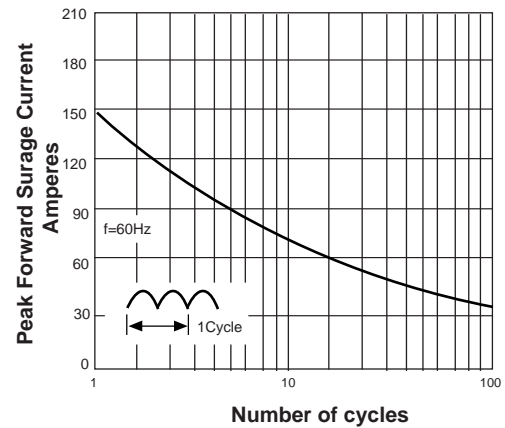
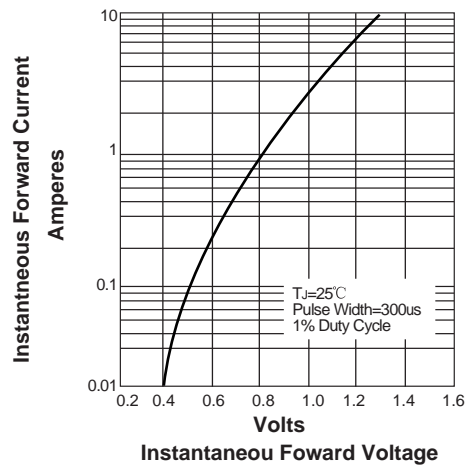
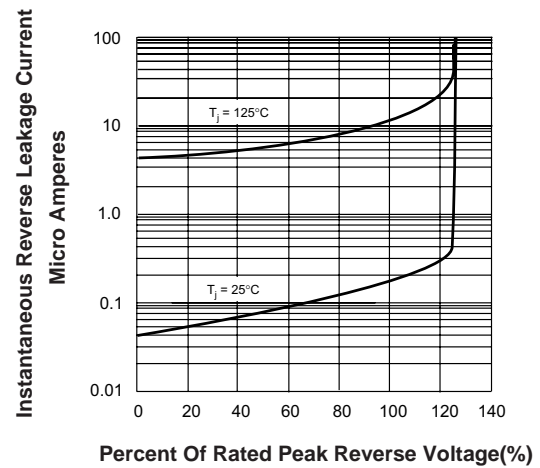
Weight : 0.0345 ounce, 0.98 grams

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 current derate by 20%.

Parameter	SYMBOLS	FR301	FR302	FR303	FR304	FR305	FR306	FR307	UNITS
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 at $T_L=100^\circ C$	$I_{(AV)}$	3.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	150.0							A
Maximum instantaneous forward voltage at 3.0A	V_F	1.30							V
Maximum DC reverse current $T_A = 25^\circ C$ at rated DC blocking voltage $T_A = 125^\circ C$	I_R	10.0 500							μA
Maximum reverse recovery time(Note 1)	T_{rr}	150				250	500		ns
Typical junction capacitance (Note2)	C_J	60.0							pF
Typical thermal resistance	R_{qJA}	45.0							$^\circ C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ C$

Note: 1.Reverse recovery time test condition: $I_F=0.5A$ $I_R=1.0A$ $I_{rr}=0.25A$
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Ratings And Characteristic Curves
FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

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

FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS


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