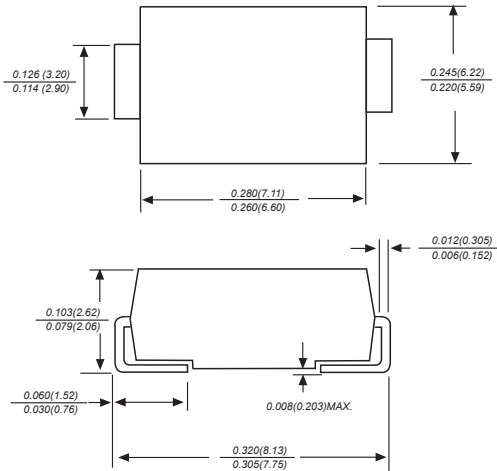


S12A THRU S12M

SURFACE MOUNT GENERAL RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 12.0Amperes

DO-214AB



Dimensions in inches and (millimeters)

FEATURES

The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
 For surface mounted applications
 Low reverse leakage
 Built-in strain relief, ideal for automated placement
 High forward surge current capability
 High temperature soldering guaranteed:
 250°C/10 seconds at terminals
 Glass passivated chip junction
 RoHS Compliance
 Reach Compliance

MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic body over passivated chip
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.007 ounce, 0.25grams

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%.

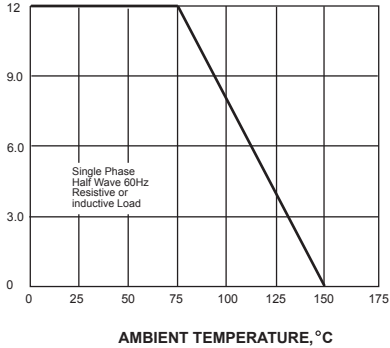
	SYMBOLS	S12A	S12B	S12D	S12G	S12J	S12K	S12M	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at $T_L=75^\circ C$	$I_{(AV)}$	12.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300.0							Amps
Maximum instantaneous forward voltage at 12A	V_F	1.15							Volts
Maximum DC reverse current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=125^\circ C$	I_R	10.0 250.0							μA
Typical junction capacitance (NOTE 1)	C_J	78.0							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	44.0							$^\circ C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^\circ C$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES S12A THRU S12M

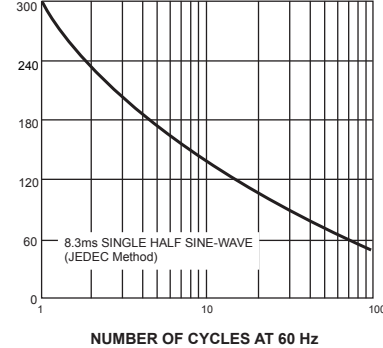
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



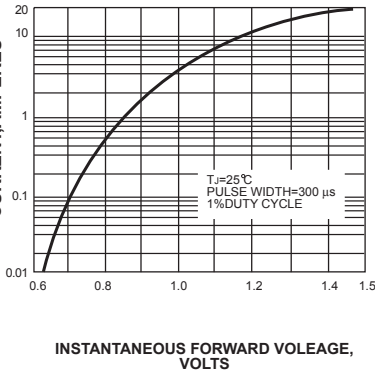
PEAK FORWARD SURGE CURRENT, AMPERES

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



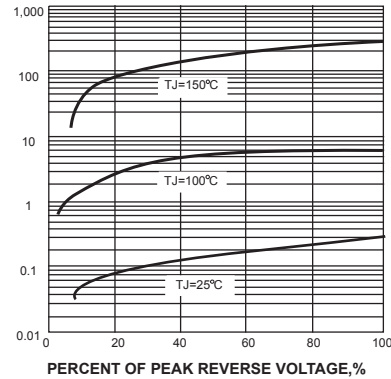
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



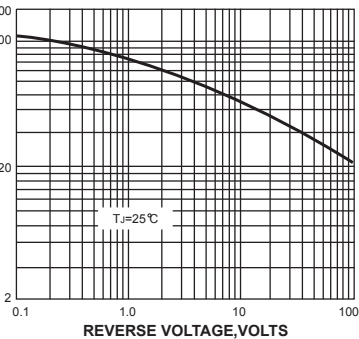
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

