

SK12H45 - SK12H60

12.0 AMPS. Schottky Barrier Rectifiers

DO-201AD

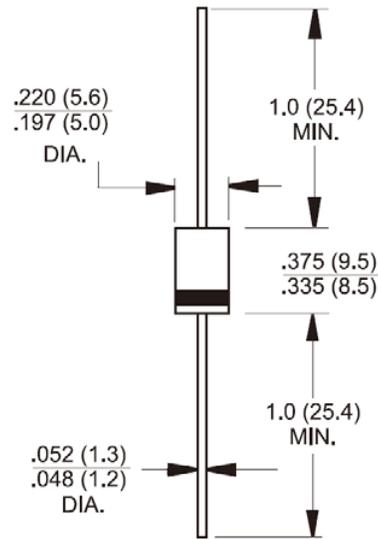


Features

- ✧ Low power loss, high efficiency
- ✧ High current capability, low VF
- ✧ High reliability
- ✧ High surge current capability
- ✧ Epitaxial construction
- ✧ Guard-ring for transient protection
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds / .375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.3 grams



Dimensions in inches and (millimeters)
Marking Diagram



- SK12HXX = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	SK12H45	SK12H60	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	60	V
Maximum RMS Voltage	V_{RMS}	31	42	V
Maximum DC Blocking Voltage	V_{DC}	45	60	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	12		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	320		A
Maximum Instantaneous Forward Voltage (Note 1) $I_F=12A, T_A=25^\circ C$	V_F	0.55	0.70	V
Maximum Reverse Current @ Rated VR $T_A=25^\circ C$ $T_A=100^\circ C$	I_R	0.15 20		mA
Typical Thermal Resistance(Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	30 10		$^\circ C/W$
Operating Temperature Range - in DC forward mode	T_J	<=200		$^\circ C$
Storage Temperature Range	T_{STG}	- 50 to + 175		$^\circ C$

Note 1: Pulse Test : 300uS Pulse Width, 1% Duty Cycle

Note 2: Mounted on Cu-Pad size 16mm x 16mm on P.C.B.

Version:B10

RATINGS AND CHARACTERISTIC CURVES (SK12H45 THRU SK12H60)

FIG. 1 FORWARD CURRENT DERATING CURVE

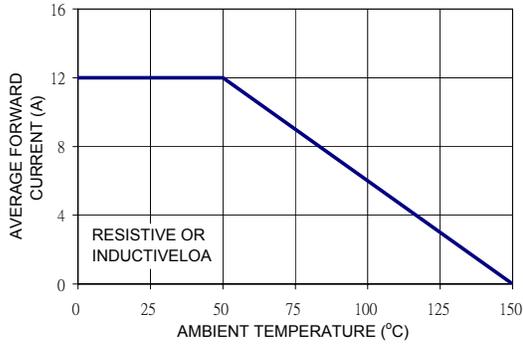


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

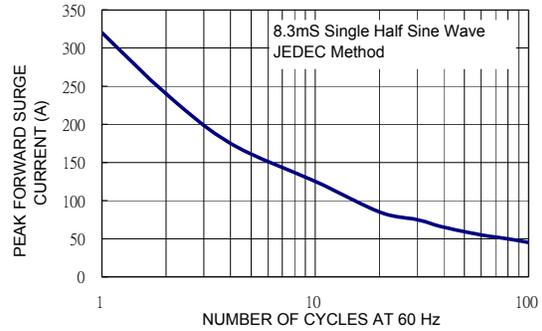


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

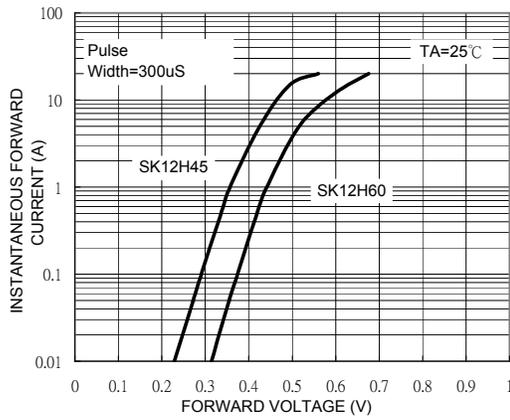


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

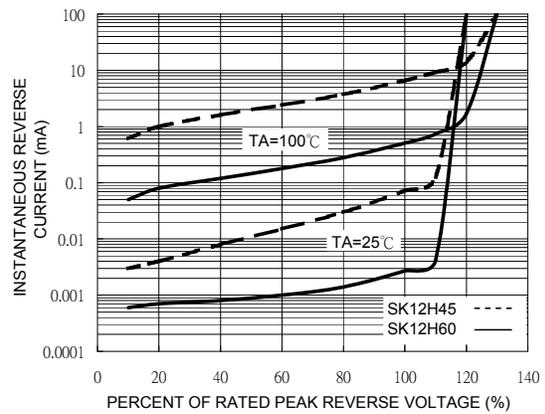


FIG. 5 TYPICAL JUNCTION CAPACITANCE

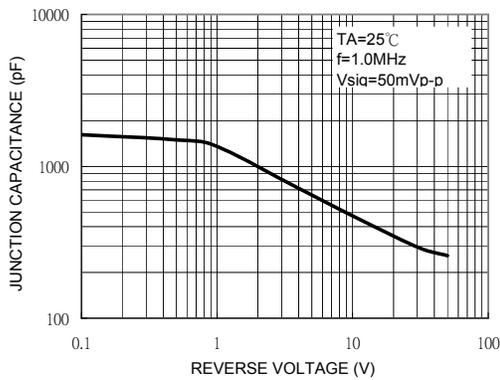


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

