

S5JC-S5MC(LS)

SURFACE MOUNT GLASS PASSIVATED RECTIFIERS

REVERSE VOLTAGE – 600 to 1000 Volts
FORWARD CURRENT – 5.0 Ampere

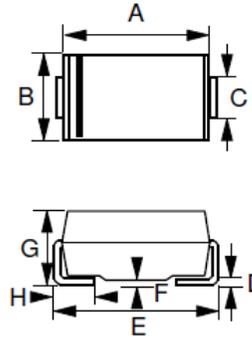
FEATURES

- Glass passivated chip
- For surface mounted applications
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Package: Molded plastic
- Package Material: Molding compound, UL Flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Polarity: Color band denotes cathode
- Weight: 0.21 grams

SMC



SMC		
DIM	MIN	MAX
A	6.60	7.11
B	5.59	6.22
C	2.92	3.18
D	0.15	0.31
E	7.75	8.13
F	0.05	0.20
G	2.01	2.50
H	0.76	1.52
All dimension in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	S5JC	S5KC	S5MC	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_L=75^\circ\text{C}$	$I_{(AV)}$	5.0			A
Peak Forward Surge Current 8.3 ms single half sine-wave super imposed on rated load	I_{FSM}	100			A
Peak Forward Surge Current 1.0 ms single half sine-wave	I_{FSM}	200			A
Maximum Forward Voltage at 5.0A DC	V_F	1.15			V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_J=125^\circ\text{C}$	I_R	10 250			μA
Typical Reverse Recovery Time (Note 4)	t_{rr}	2200			ns
Typical Junction Capacitance (Note 5)	C_T	40			pF
Typical Thermal Resistance (Note 6)	R_{thJL}	10			$^\circ\text{C/W}$
Typical Thermal Resistance (Note 7)	R_{thJA}	50			$^\circ\text{C/W}$
Operating Temperature Range	T_J	-55 to + 150			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to + 150			$^\circ\text{C}$

Note:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$.
5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
6. Thermal Resistance junction to Lead.
7. Thermal Resistance junction to Ambient.

FIG.1 - FORWARD CURRENT DERATING CURVE

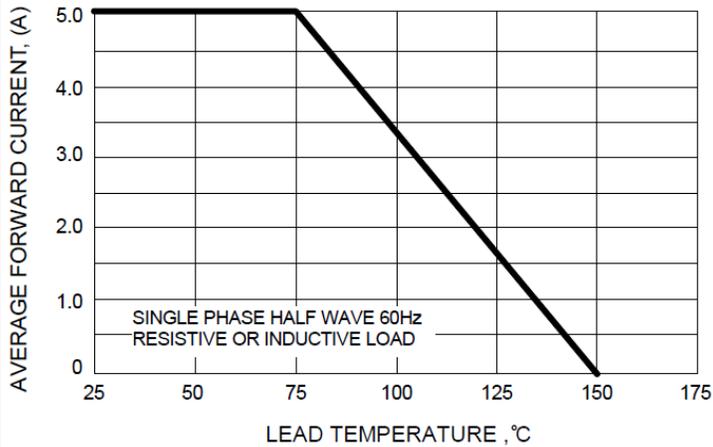


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

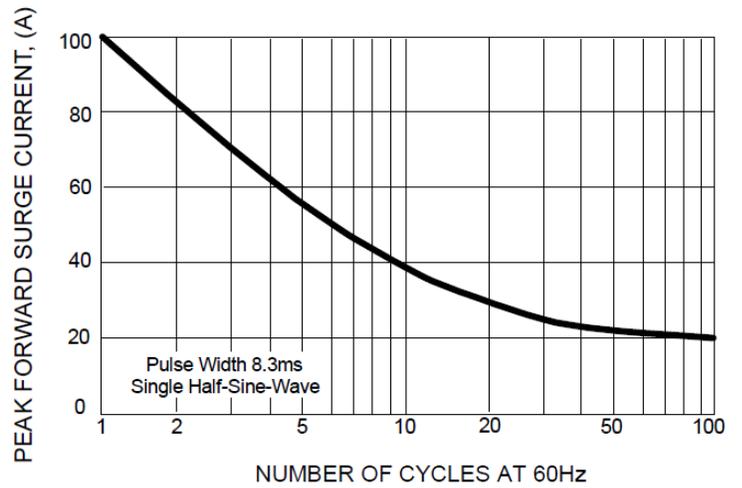


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

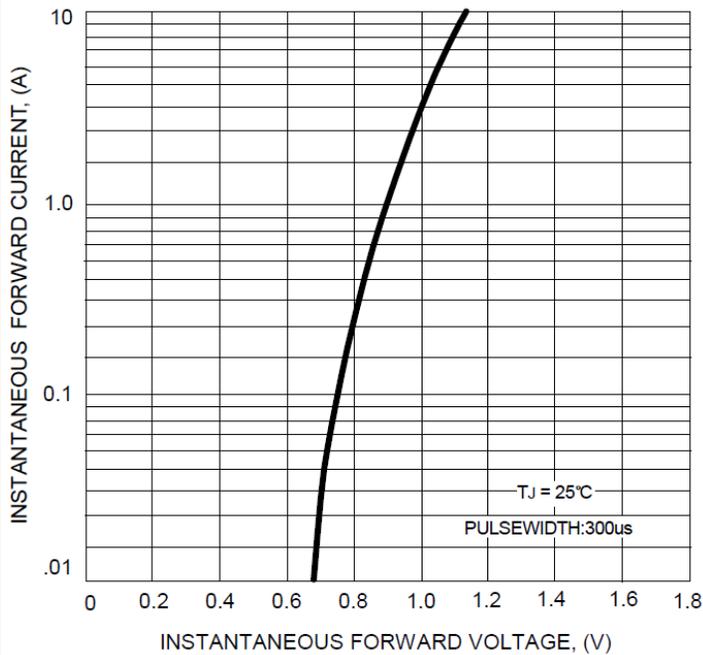
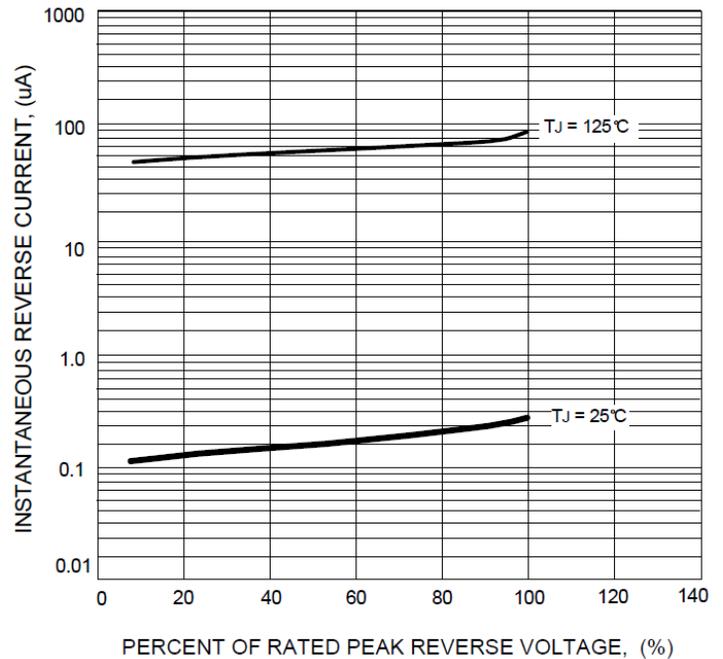


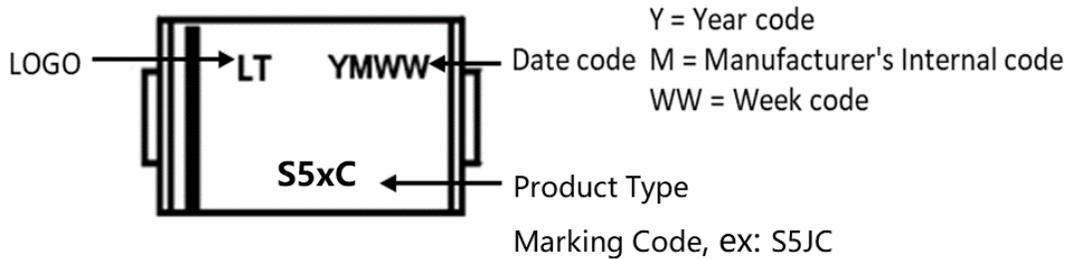
FIG.4 - TYPICAL REVERSE CHARACTERISTICS



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
S5JC_HF	SMC	3000pcs	Reel
S5KC_HF	SMC	3000pcs	Reel
S5MC_HF	SMC	3000pcs	Reel

Marking Information:



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