

SDM1045CS

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

VOLTAGE 45 Volt **CURRENT** 10 Ampere

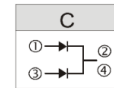
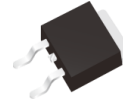
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications in order to optimize board space
- Low power loss, High efficiency
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: TO-252 molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: As marking
- Weight: 0.0104 ounces, 0.297 grams.

TO-252



MAXIMUM RATINGS($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	V
Maximum RMS Voltage	V_{RMS}	32	V
Maximum DC Blocking Voltage	V_R	45	V
Maximum Average Rectified Output Current	$I_{F(AV)}$	10 5	A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80	A
Typical Thermal Resistance	$R_{\theta JC}$	8	$^{\circ}\text{C/W}$
Operating Junction Temperature Range And Storage Temperature Range	T_J, T_{STG}	-55 to + 150	$^{\circ}\text{C}$

NOTE : 1.Mounted on 10cm x 10cm x 0.5mm copper pad area

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Breakdown voltage	V_{BR}	$I_R=0.5\text{mA}$ $T_A=25^{\circ}\text{C}$	45	-	-	V
Instantaneous forward voltage	V_F	$I_F=1\text{A}$ $T_A=25^{\circ}\text{C}$	-	0.34	-	V
		$I_F=3\text{A}$ $T_A=25^{\circ}\text{C}$	-	0.42	-	V
		$I_F=5\text{A}$ $T_A=25^{\circ}\text{C}$	-	0.49	0.54	V
		$I_F=1\text{A}$ $T_A=125^{\circ}\text{C}$	-	0.26	-	V
Reverse current	I_R	$V_R=36\text{V}$ $T_A=25^{\circ}\text{C}$	-	25	-	μA
		$V_R=45\text{V}$ $T_A=25^{\circ}\text{C}$	-	-	210	μA
		$V_R=45\text{V}$ $T_A=125^{\circ}\text{C}$	-	5	-	mA

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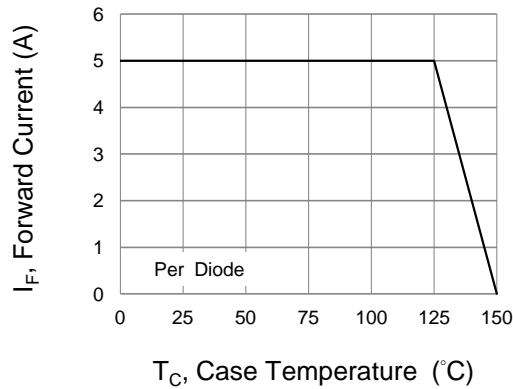


Fig.1 Forward Current Derating Curve

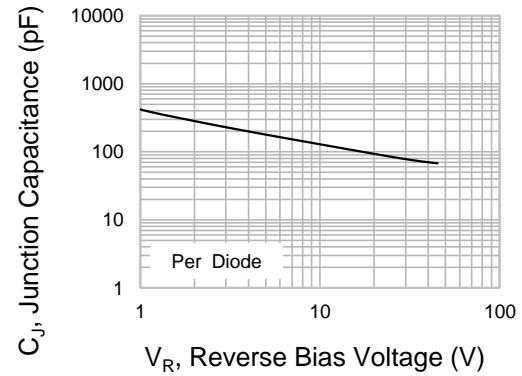


Fig.2 Typical Junction Capacitance

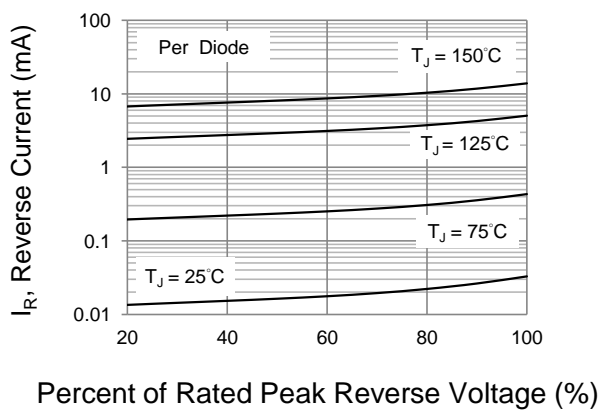


Fig.3 Typical Reverse Characteristics

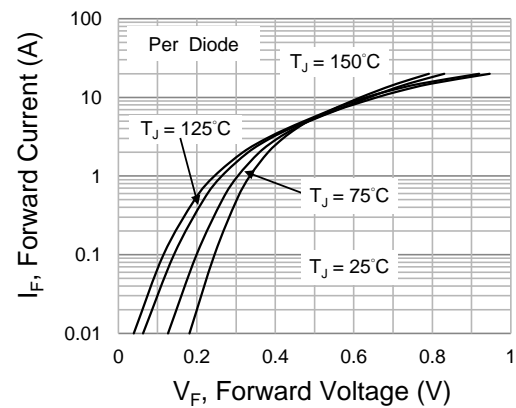


Fig.4 Typical Forward Characteristics

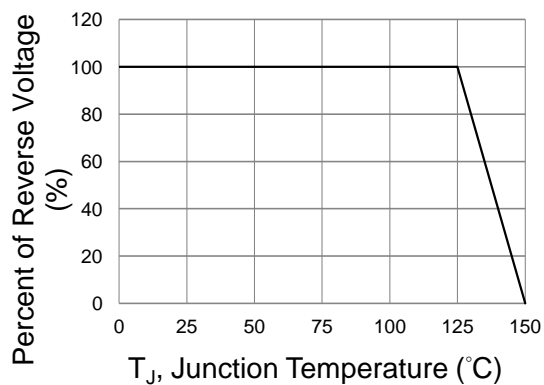


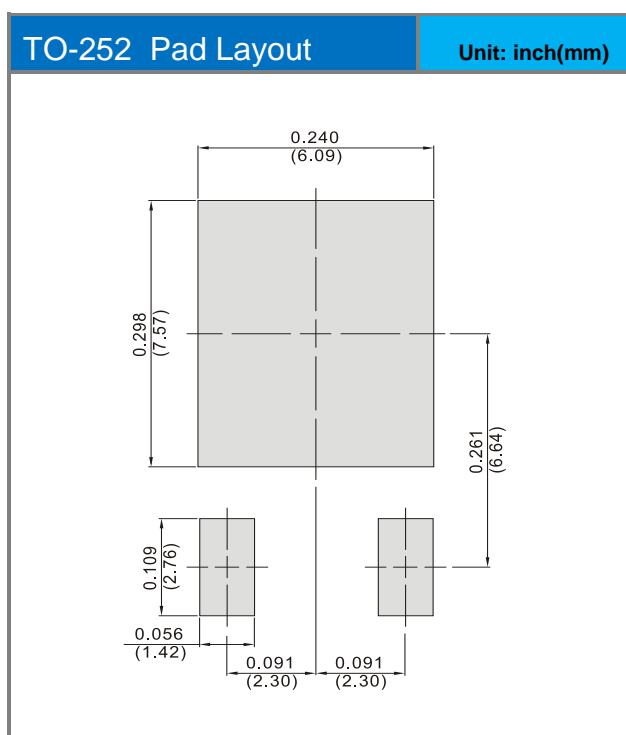
Fig.5 Operating Temperature Derating Curve

SDM1045CS

Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SDM1045CS_S2_00001	TO-252	3K / 13" Reel	SDM1045CS	Halogen free

Packaging Information & Mounting Pad Layout





SDM1045CS

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