

SBM1560VPC

Surface Mount Extreme Low V_F Schottky Barrier Rectifier

Voltage

60 V

Current

15 A

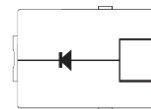
Features

- Extreme low forward voltage drop
- Low power loss, high efficiency
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : TO-277C package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.11 grams

TO-277C



Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	60	V
Maximum RMS Voltage		V_{RMS}	42	V
Maximum DC Blocking Voltage		V_{DC}	60	V
Maximum Average Forward Rectified Current		$I_{F(AV)}$	15	A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load		I_{FSM}	250	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$		C_J	550	pF
Typical Thermal Resistance	(Note 1)	$R_{\theta JA}$	65	$^\circ\text{C/W}$
	(Note 2)	$R_{\theta JC}$	0.64	
	(Note 2)	$R_{\theta JL}$	12	
Operating Junction Temperature Range		T_J	-55~150	$^\circ\text{C}$
Storage Temperature Range		T_{STG}	-55~150	$^\circ\text{C}$

SBM1560VPC

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.31	0.36	V
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.4	0.45	
		$I_F = 15\text{ A}, T_J = 25^\circ\text{C}$	-	0.54	0.59	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.21	0.26	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.35	0.41	
Reverse current ^(Note 3)	I_R	$V_R = 42\text{ V}, T_J = 25^\circ\text{C}$	-	30	150	μA
		$V_R = 60\text{ V}, T_J = 25^\circ\text{C}$	-	0.05	0.2	mA
		$V_R = 60\text{ V}, T_J = 125^\circ\text{C}$	-	12	50	

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm² copper pad area.
3. Short duration pulse test used to minimize self-heating effect.

SBM1560VPC

TYPICAL CHARACTERISTIC CURVES

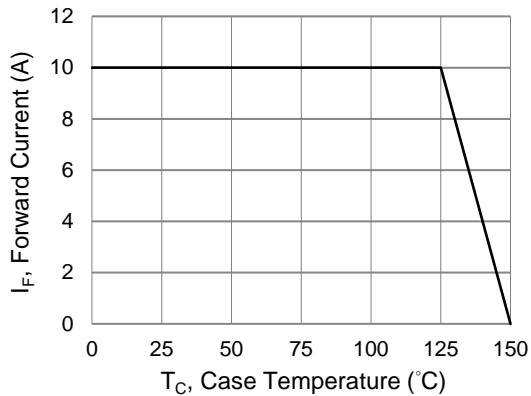


Fig.1 Forward Current Derating Curve

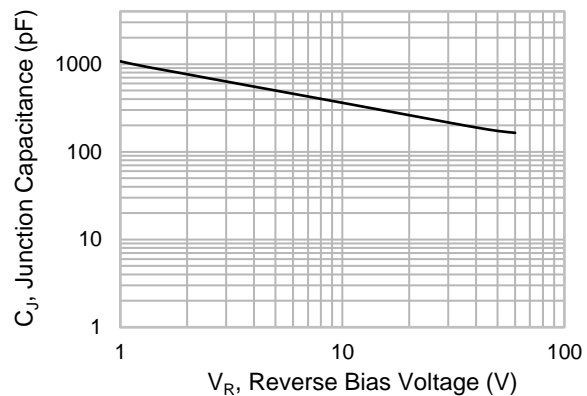


Fig.2 Typical Junction Capacitance

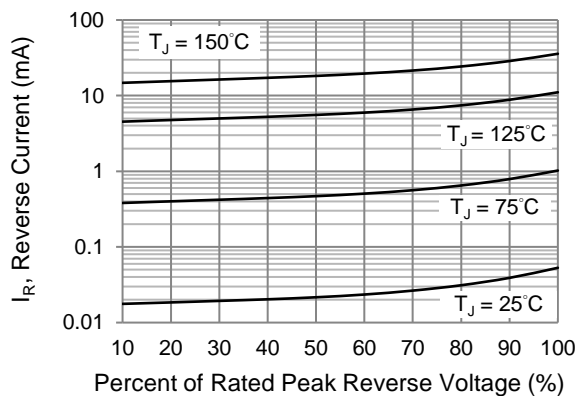


Fig.3 Typical Reverse Characteristics

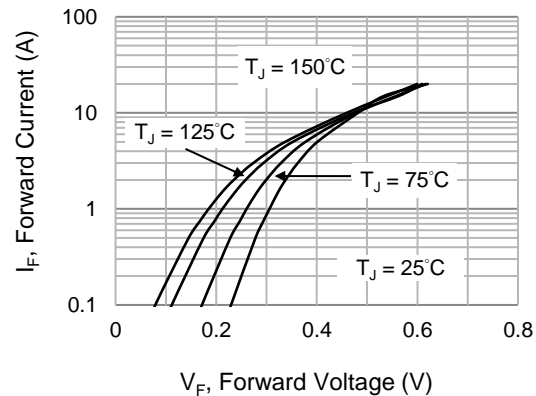


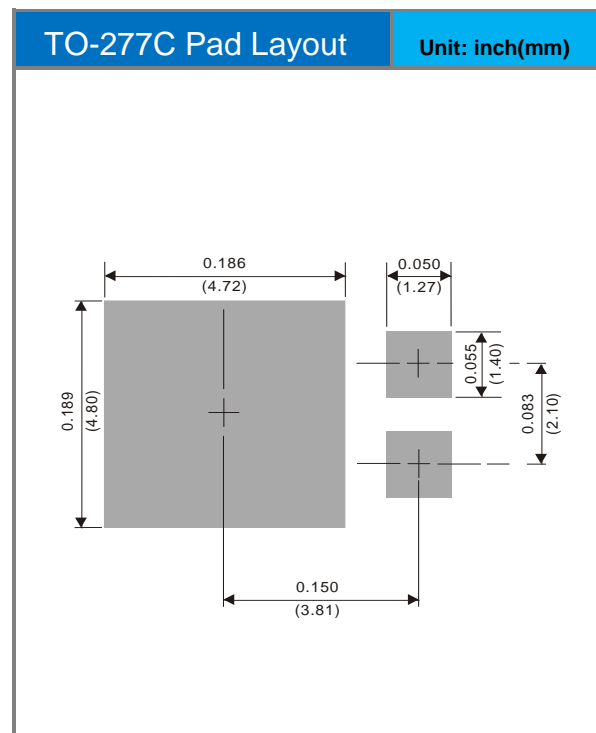
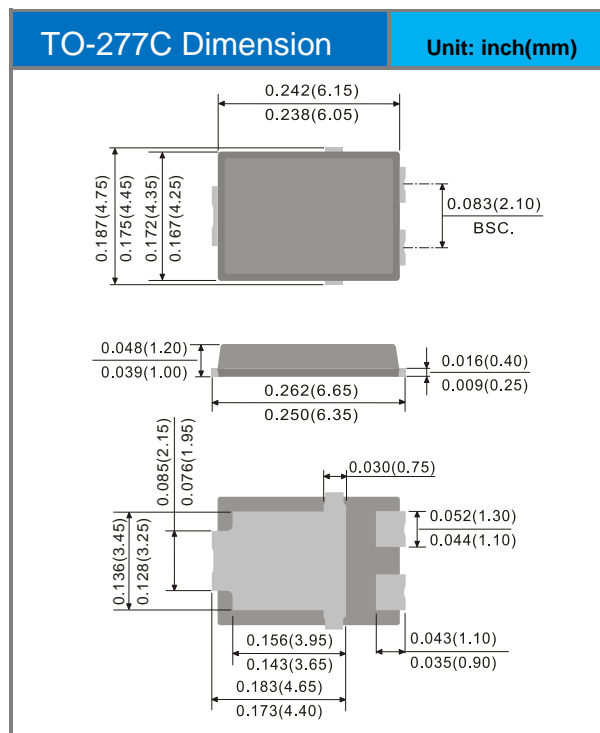
Fig.4 Typical Forward Characteristics

SBM1560VPC

Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SBM1560VPC	TO-277C	5K pcs / 13" reel	SBM1560VPC

Packaging Information & Mounting Pad Layout



SBM1560VPC

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