



SBM3060VDC-AU

Surface Mount Low V_F Schottky Barrier Rectifier

Voltage 60 V **Current** 30 A

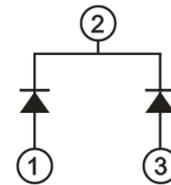
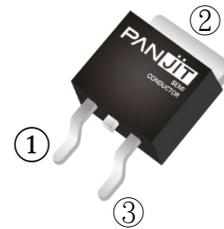
Features

- Low forward voltage drop
- Low power loss, high efficiency
- High surge current capability
- AEC-Q101 qualified
- Lead free in comply with EU RoHS 2.0
- Green molding compound as per IEC61249 Standard

Mechanical Data

- Case : TO-263 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 1.38 grams

TO-263



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

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Repetitive 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 Current	per device	30	A
	per diode	15	
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load Per Diode	I_{FSM}	250	A
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 4\text{ V}$	C_J	650	pF
Typical Thermal Resistance	(Note 1)	$R_{\theta JA}$	52
	(Note 2)	$R_{\theta JC}$	4.5
	(Note 2)	$R_{\theta JL}$	3.2
Operating Junction Temperature Range	T_J	-55~150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~150	$^\circ\text{C}$



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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage Per Diode	V_F	$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.36	-	V
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.4	-	
		$I_F = 15\text{ A}, T_J = 25^\circ\text{C}$	-	-	0.59	
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.29	-	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.35	-	
		$I_F = 15\text{ A}, T_J = 125^\circ\text{C}$	-	0.57	-	
Reverse Current Per Diode ^(Note 3)	I_R	$V_R = 42\text{ V}, T_J = 25^\circ\text{C}$	-	30	-	μA
		$V_R = 60\text{ V}, T_J = 25^\circ\text{C}$	-	-	220	
		$V_R = 60\text{ V}, T_J = 125^\circ\text{C}$	-	16	-	mA

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.



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TYPICAL CHARACTERISTIC CURVES

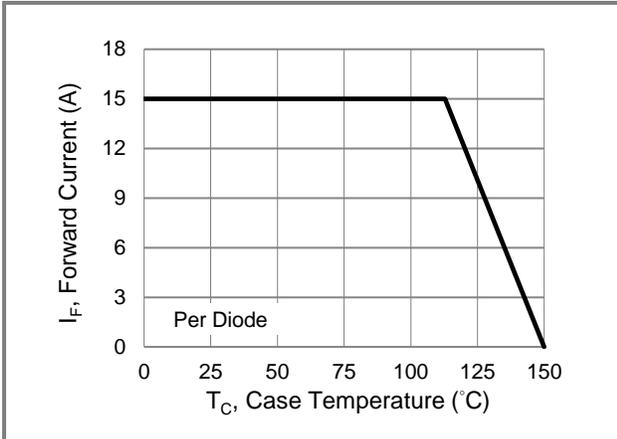


Fig.1 Forward Current Derating Curve

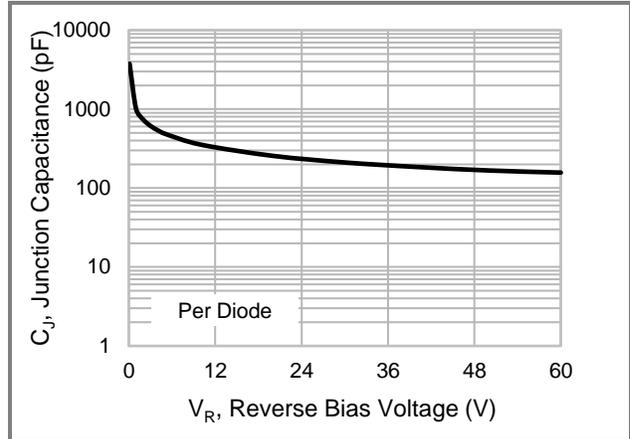


Fig.2 Typical Junction Capacitance

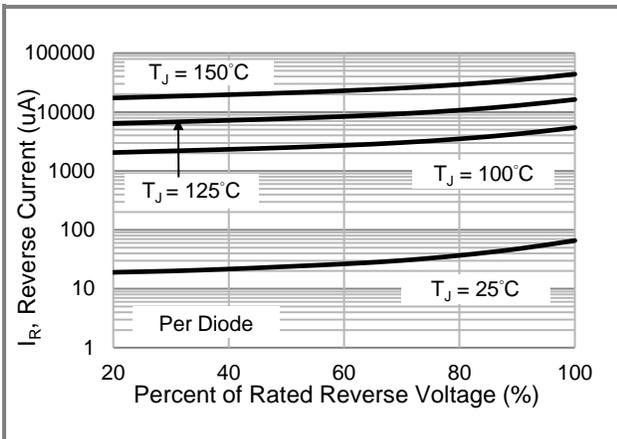


Fig.3 Typical Reverse Characteristics

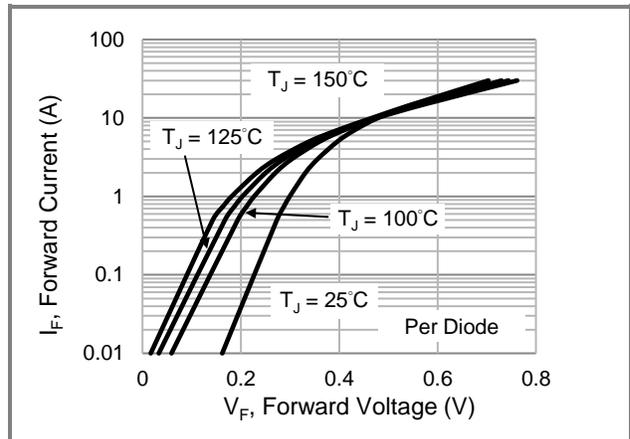


Fig.4 Typical Forward Characteristics

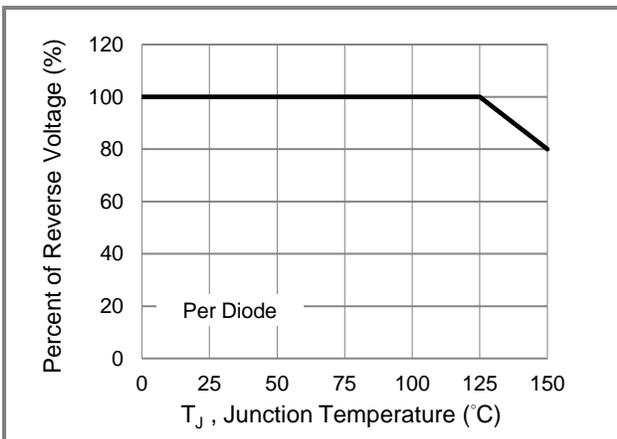


Fig.5 Operating Temperature Derating Curve

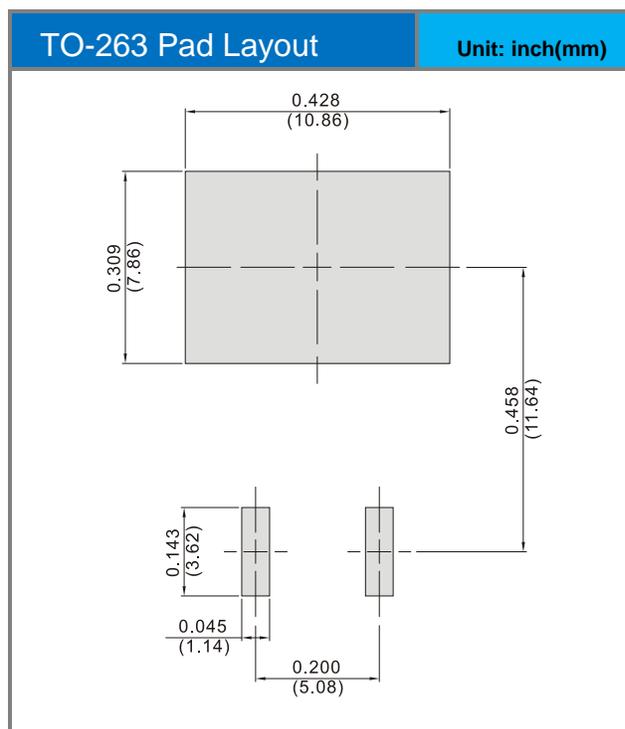
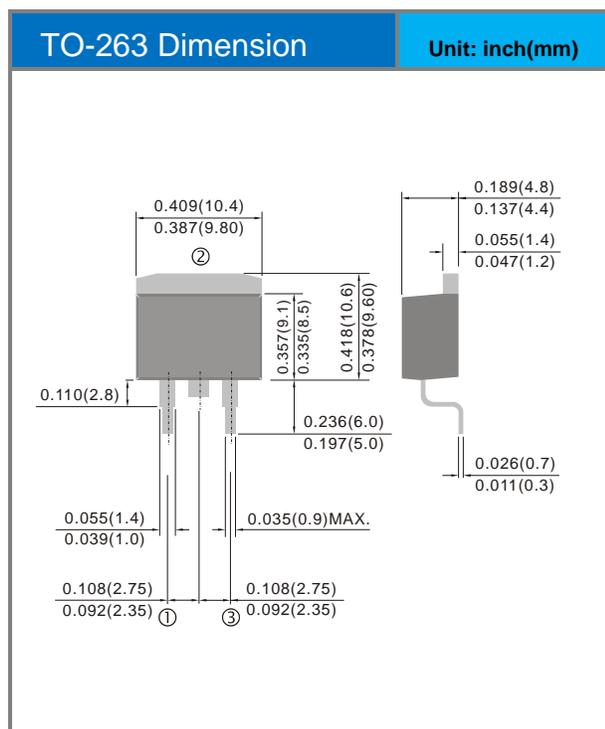


SBM3060VDC-AU

Part No. Packing Code Version

Part No.	Package Type	Packing Type	Marking	Version
SBM3060VDC-AU	TO-263	800 pcs / 13" reel	SBM3060VDC	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout





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