

SBM250L

ULTRA LOW VF SCHOTTKY RECTIFIER

Voltage

50 V

Current

2 A

DO-41

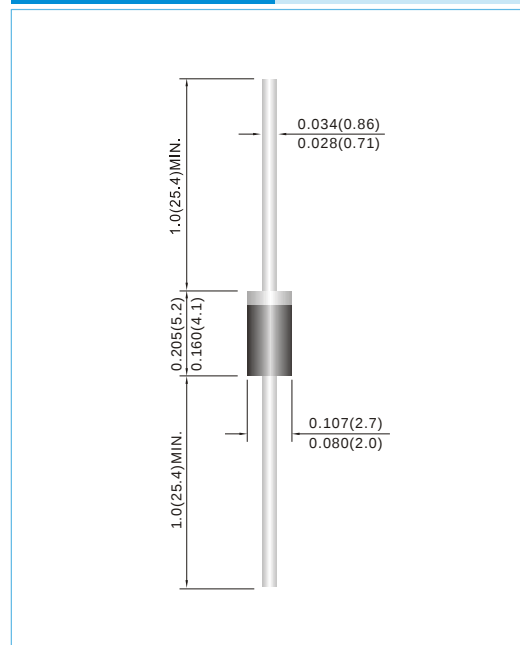
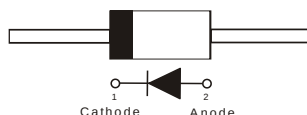
Unit : inch(mm)

Features

- Ultra low forward voltage drop, low power loss
- High efficiency operation
- Lead free in compliance with EU RoHS 2011/65/EU directive

Mechanical Data

- Case: Molded plastic, DO-41
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Approx. Weight: 0.012 ounces, 0.336 grams
- Marking: Part number



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

PARAMETER	SYMBOL	LIMIT	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	V
Maximum rms voltage	V_{RMS}	35	V
Maximum dc blocking voltage	V_R	50	V
Maximum average forward rectified current	$I_{F(AV)}$	2	A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	50	A
Typical junction capacitance ($V_R=4V$, $f=1\text{MHz}$)	C_J	125	pF
Typical thermal resistance	(Note 1) $R_{\theta JA}$	80	$^{\circ}\text{C/W}$
	(Note 2) $R_{\theta JC}$	40	
Operating junction temperature range	T_J	-55 to +150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Note : 1. The testing condition of the thermal resistance (junction to ambient) is based on 10mm lead length between mini copper pads.

2. The testing condition of the thermal resistance (junction to case) is base on 10mm lead length between two 10cm x 10cm copper pads.

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

PARAMETER	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNITS
Breakdown voltage	V_{BR}	$I_R=0.5\text{mA}$	$T_J=25^\circ\text{C}$	50	-	-	V
Instantaneous forward voltage	V_F	$I_F=0.5\text{A}$	$T_J=25^\circ\text{C}$	-	0.33	-	V
		$I_F=2\text{A}$	$T_J=25^\circ\text{C}$	-	0.44	0.5	V
		$I_F=0.5\text{A}$	$T_J=125^\circ\text{C}$	-	0.26	-	V
		$I_F=2\text{A}$	$T_J=125^\circ\text{C}$	-	0.4	-	V
Reverse current	I_R	$V_R=40\text{V}$	$T_J=25^\circ\text{C}$	-	8	-	μA
		$V_R=50\text{V}$	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$	- -	- 3	40 -	μA mA

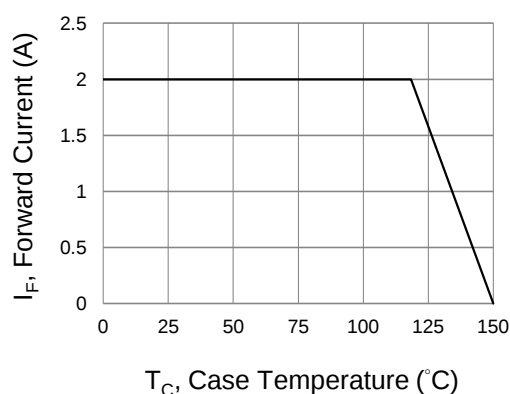


Fig.1 Forward Current Derating Curve

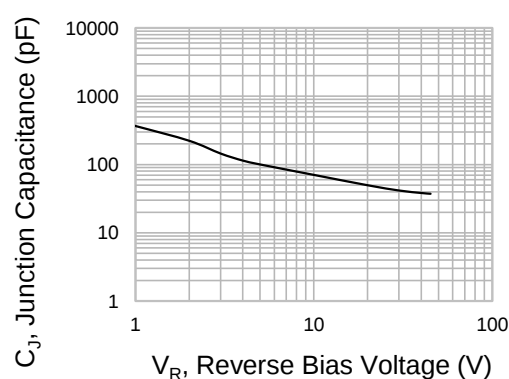


Fig.2 Typical Junction Capacitance

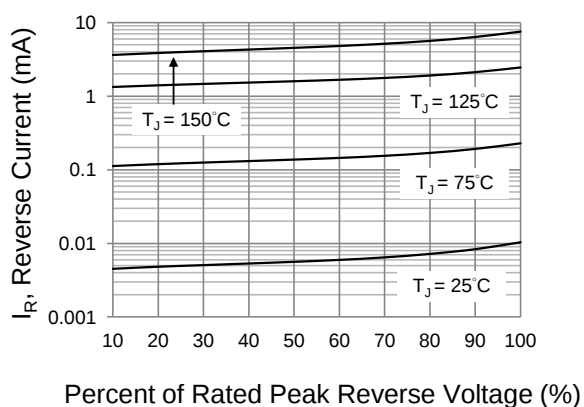


Fig.3 Typical Reverse Characteristics

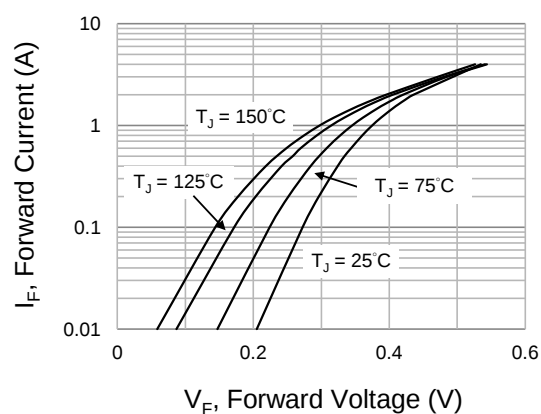


Fig.4 Typical Forward Characteristics

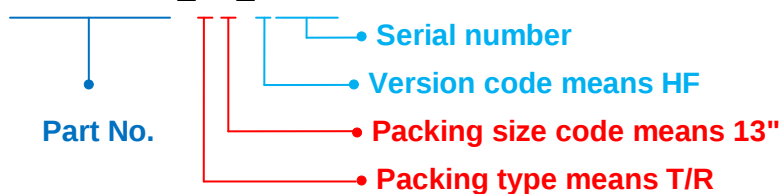
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Part No_packing code_Version

SBM250L_AY_00001
SBM250L_AY_10001
SBM250L_B0_00001
SBM250L_B0_10001
SBM250L_R2_00001
SBM250L_R2_10001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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