



### ULTRA LOW VF SCHOTTKY RECTIFIER

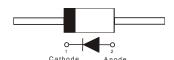
Voltage 50 V Current 2 A

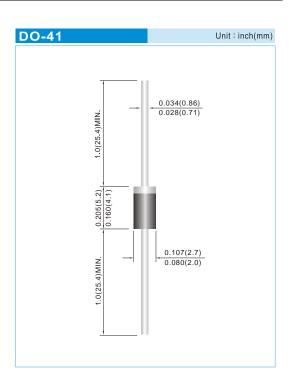
### **Features**

- 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<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNIT		
Maximum repetitive peak reverse voltage		VRRM	50	V	
Maximum rms voltage		VRMS	35	V	
Maximum dc blocking voltage		VR	50	V	
Maximum average forward rectified current		IF(AV)	2	Α	
Peak forward surge current: 8.3ms single half sine- wave superimposed on rated load		IFSM	50	А	
Typical junction capacitance (V <sub>R</sub> =4V, f=1MHz)		Сл	125	pF	
Typical thermal resistance	(Note 1)	$R_{\theta JA}$	80	9000	
	(Note 2)	$R_{ heta JC}$	40	°C/W	
Operating junction temperature range		TJ	-55 to +150	°C	
Storage temperature range		Тѕтс	-55 to +150	°C	

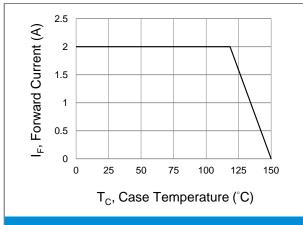
- Note: 1. The testing condition of the thermal resistance (junction to ambient) is based on 10mm lead length between mini copper pads.
  - 2. The testing condition of the thermal resistance (junction to case) is base on 10mm lead length between two 10cm x 10cm copper pads.



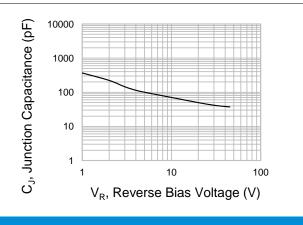


## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

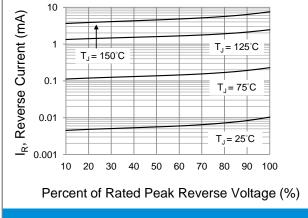
PARAMETER	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNITS
Breakdown voltage	$V_{BR}$	I <sub>R</sub> =0.5mA	T <sub>J</sub> =25°C	50	-	-	V
Instantaneous forward voltage	$V_F$	I <sub>F</sub> =0.5A	T <sub>J</sub> =25°C	-	0.33	-	V
		I <sub>F</sub> =2A		-	0.44	0.5	
		I <sub>F</sub> =0.5A	T <sub>J</sub> =125°C	-	0.26	-	V
		I <sub>F</sub> =2A		-	0.4	-	
Reverse current	I <sub>R</sub>	V <sub>R</sub> =40V	T <sub>J</sub> =25°C	-	8	-	μА
		V <sub>R</sub> =50V	T <sub>J</sub> =25°C	-	-	40	μА
			T <sub>J</sub> =125°C	-	3	-	mA



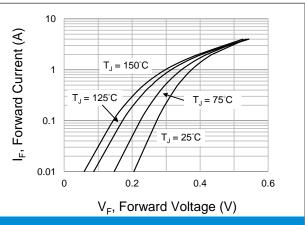
**Fig.1 Forward Current Derating Curve** 



**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

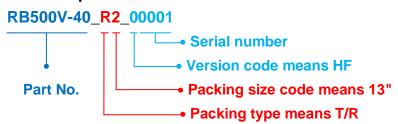
SBM250L\_B0\_00001

SBM250L\_B0\_10001

SBM250L\_R2\_00001

SBM250L\_R2\_10001

## For example:



Packing Code XX			Version Code XXXXX			
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	Α	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	В	13"	2			
Tube Packing (T/P)	Т	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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