

SBA0520Q SERIES

EXTREME LOW VF SCHOTTKY RECTIFIER

Voltage

20~40 V

Current

0.5 A

Features

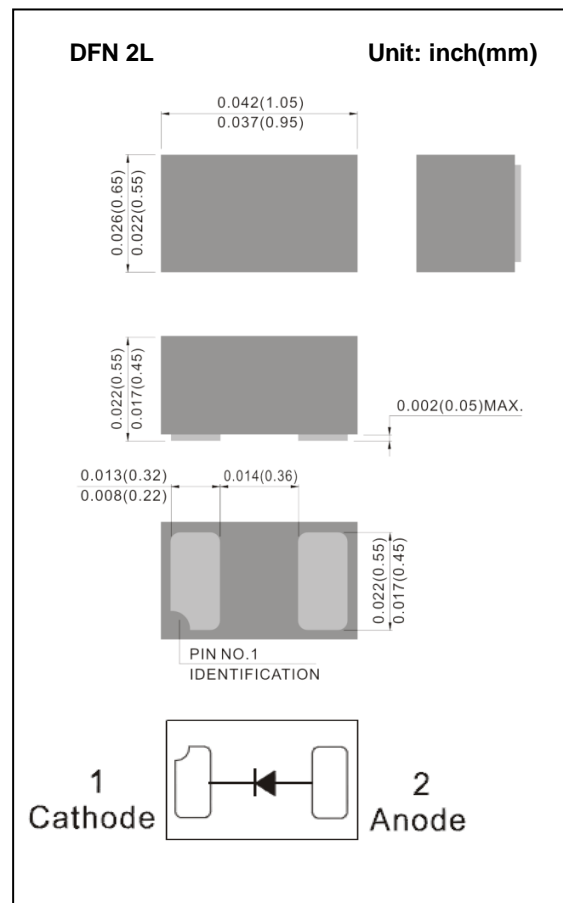
- Ultra low forward voltage , Low Power loss
- Fast switching speed
- Surface mount package
- Ultra thin profile package for space constrained utilization
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

Applications

- Low voltage rectification
- Reverse polarity protection
- Low power consumption applications

Mechanical Data

- Case: DFN 2L, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00004 ounces, 0.0011 grams



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

PARAMETER	SYMBOL	SBA0520Q	SBA0530Q	SBA0540Q	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Maximum rms voltage	V_{RMS}	14	21	28	V
Maximum dc blocking voltage	V_R	20	30	40	V
Maximum average forward rectified current	$I_{F(AV)}$	0.5			A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	2			A
Typical forward voltage at 10mA	V_F	0.25	0.25	0.27	V
Typical forward voltage at 0.1A	V_F	0.33	0.33	0.37	V
Maximum forward voltage at 0.5A	V_F	0.48	0.52	0.6	V
Maximum dc reverse current at $T_J=25^{\circ}\text{C}$	I_R	100	100	50	μA
Typical thermal resistance (Note 1)	$R_{\theta JA}$	430			$^{\circ}\text{C}/\text{W}$
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. Mounted on a FR4 PCB, single-sided copper, mini pad.



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TYPICAL CHARACTERISTIC CURVES

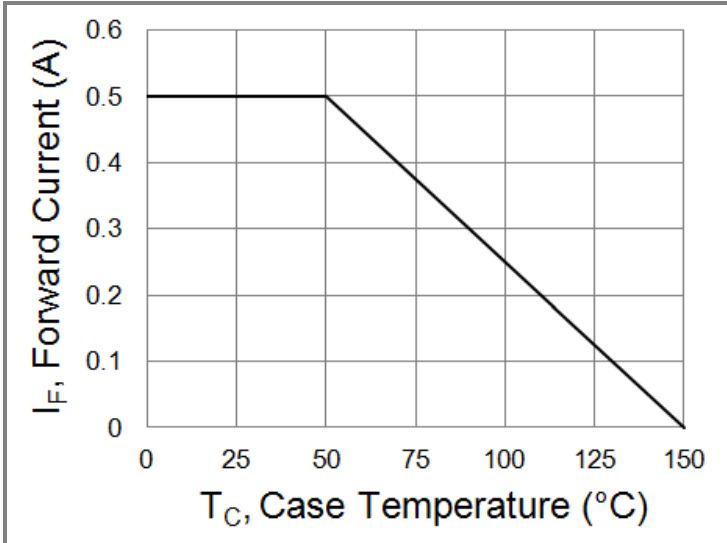


Fig.1 Forward Current Derating Curve

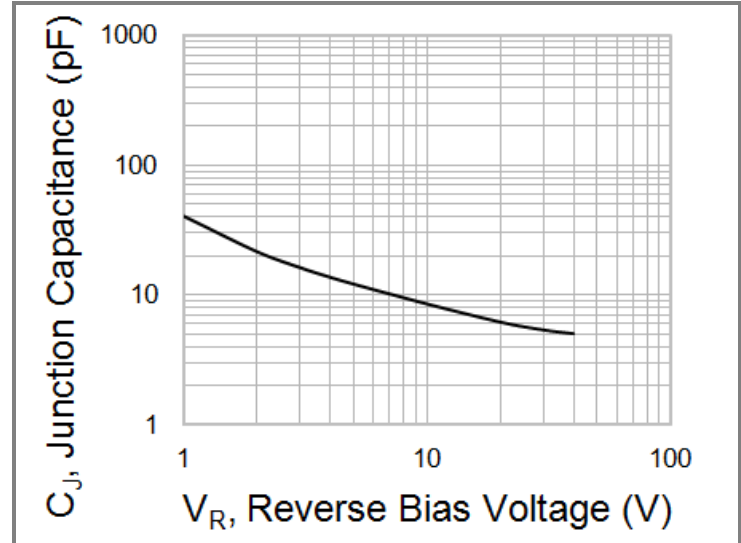


Fig. 2 Typical Junction Capacitance

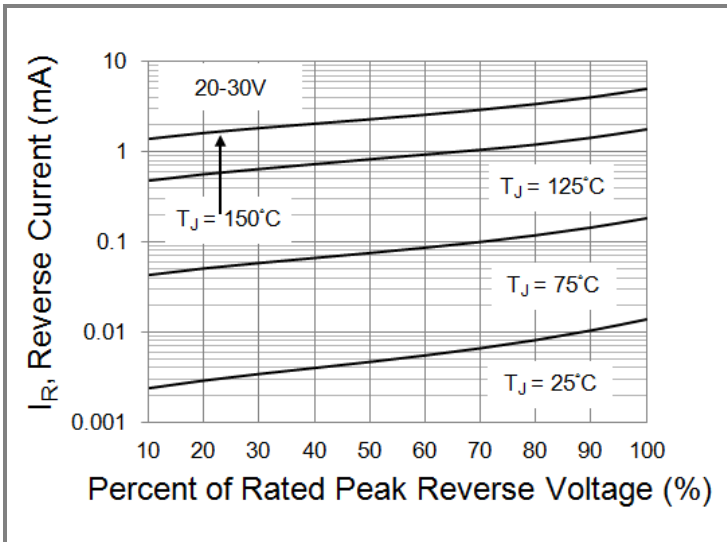


Fig.3 Typical Reverse Characteristics

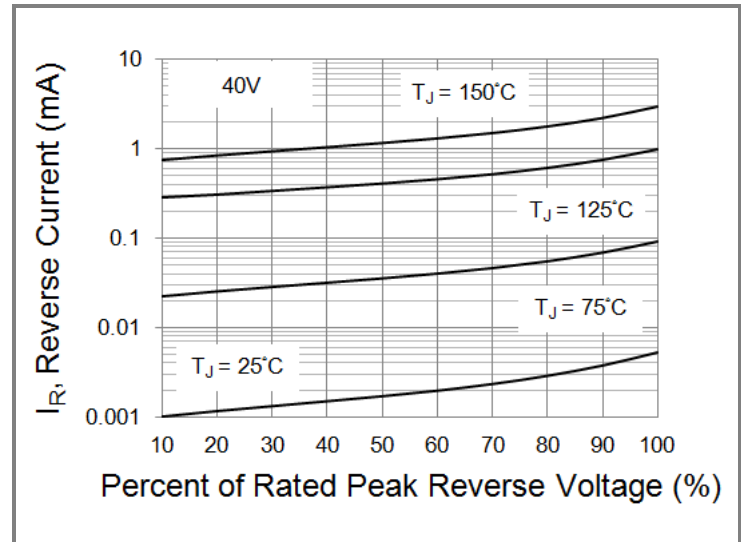


Fig.4 Typical Reverse Characteristics

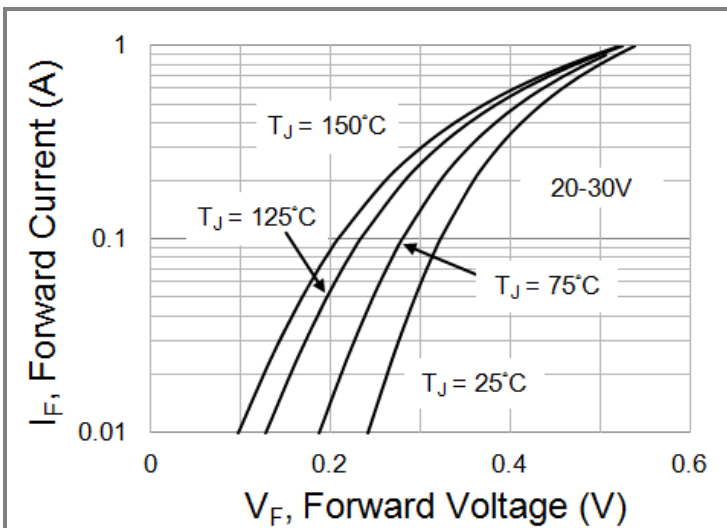


Fig.5 Typical Forward Characteristics

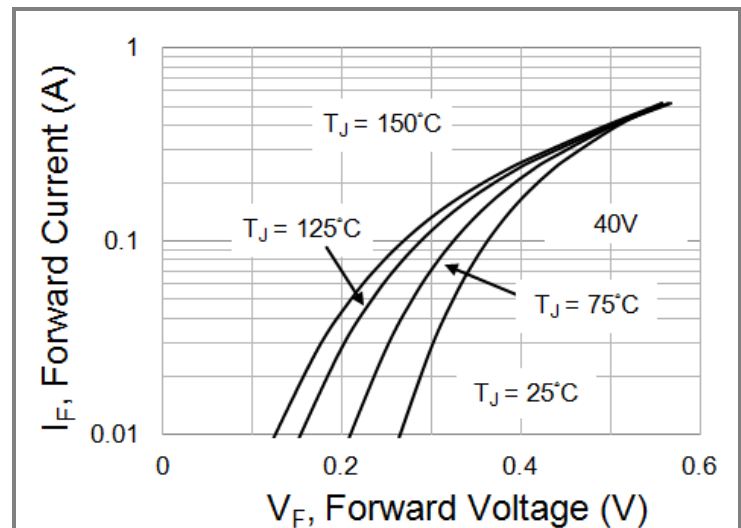
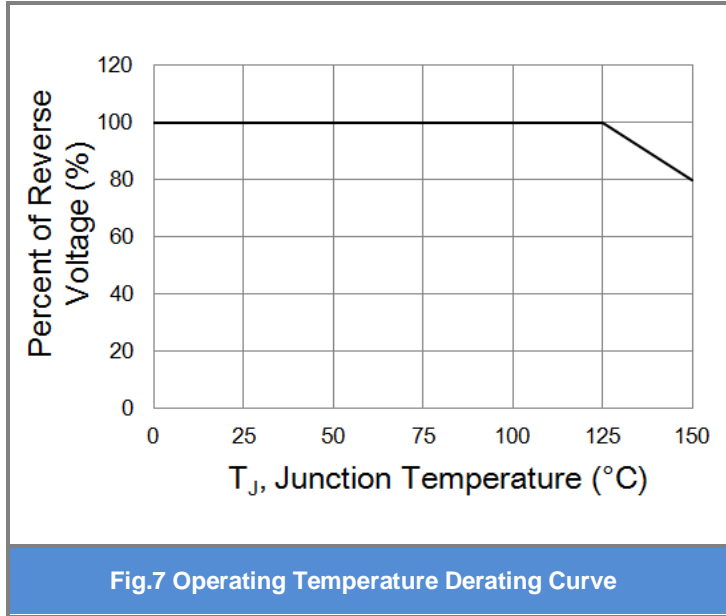


Fig.6 Typical Forward Characteristics



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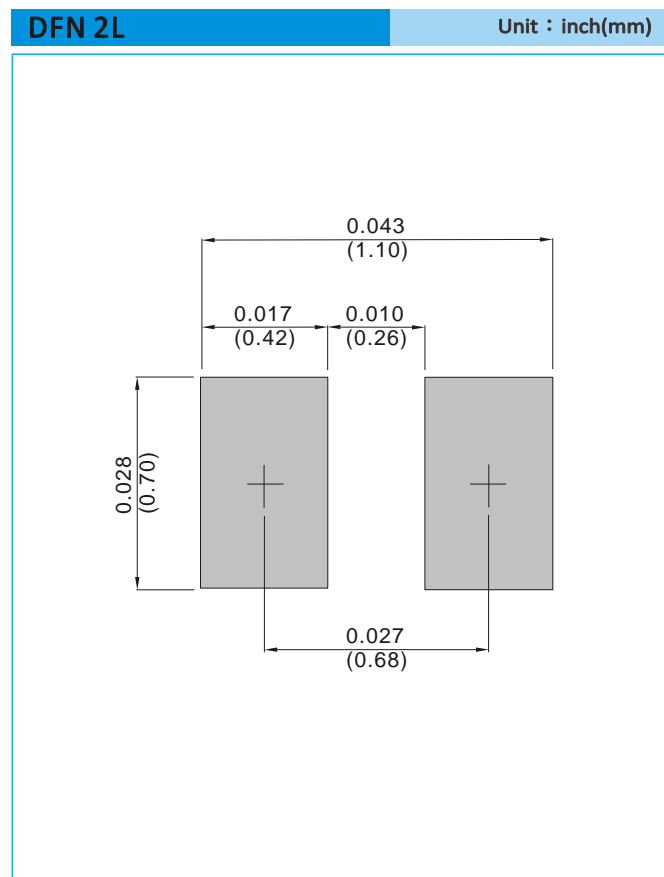


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Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SBA0520Q_R1_00001	DFN 2L	8K / 7" Reel	A7	Halogen free
SBA0530Q_R1_00001	DFN 2L	8K / 7" Reel	E7	Halogen free
SBA0540Q_R1_00001	DFN 2L	8K / 7" Reel	C7	Halogen free

Mounting Pad Layout





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