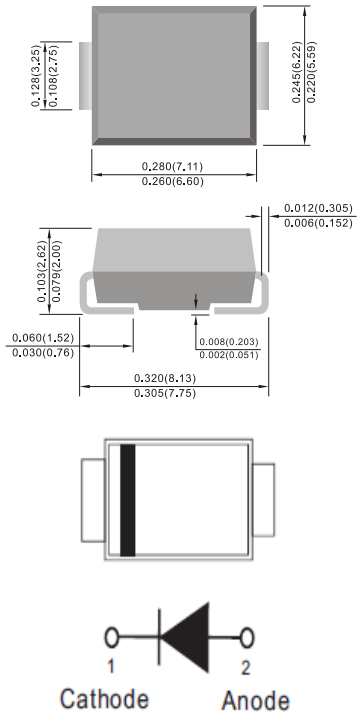
MB420L

ULTRA LOW VF SCHOTTKY BARRIER RECTIFIER

Voltage	200 V	Current	4 A

SMC Unit: inch(mm)



Features

- Ideal for automated placement
- Ultra low forward voltage drop, low power loss
- High efficiency operation
- Low thermal resistance
- Ultra thin profile package for space constrained utilization
- Easy pick and place package suitable for automated handling
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: SMC Molded Plastic
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.0082 ounces, 0.233 grams

Maximum Ratings And Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	200	V
Maximum rms voltage		V_{RMS}	140	V
Maximum dc blocking voltage		V_R	200	V
Maximum average forward rectified current		$I_{F(AV)}$	4	A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	100	A
Typical junction capacitance (V_R =4V, f=1MHz)		C_J	80	pF
Typical thermal resistance	(Note 2)	$R_{\theta JL}$	15	°C/W
	(Note 1)	$R_{\theta JA}$	110	
Maximum reverse recovery time		T_{RR}	35	ns
Operating junction temperature range		T_J	-55 to +150	°C
Storage temperature range		T_{STG}	-55 to +150	°C

Note:1.Mounted on a FR4 PCB, single-sided copper, mini pad.

2.Mounted on 10cm*10cm*0.5mm copper pad area.

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Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNITS
Breakdown voltage	V_{BR}	I_R=0.5mA	T_J=25°C	200	-	-	V
Instantaneous forward voltage	V_F	I_F=1A	T_J=25°C	-	0.71	-	V
		I_F=2A		-	0.76	-	
		I_F=4A		-	-	0.86	
		I_F=1A	T_J=125°C	-	0.55	-	V
		I_F=2A		-	0.61	-	
Reverse current	I_R	V_R=160V	T_J=25°C	-	30	-	nA
		V_R=200V	T_J=25°C	-	-	5	μA
			T_J=125°C	-	-	5	mA

MB420L

TYPICAL CHARACTERISTIC CURVES

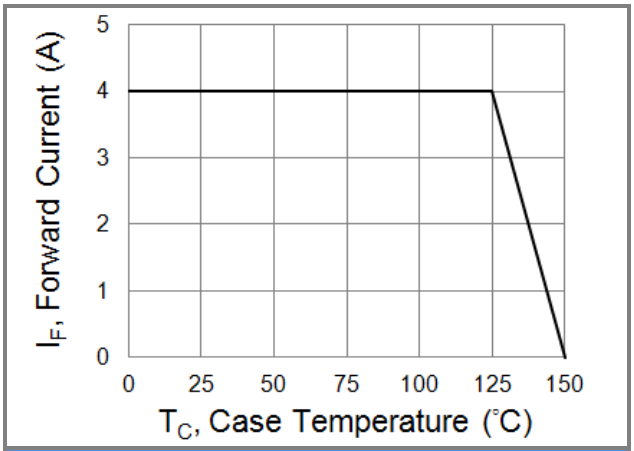


Fig.1 Forward Current Derating Curve

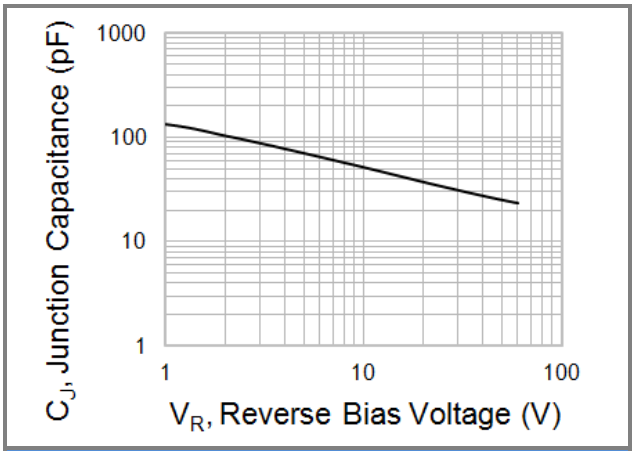


Fig.2 Typical Junction Capacitance

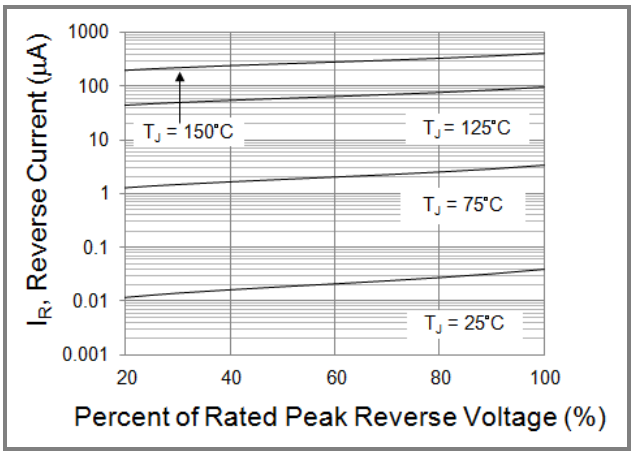


Fig.3 Typical Reverse Characteristics

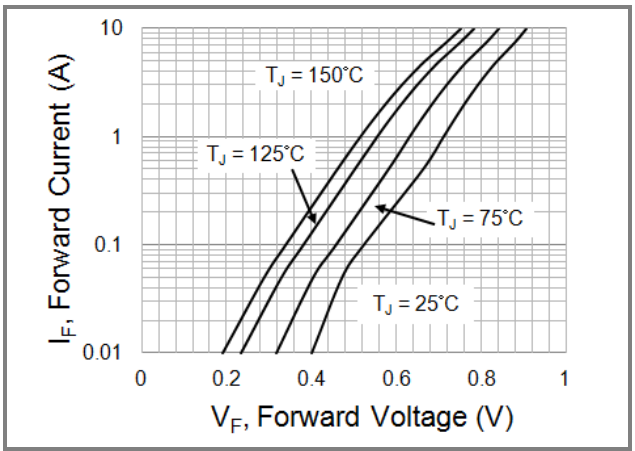


Fig.4 Typical Forward Characteristics

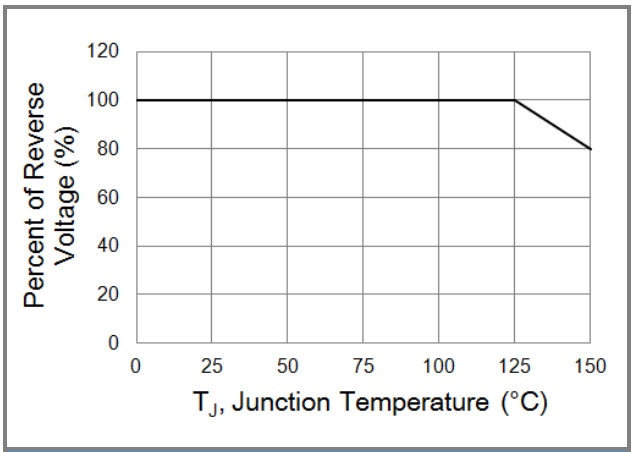


Fig.5 Operating Temperature Derating Curve

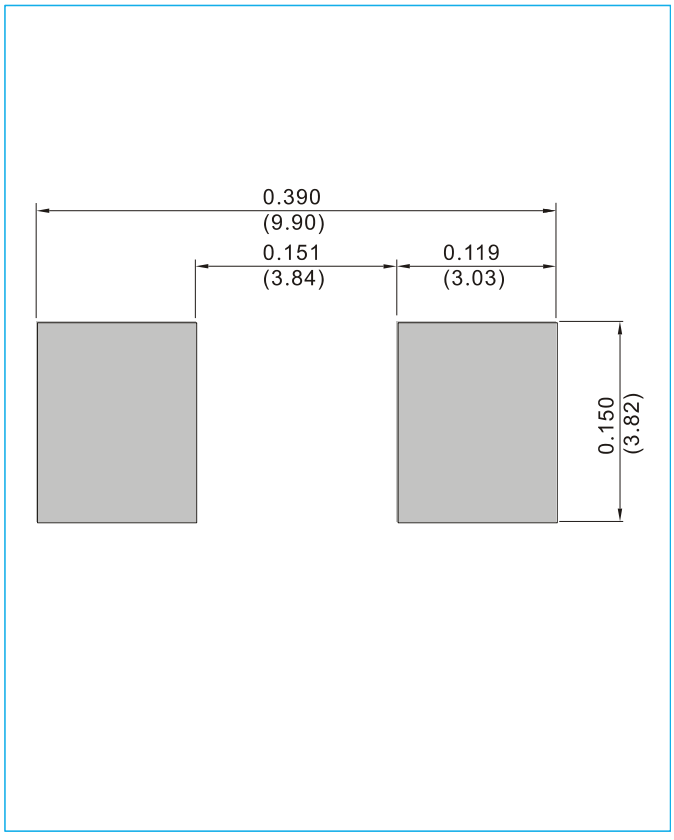
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Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
MB420L_R1_00001	SMC	0.8K pcs / 7” reel	MB420L	Halogen free
MB420L_R2_00001	SMC	3K pcs / 13” reel	MB420L	Halogen free

Mounting Pad Layout

SMC / DO-214AB Unit：inch(mm)



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