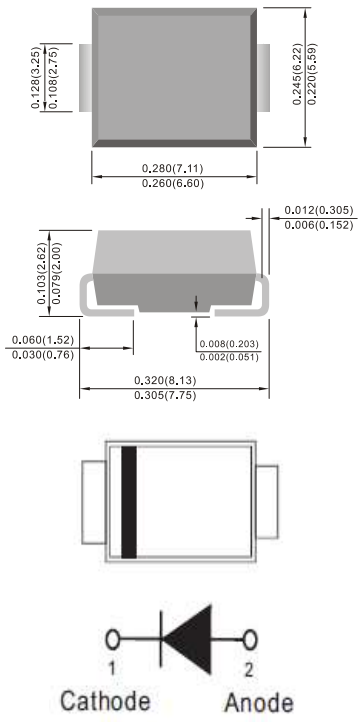
MB420G

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
- Approx. 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 2)	$R_{\theta JC}$	23	
	(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

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TYPICAL CHARACTERISTIC CURVES

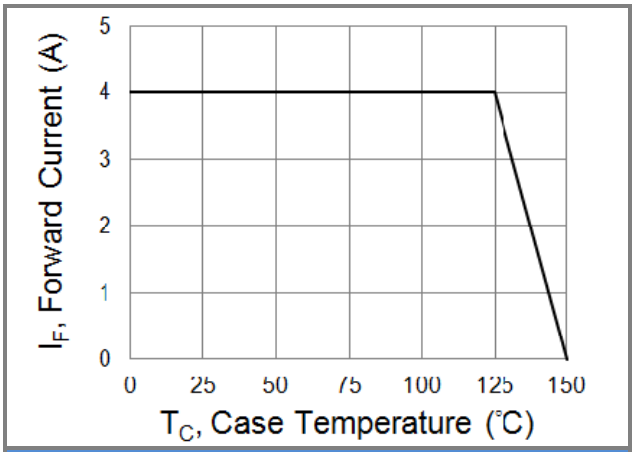


Fig.1 Forward Current Derating Curve

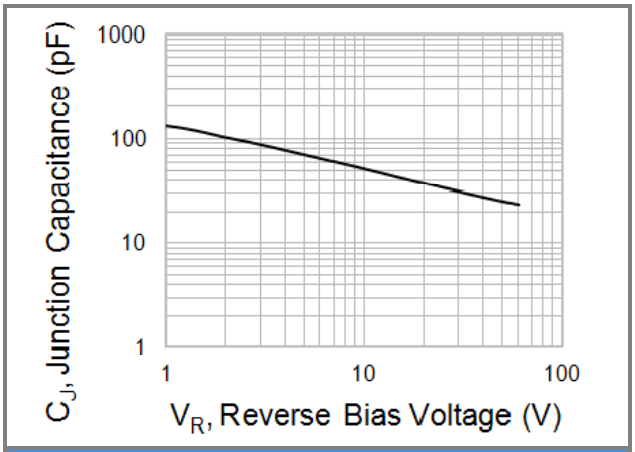


Fig.2 Typical Junction Capacitance

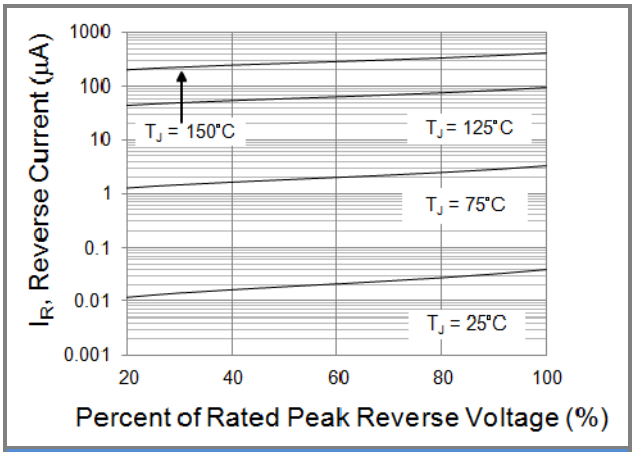


Fig.3 Typical Reverse Characteristics

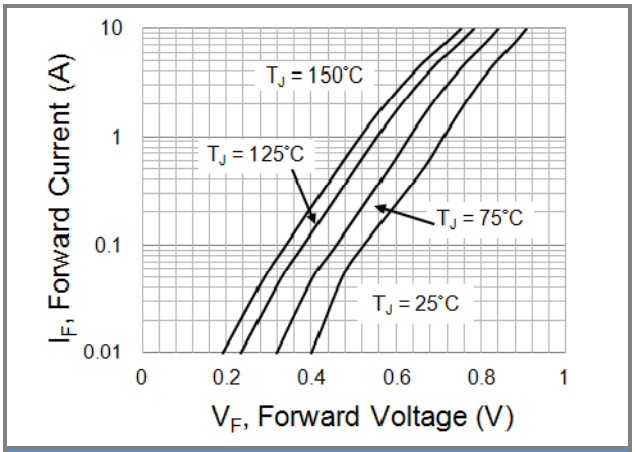


Fig.4 Typical Forward Characteristics

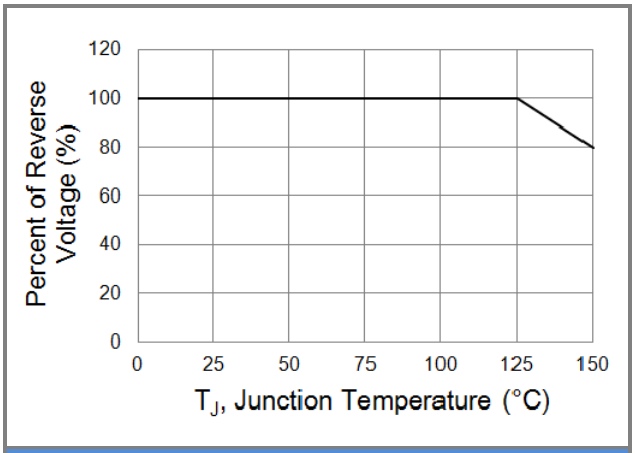


Fig.5 Operating Temperature Derating Curve

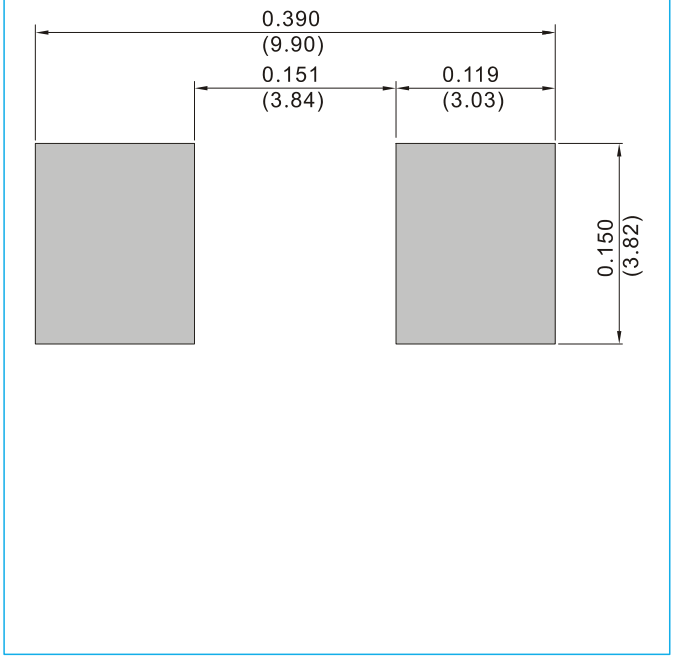
MB420G

Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
MB420G_R1_000A1	SMC	0.8K pcs / 7” reel	MB420G	Halogen free
MB420G_R2_000A1	SMC	3K pcs / 13” reel	MB420G	Halogen free

Mounting Pad Layout

SMC / DO-214AB Unit：inch(mm)



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