

■ Features

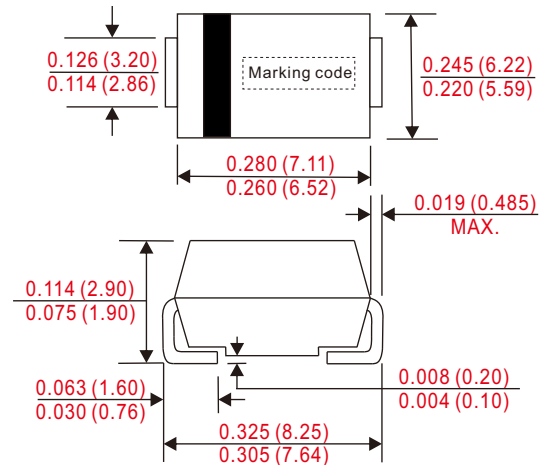
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. C1045CG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, DO-214AB / SMC
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : 0.007 ounce, 0.226 gram

■ Outline

SMC(DO-214AB)



Dimensions in inches and (millimeters)

■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Conditions	Symbol	C1045C			UNIT
Marking code			C1045			
Peak repetitive reverse voltage		V_{RRM}	45			V
Working peak reverse voltage		V_{RWM}				
DC blocking voltage		V_{RM}				
RMS reverse voltage		$V_{R(RMS)}$	32			V
Forward rectified current		I_O	10			A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	120			A
Thermal resistance	Junction to ambient(1)	$R_{\theta JA}$	102			°C/W
	Junction to ambient(2)	$R_{\theta JA}$	60			°C/W
Operating and Storage temperature		T_J, T_{STG}	-65 ~ +150			°C
Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 0.5mA$	$V_{(BR)R}$	45			V
Forward voltage drop	$I_F = 5A, T_J = 25^\circ C$	V_F			430	mV
	$I_F = 8A, T_J = 25^\circ C$				480	
	$I_F = 10A, T_J = 25^\circ C$				550	
Reverse current	$V_R = V_{RRM}, T_J = 25^\circ C$	I_R			0.45	mA
	$V_R = V_{RRM}, T_J = 100^\circ C$				18	
	$V_R = V_{RRM}, T_J = 125^\circ C$				100	

Note : 1.FR-4 PCB, 2oz.Copper.
2.Polyimide PCB, 2oz.Copper.Cathode pad dimensions 18.8mm x 14.4mm.Anode pad dimensions 5.6mm x 14.4mm.

Rating and characteristic curves

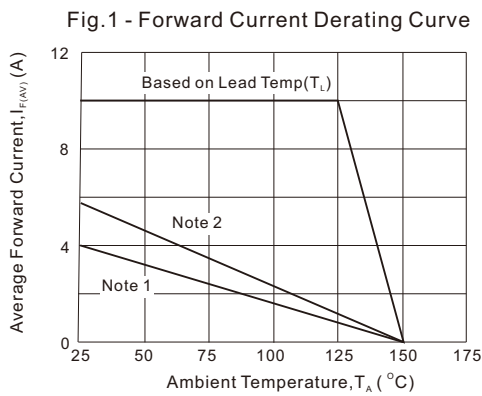


Fig. 2 - Instantaneous Forward Characteristics

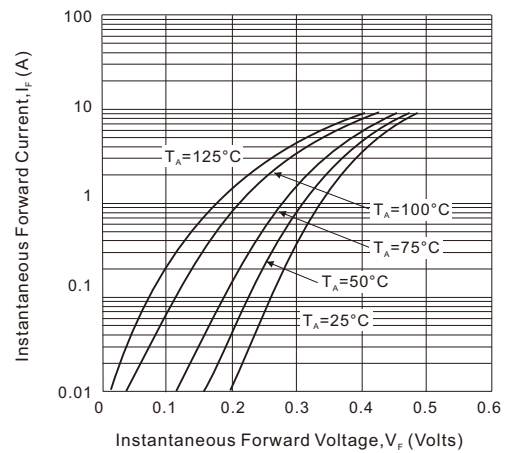
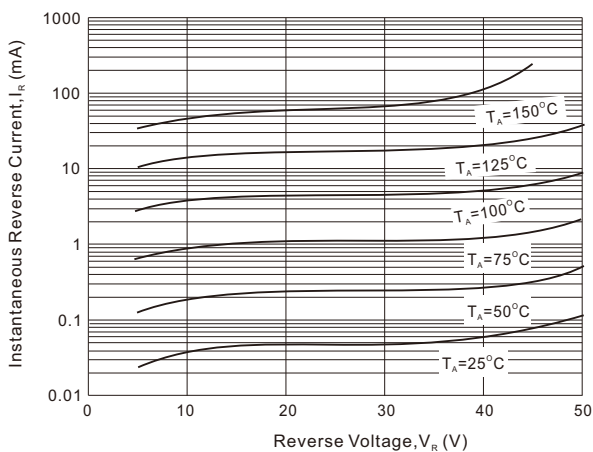
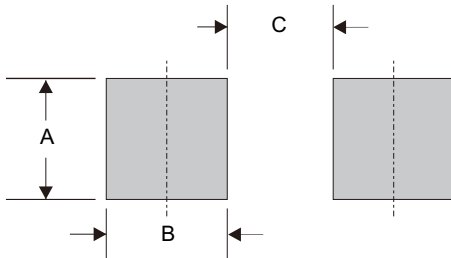


Fig. 3 - Reverse Characteristics



■ SMC foot print



A	B	C
0.132 (3.30)	0.098 (2.50)	0.176 (4.40)

Dimensions in inches and (millimeters)

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