

■ Features

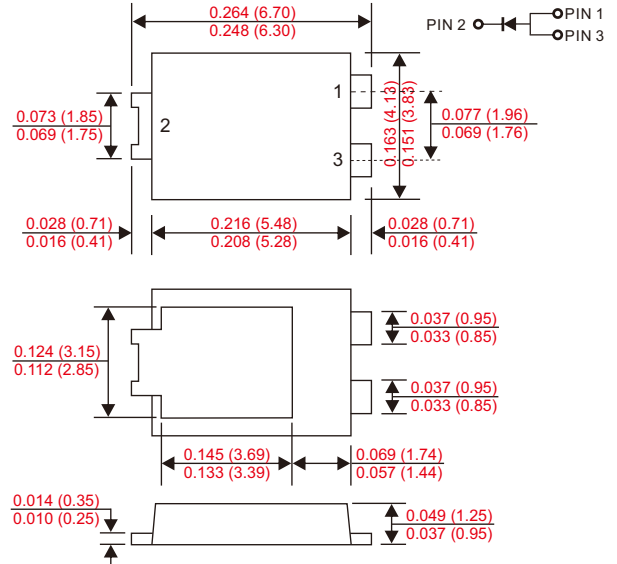
- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex. CP5S100SG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, TO-277.
- Lead : Solder plated, solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 0.093 grams.

■ Outline

TO-277



■ 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	CP5S100S			UNIT
Marking code			CP5S100S			
Peak repetitive reverse voltage		V_{RRM}	100			V
Working peak reverse voltage		V_{RWM}				
DC blocking voltage		V_{RM}				
Forward rectified current		I_O	5			A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	150			A
Peak repetitive reverse surge current	2us - 1kHz	I_{RRM}	3			A
Thermal resistance(1)	Junction to ambient	$R_{\theta JA}$	72			°C/W
Operating and Storage temperature		T_J, T_{STG}	-40 ~ +175			°C
Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop	$I_F = 3A, T_J = 25^{\circ}C$	V_F		470		mV
	$I_F = 5A, T_J = 25^{\circ}C$			530	630	
	$I_F = 3A, T_J = 125^{\circ}C$			390		
	$I_F = 5A, T_J = 125^{\circ}C$			480	590	
Reverse current	$V_{RRM} = 70\ T_J = 25^{\circ}C$	I_R		0.007		mA
	$V_{RRM} = 100\ T_J = 25^{\circ}C$				0.1	
	$V_{RRM} = 70\ T_J = 125^{\circ}C$			7		
	$V_{RRM} = 100\ T_J = 125^{\circ}C$				30	

Note : 1.FR-4 PCB, 2oz. Copper.

■ Rating and characteristic curves

Fig.1 - Forward Current Derating Curve

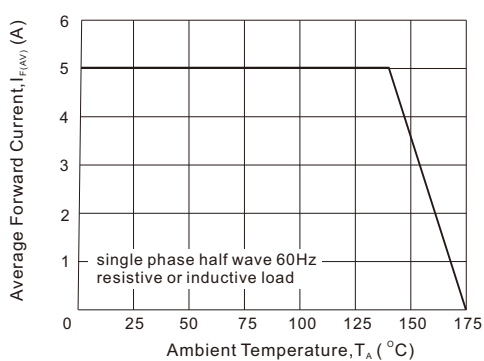


Fig. 2 - Instantaneous Forward Characteristics

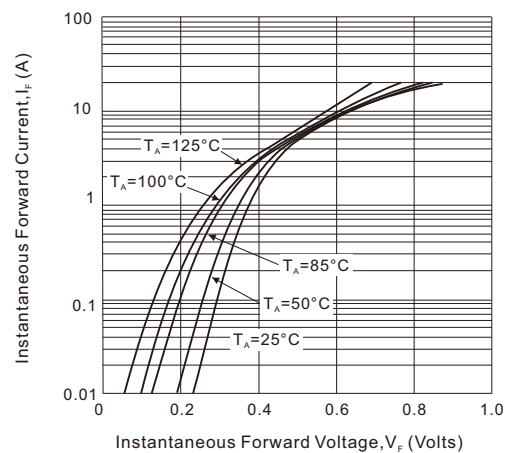
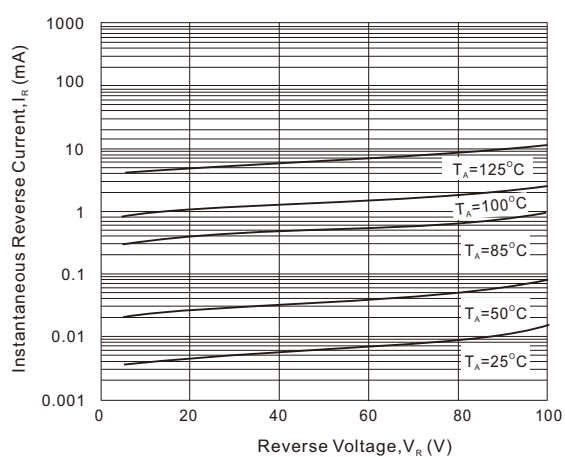
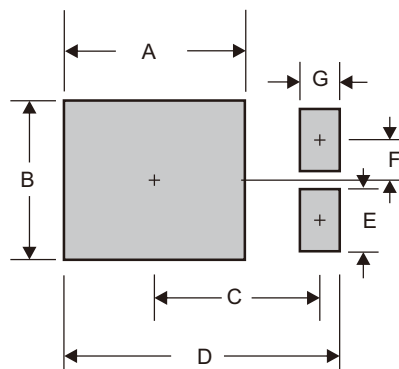


Fig. 3 - Reverse Characteristics



■ TO-277 foot print



A	B	C	D	E	F	G
0.185 (4.70)	0.142 (3.60)	0.152 (3.87)	0.260 (6.60)	0.055 (1.40)	0.035 (0.90)	0.031 (0.80)

Dimensions in inches and (millimeters)

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