CP5L100S

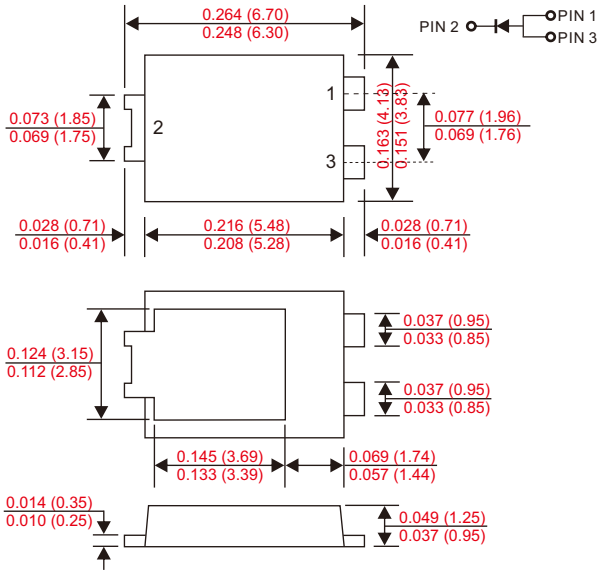
5A Surface Mount Trench Schottky Rectifier

■ Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex.CP5L100SG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Outline

TO-277



Dimensions in inches and (millimeters)

■ 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.

■ 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	CP5L100S	UNIT
Marking code			CP5L100S	
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage		V_{RRM} V_{RWM} V_{RM}	100	V
Forward rectified current		I_O	5	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	120	A
Thermal resistance	Junction to soldering(1)	$R_{\theta JS}$	3	°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
Forward voltage drop	I_F = 5A, T_J = 25°C	V_F			720	mV
	I_F = 5A, T_J = 125°C				630	
Reverse current	V_R = V_{RRM} T_J = 25°C	I_R			0.1	mA
	V_R = V_{RRM} T_J = 125°C				100	

Note : 1.Theoretical RθJS calculated from the top center of the die straight down to the PCB cathode tab solder junction.
2.Polymide PCB, 2oz.Copper.

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■ Rating and characteristic curves

Fig.1 - Forward Current Derating Curve

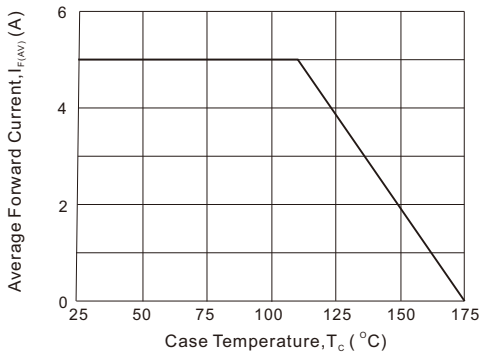


Fig. 2 - Instantaneous Forward Characteristics

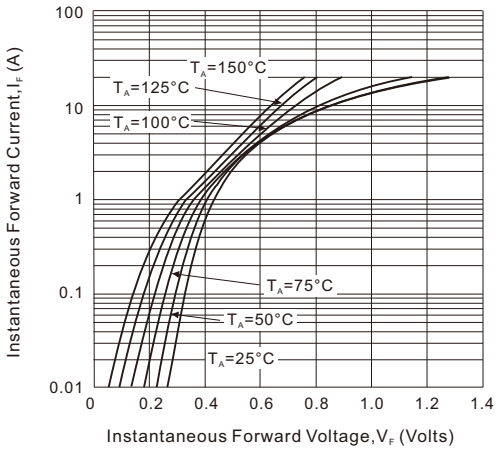
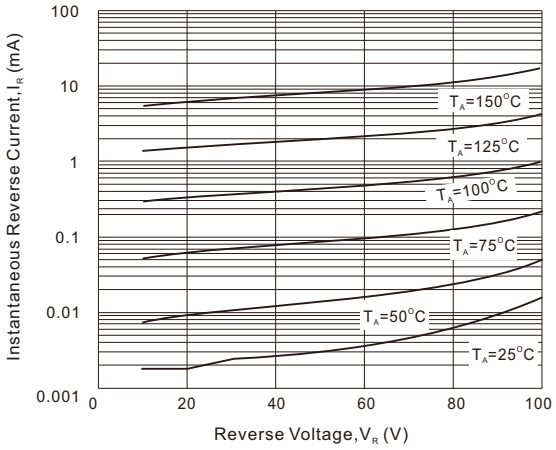


Fig. 3 - Reverse Characteristics



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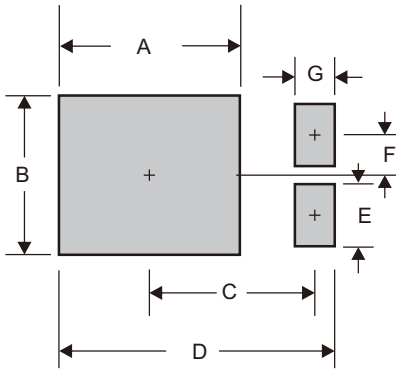
■ TO-277 foot print



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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