

5A Surface Mount Trench Schottky Rectifier

■ Features

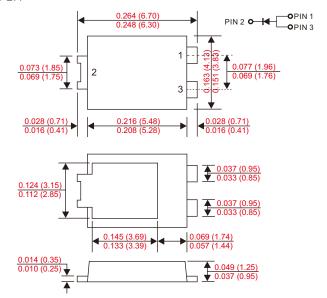
- · Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex.CP5L100SG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ 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



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	CP5L100S	UNIT	
Marking code			CP5L100S	UNIT	
Peak repetitive reverse voltage		V _{RRM}			
Working peak reverse voltage		V _{RWM}	100	V	
DC blocking voltage		V _{RM}			
Forward rectified current		Io	5	Α	
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I _{FSM}	120	А	
The constitution of	Junction to soldering(1)	R _{eJS}	3	°C/W	
Thermal resistance	Junction to ambient(2)	R _{eJA}	60	°C/W	
Operating and Storage temperature		T _J , T _{STG}	-65 ~ +150	°C	

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop	$I_F = 5A, T_J = 25^{\circ}C$.,,			720	mV
	$I_F = 5A, T_J = 125^{\circ}C$	V _F			630	
Reverse current	$V_R = V_{RRM} T_J = 25^{\circ}C$				0.1	mA
	$V_R = V_{RRM} T_J = 125^{\circ}C$	I _R			100	

Note: 1.Theoretical R0JS calculated from the top center of the die straight down to the PCB cathode tab solder junction. 2.Polymide PCB, 2oz.Copper.

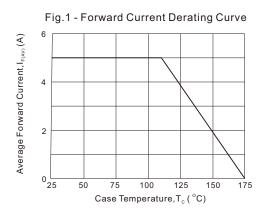
Document ID : DS-12KFP Revised Date : 2015/03/16

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■ Rating and characteristic curves



100 T_x=125°C T_x=125°C T_x=100°C T_x=100°C T_x=25°C T_x=25°C T_x=25°C

Instantaneous Forward Voltage, V_F (Volts)

Fig. 2 - Instantaneous Forward Characteristics

100 Instantaneous Reverse Current, I_R (mA) 10 T_A=150°C T₄=125°C 1 =100°C 0.1 T_A=75°C≣ 0.01 T_A=25°C 0.001 0 20 60 100 Reverse Voltage, $V_R(V)$

Fig. 3 - Reverse Characteristics

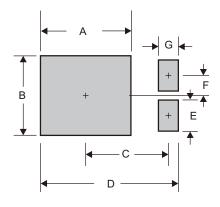
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■ TO-277 foot print



Α	В	С	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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Document ID : DS-12KFP Revised Date : 2015/03/16

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