CP10L100S

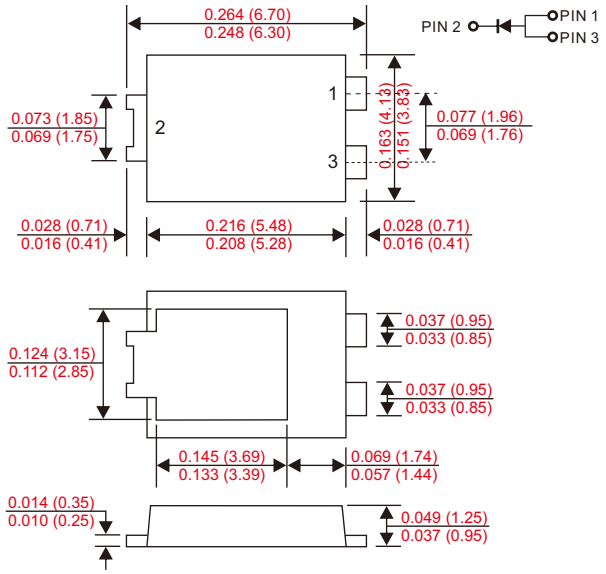
10A Surface Mount Trench Schottky Rectifier

■ Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Suffix "G" indicates Halogen-free part, ex.CP10L100SG.
- 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	CP10L100S	UNIT
Marking code			CP10L100S	
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage		V_{RRM} V_{RWM} V_{RM}	100	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}	200	A
Peak repetitive reverse surge current	2us - 1kHz	I_{RRM}	3	A
Thermal resistance(1)	Junction to case	$R_{\theta JC}$	4	°C/W
Operating and Storage temperature		T_J, T_{STG}	-55 ~ +150	°C

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage drop	I_F = 10A, T_A = 25°C	V_F		640	750	mV
	I_F = 10A, T_A = 125°C			570		
Reverse current	V_{RRM} =100 T_A = 25°C	I_R		0.02	0.1	mA
	V_{RRM} =100 T_A = 125°C			7.5	30	

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

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■ Rating and characteristic curves

Fig. 1 - Instantaneous Forward Characteristics

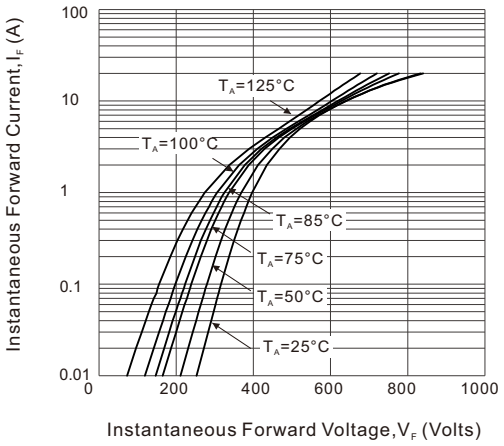


Fig. 2 - Reverse Characteristics (per diode)

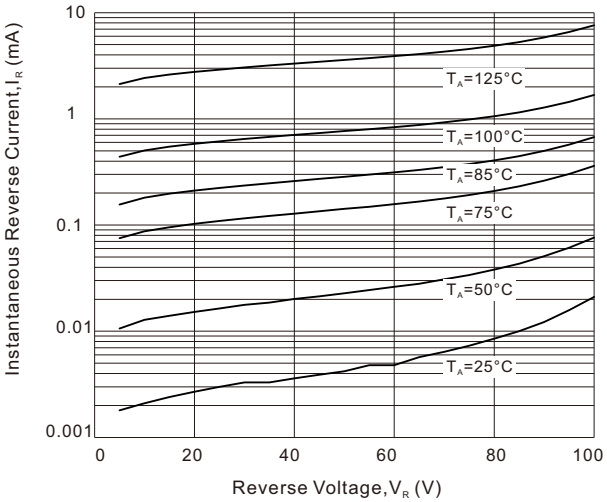


Fig. 3 - Total Capacitance VS. Reverse Voltage (per diode)

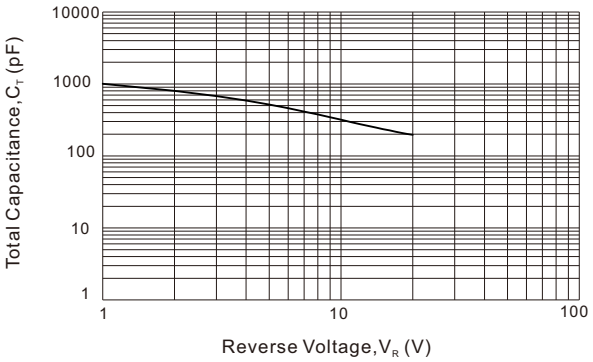


Fig.4 - Forward Current Derating Curve

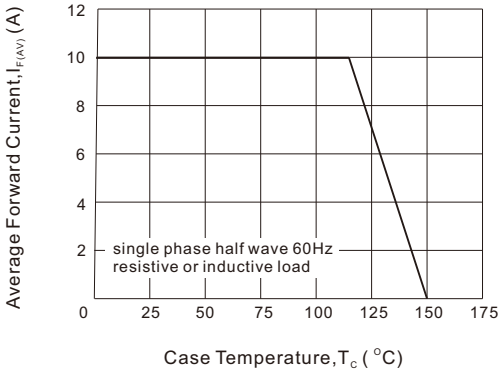
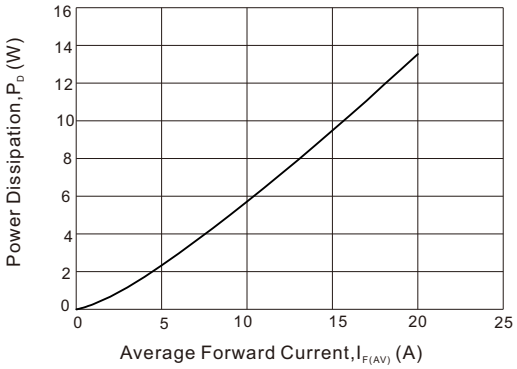
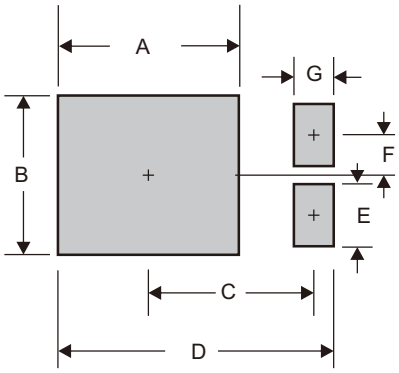


Fig. 5 - Forward Power Dissipation (per diode)



■ 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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