

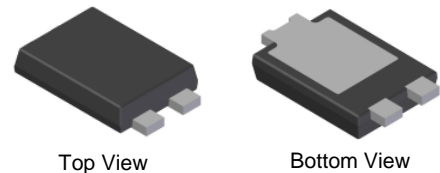
Surface Mount Trench Schottky Rectifier Diode in TO-277

■ Features

- Low forward voltage drop.
- Excellent high temperature stability.
- Fast switching capability.
- Halogen-free part
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

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



Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Conditions	Symbol	CP10S45SG	UNIT
Peak repetitive reverse voltage		V_{RRM}	45	V
Working peak reverse voltage		V_{RWM}		
DC blocking voltage		V_{RM}		
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 case	R_{BJC}	10	°C/W
	Junction to ambient	R_{BJA}	35	
Storage temperature		T_{STG}	-55 ~ +150	°C
Operating temperature		T_J	-55 ~ +150	

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 0.5mA, T_J = 25^\circ C$	$V_{(BR)R}$	45			V
Forward voltage drop	$I_F = 5A, T_J = 25^\circ C$	V_F			420	mV
	$I_F = 10A, T_J = 25^\circ C$			460	470	
	$I_F = 10A, T_J = 125^\circ C$			410		
Reverse current	$V_R = V_{RRM}, T_J = 25^\circ C$	I_R		0.06	0.3	mA
	$V_R = V_{RRM}, T_J = 125^\circ C$			40	80	

Typical Characteristics ($T_{amb} = 25^\circ\text{C}$ unless otherwise specified)

Fig. 1 - Instantaneous Forward Characteristics

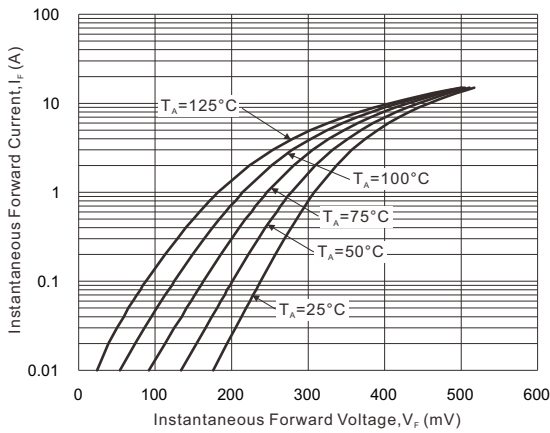


Fig. 2 - Reverse Characteristics

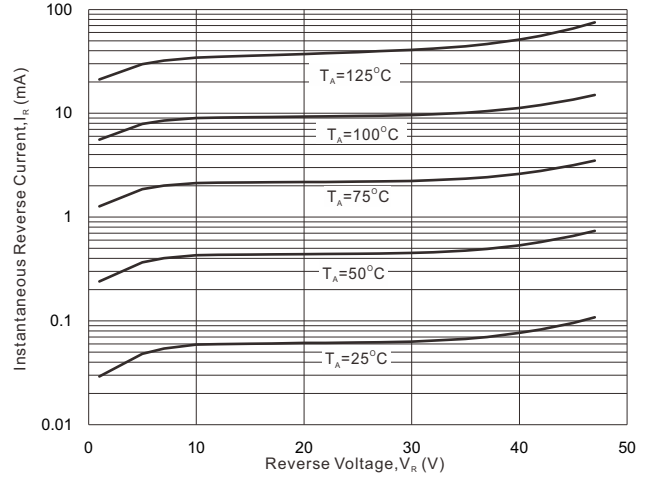


Fig. 3 - Forward Power Dissipation

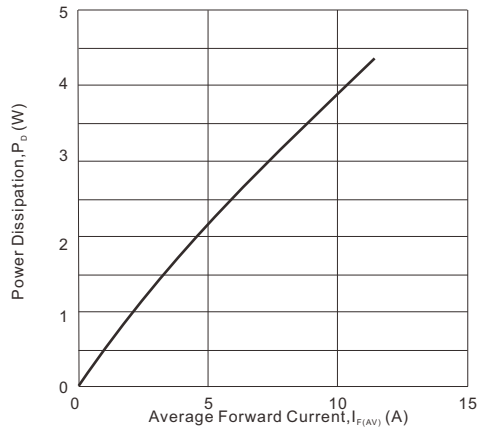


Fig. 4 - Forward Current Derating Curve

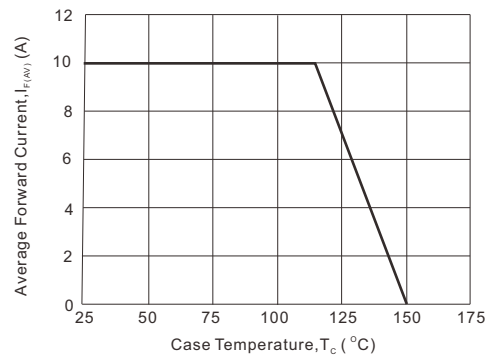
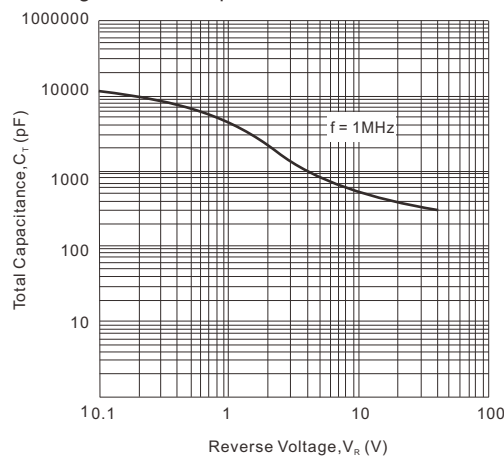
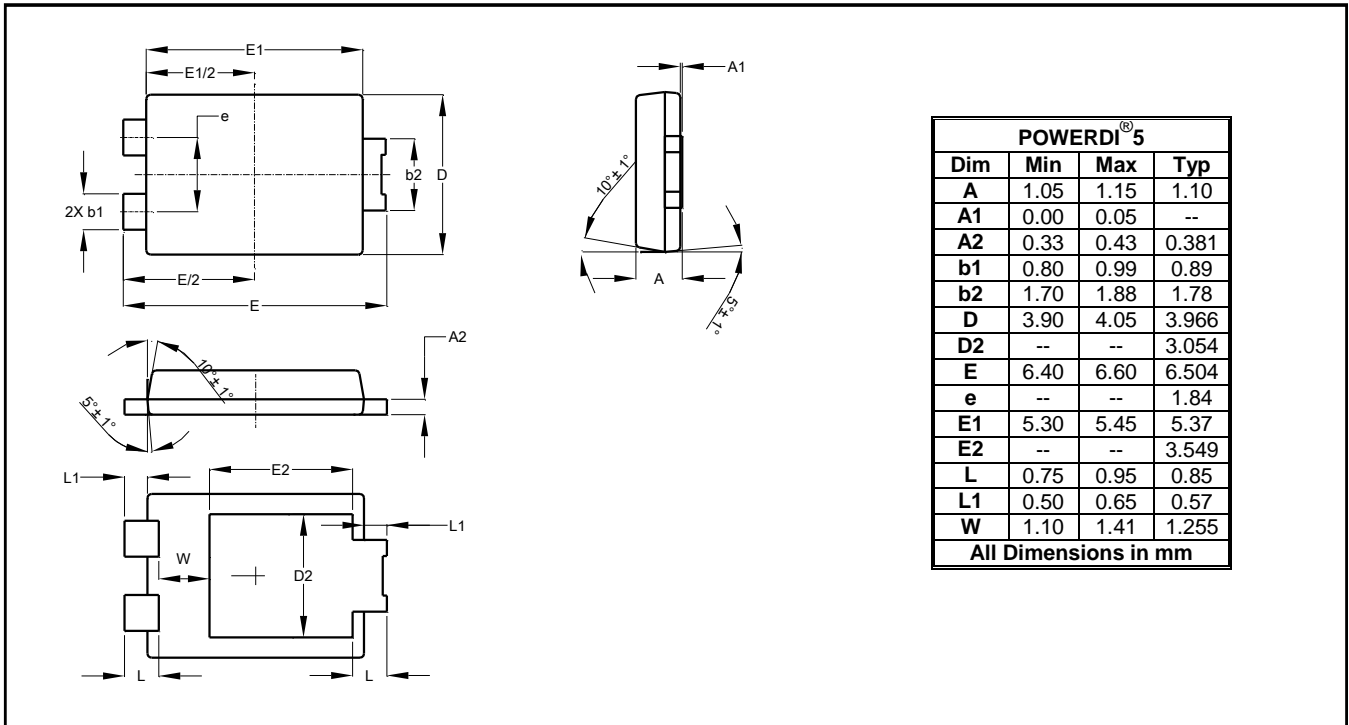


Fig. 5 - Total Capacitance VS. Reverse Voltage



Package Dimensions



Ordering information

Order code	Package	Marking	Packaging option	Base quantity	Packaging specification
CP10S45SG	TO-277		Tape and reel	5000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2020	1.0	Initial release

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