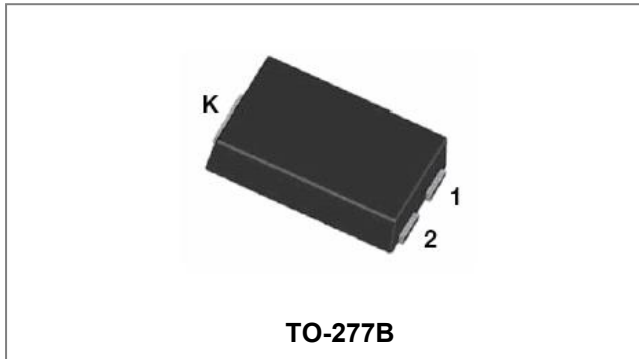


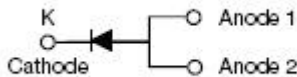
EP10100TH SCHOTTKY RECTIFIER



Features

- 175°C T_J operation
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Exsemi technology

Circuit Diagram



Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	-	100	V
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _L =125°C, rectangular wave form	10	A
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3ms, Half Sine pulse, T _J = 25 °C	250	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 10A, Pulse, T _J = 25 °C	0.76	0.82	V
	V _{F2}	@ 10A, Pulse, T _J = 125 °C	0.65	0.73	V
Reverse Current*	I _{R1}	@V _R = rated V _R T _J = 25 °C	0.5	2	uA
Reverse Current*	I _{R2}	@V _R = rated V _R T _J = 125 °C	10	100	uA

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance Junction to Ambient (NOTE1)	$R_{\theta JA}$	DC operation	75	$^{\circ}\text{C/W}$
Typical Thermal Resistance Junction to Lead (NOTE1)	$R_{\theta JL}$	DC operation	8	$^{\circ}\text{C/W}$
Approximate Weight	wt	-	0.08	g

NOTE: 1. Units mounted on P.C.B., 0.5 x 0.5" (30 x 30mm) copper pads.

Ratings and Characteristics Curves

Fig.1:Maximum Forward Current Derating Curve

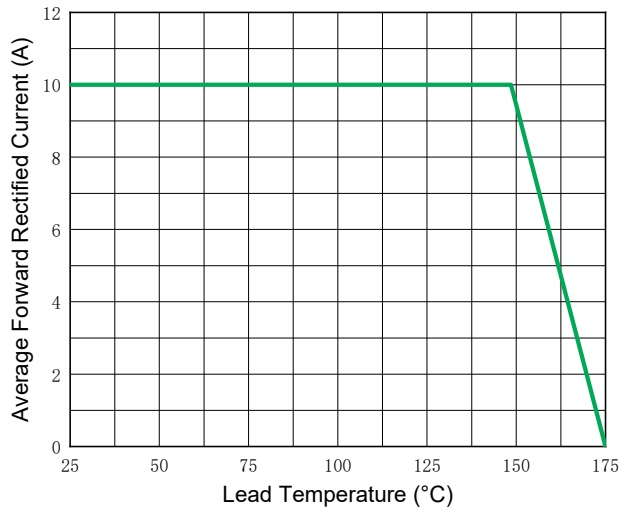


Fig.2:Forward Surge Current Capability

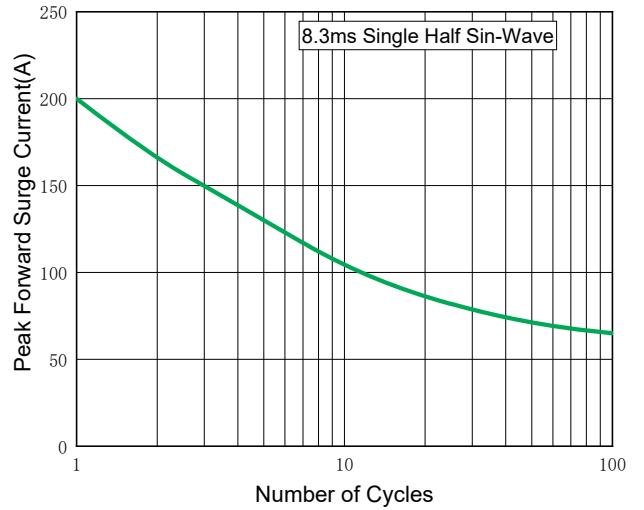


Fig.3:Typical Instantaneous Forward Characteristics

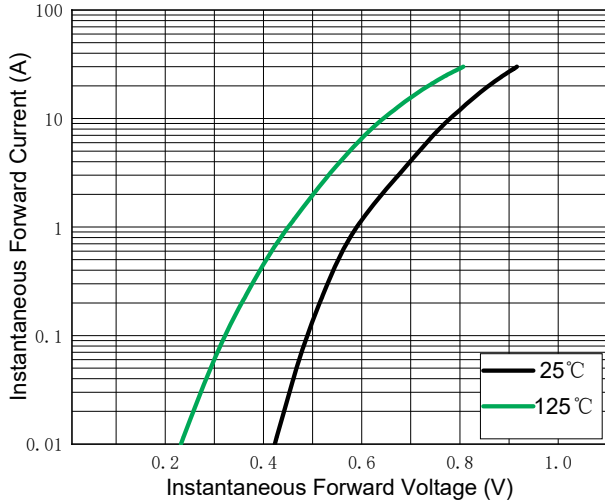
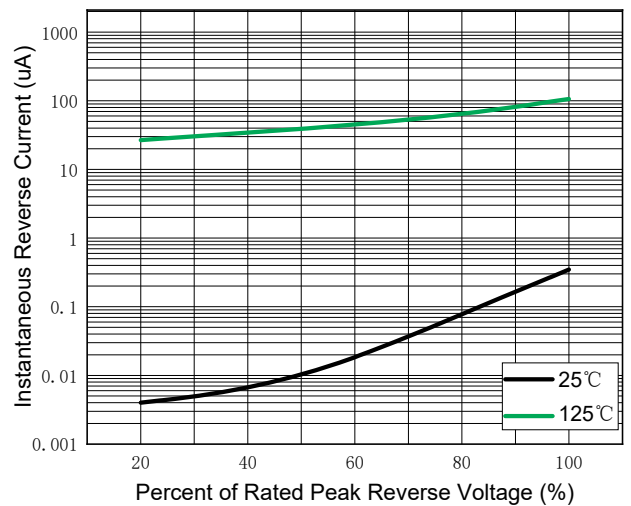
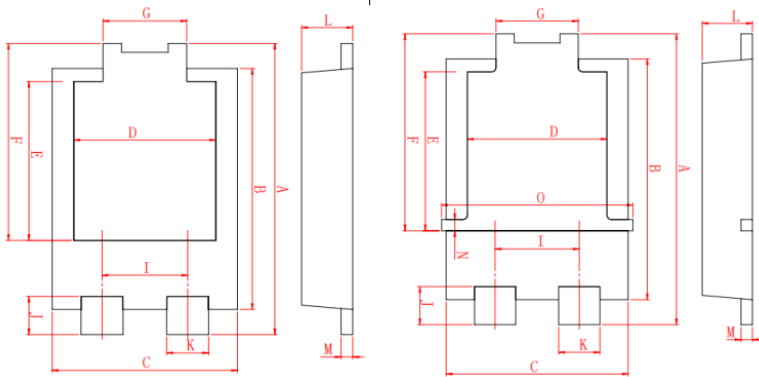


Fig.4:Typical Reverse Characteristics



Mechanical Dimensions TO-277B

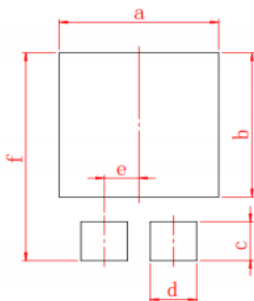


SYMBOL	Millimeters		SYMBOL	Millimeters	
	Min.	Max.		Min.	Max.
A	6.30	6.70	B	5.28	5.48
C	3.88	4.08	D	2.90	3.20
E	3.40	3.70	F	4.20	4.60
G	1.70	1.90			
I	1.74	1.94	J	0.65	1.05
K	0.85	0.95	L	0.95	1.25
M	0.20	0.30	N	0.25	0.50
O	4.00	4.50			

Nota.

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

TO- 277B Suggested Pad Layout



SYMBOL	Millimeters	
	Min.	Max.
a	4.50	
b	4.65	
c	1.10	
d	1.00	
e	0.90	
f	6.85	

Ordering Information

Device	Package	Shipping
EP10100TH	TO-277B(Pb-Free)	5000pcs/ reel