

General Purpose Rectifier Diodes

FEATURES

- IF(AV) 5A
- IRRM 50V-1000V
- High surge current capability
- Polarity : Color band denotes cathode
- AEC-Q101 qualified (Automotive grade with suffix "Q".)
- Expsemi electronics

Applications

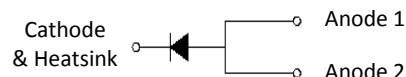
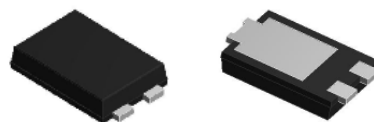
Rectifier

Marking

EP5X

X : From A To M

TO-277



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	EP5					
				A	B	D	G	J	K M
Repetitive Peak Reverse Voltage	V_{RRM}	V		50	100	200	400	600	800 1000
Maximum RMS Voltage	V_{RMS}	V		35	70	140	280	420	560 700
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_L=75^{\circ}C$	5.0					
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^{\circ}C$	150					
Operation Junction and Storage Temperature Range	T_J, T_{STG}	$^{\circ}C$		-55 ~ +150					

Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition	EP5					
				A	B	D	G	J	K M
Peak Forward Voltage	V_F	V	$I_F=5.0A$	1.5					
Peak Reverse Current	I_{RRM1}	μA	$V_{RM}=V_{RRM}$	$T_a=25^{\circ}C$					
	I_{RRM2}			$T_a=125^{\circ}C$					
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^{\circ}C/W$	Between junction and ambient	47					
	$R_{\theta J-L}$		Between junction and terminal	13					

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.30" x 0.30" (8.0 mm x 8.0 mm) copper pad areas

FIG.1: FORWARD CURRENT DERATING CURVE

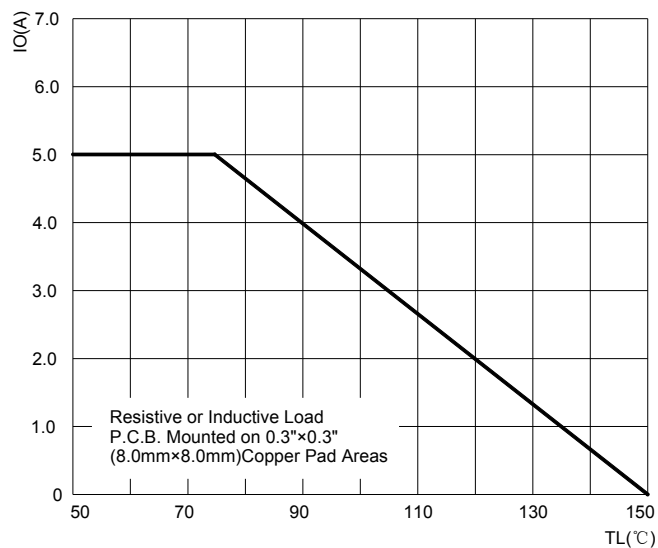


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

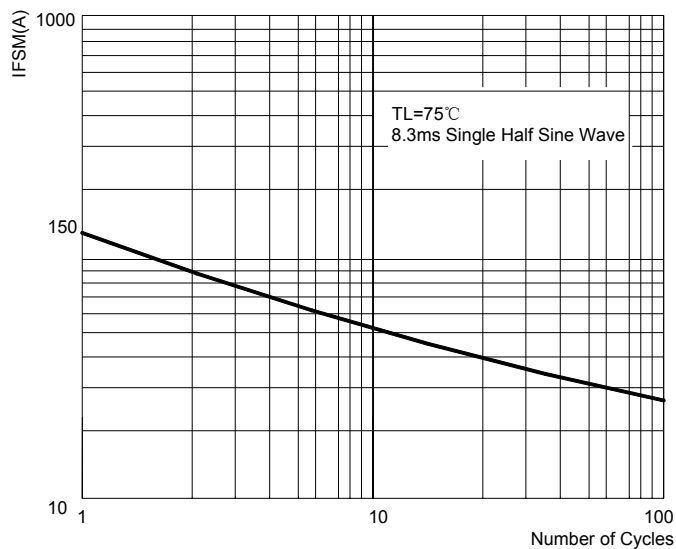


FIG.3: TYPICAL FORWARD CHARACTERISTICS

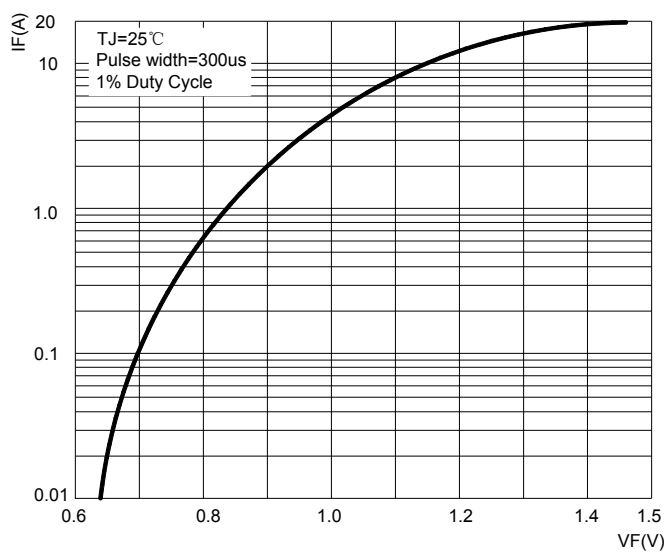
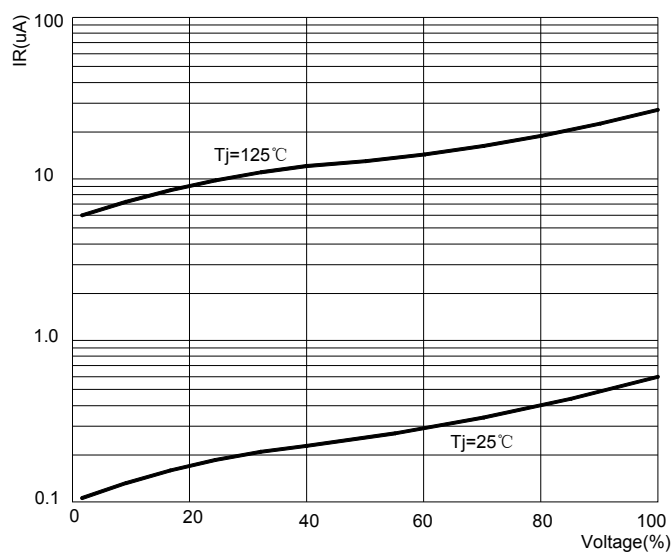
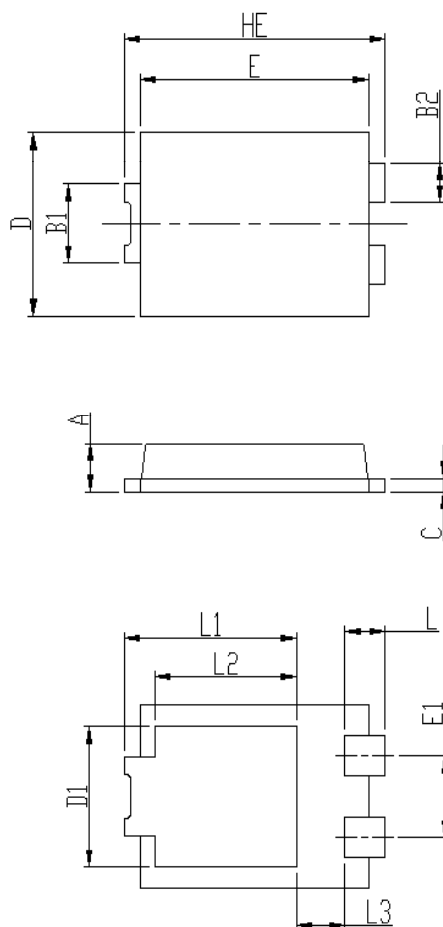


FIG.4: TYPICAL REVERSE CHARACTERISTICS

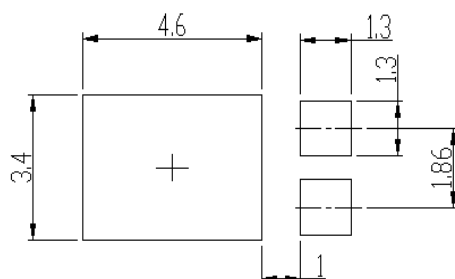


TO- 277 Package Outline Dimensions



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
HE	6.4	6.6	0.252	0.260
E	5.6	5.8	0.220	0.228
D	4.1	4.3	0.161	0.169
B1	1.7	1.9	0.067	0.075
B2	0.8	1	0.031	0.039
A	1.05	1.2	0.041	0.047
C	0.3	0.4	0.012	0.016
L	0.85	1.1	0.033	0.043
L1	4.2	4.4	0.165	0.173
L2	3.52 Typ.		0.139 Typ.	
L3	1.1	1.4	0.043	0.055
D1	3	3.3	0.118	0.130
E1	1.86 Typ.		0.073 Typ.	

TO- 277 Suggested Pad Layout



Note:

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

Ordering Information

Device	Package	Shipping
EP5X	TO-277B(Pb-Free)	5000pcs/ reel