

CURRENT 15 Ampere
 VOLTAGE RANG 45 to 100 Volts

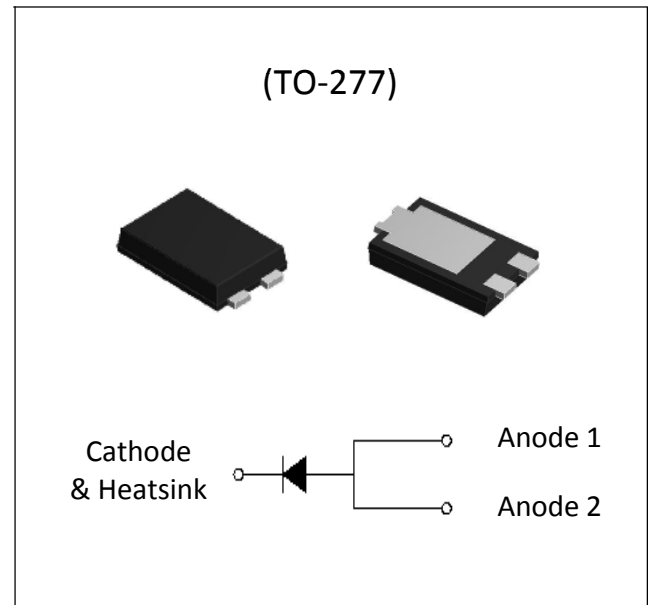
ER15V45GY THRU ER15V100GY

FEATURE

- . For surface mounted application
- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge current capability
- . High temperature soldering guaranteed:
 260°C/10 seconds at terminals.

MECHANICAL DATA

- . Terminal: Solder plated
- . Case: Molded with UL-94 Class V-0 recognized
 Flame Retardant Epoxy



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

Type Number		SYMBOL	15V45	15V60	15V80	15V100	units
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	45	60	80	100	V
Maximum RMS Voltage		V_{RMS}	31.5	42	56	70	V
Maximum DC blocking Voltage		V_{DC}	45	60	80	100	V
Average Forward Rectified Output Current		$I_{F(AV)}$	15.0				A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I_{FSM}	250.0				A
Maximum Instantaneous Forward Voltage at 3.0A DC	@ $T_A=25^\circ C$	V_F	0.30	0.35	0.40	0.43	V
Maximum Instantaneous Forward Voltage at 15.0A DC	@ $T_A=100^\circ C$		0.22	0.27	0.32	0.36	
Maximum Instantaneous Forward Voltage at 3.0A DC	@ $T_A=25^\circ C$		0.41	0.47	0.55	0.61	
Maximum Instantaneous Forward Voltage at 15.0A DC	@ $T_A=100^\circ C$		0.37	0.41	0.48	0.55	
Maximum DC Reverse Current at rated DC blocking voltage	@ $T_A=25^\circ C$	I_R	0.02	0.03	0.05	0.05	mA
	@ $T_A=100^\circ C$		5.0	5.0	10.0	10.0	
Typical Junction Capacitance (Note1)		C_J	600				pF
Typical Thermal Resistance (Note2)		$R_{(JA)}$	31				°C/W
Storage Temperature		T_{STG}	-55 to +150				°C
Operating Junction Temperature		T_J	-55 to +150				°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc

2. Polyimide PCB, 2oz. Copper. Cathode pad dimensions 18.8mm x 14.4mm. Anode pad dimensions 5.6mm x 14.4mm.

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RATING AND CHARACTERISTIC CURVES

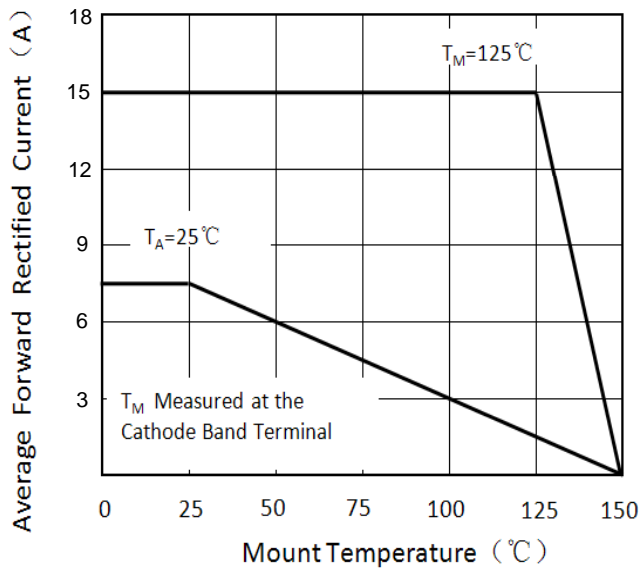


Figure 1. Forward Current Derating Curve

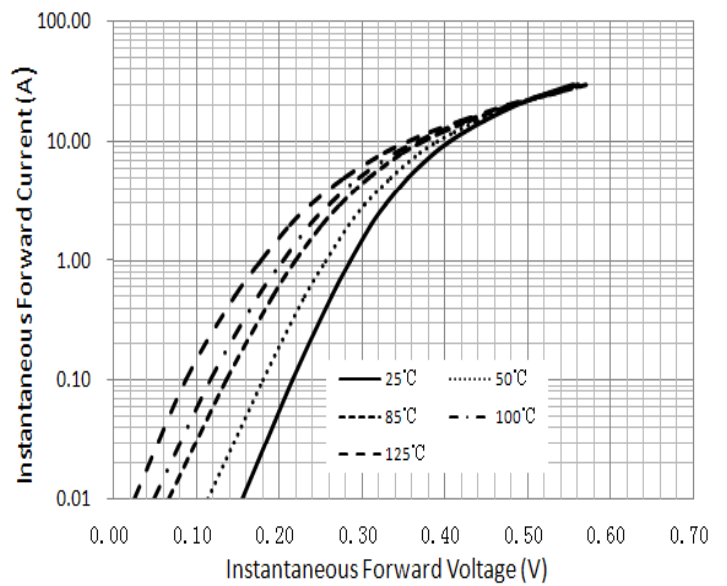


Figure 2. Typical Instantaneous Forward Characteristics

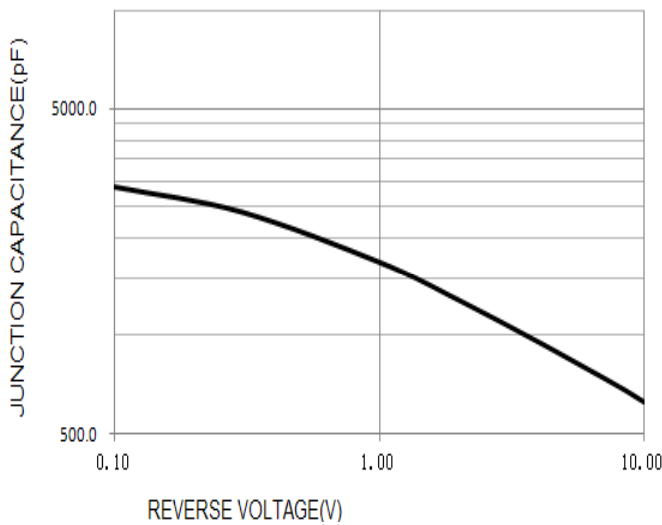


Figure 3. Typical Junction Capacitance

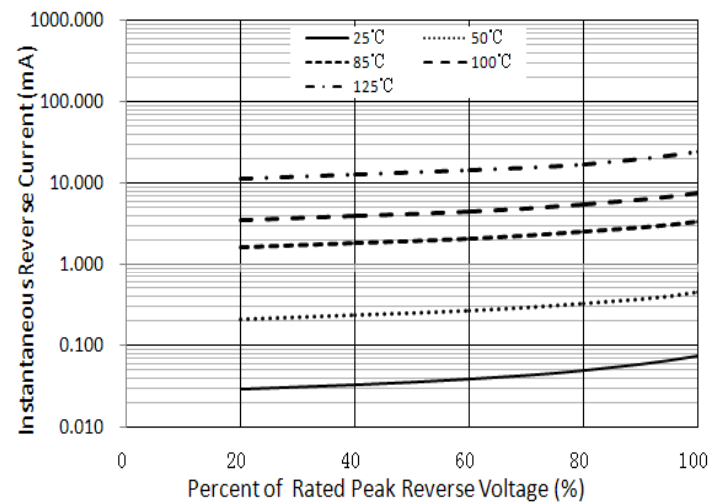


Figure 4. Typical Reverse Characteristics

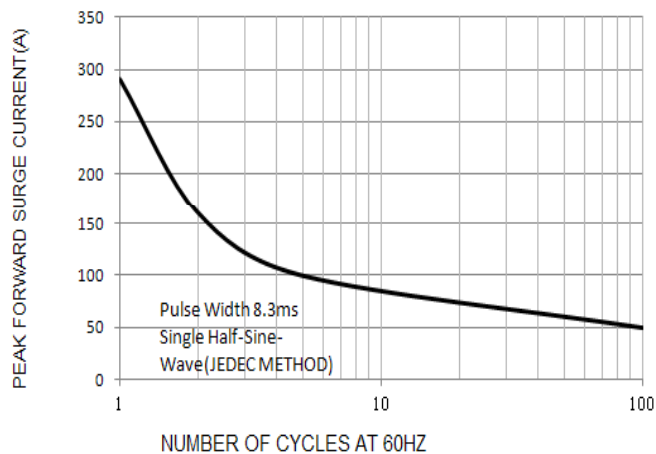
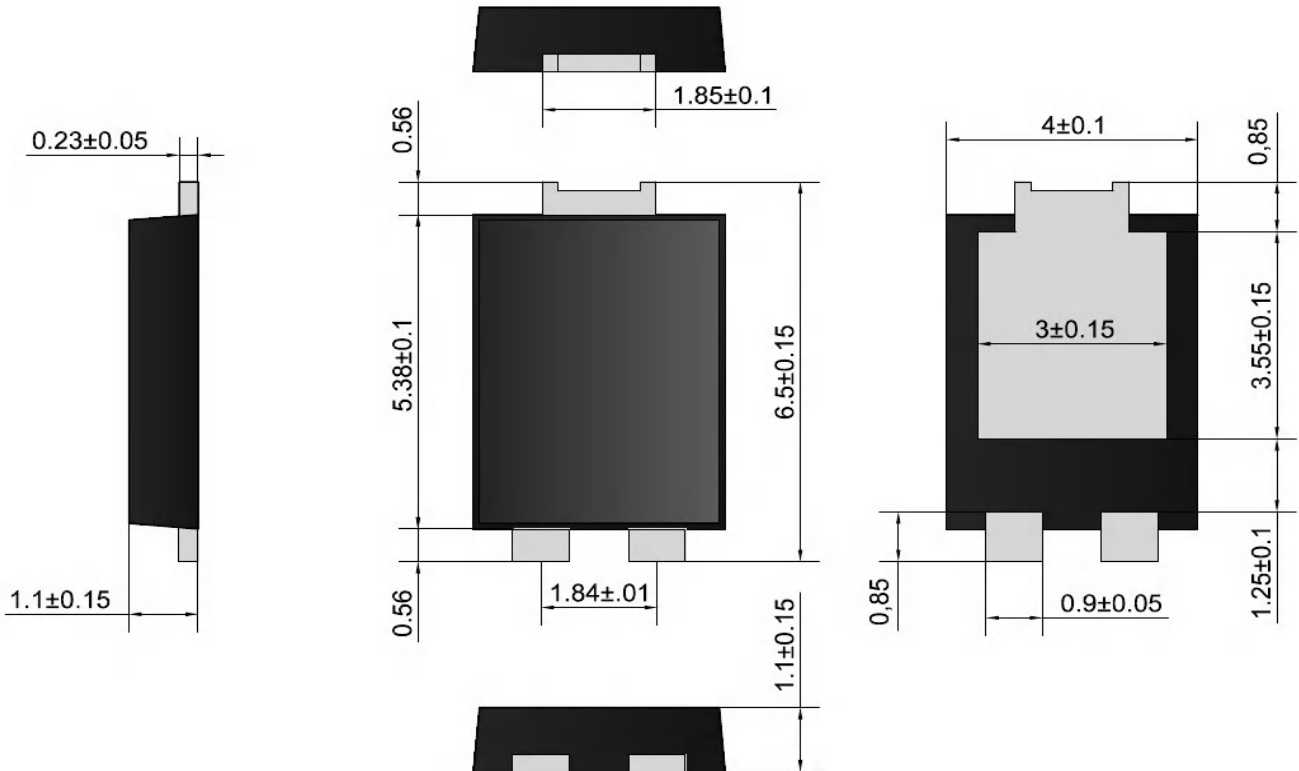


Figure 5. Maximum Non-Repetitive Peak Forward Surge Current

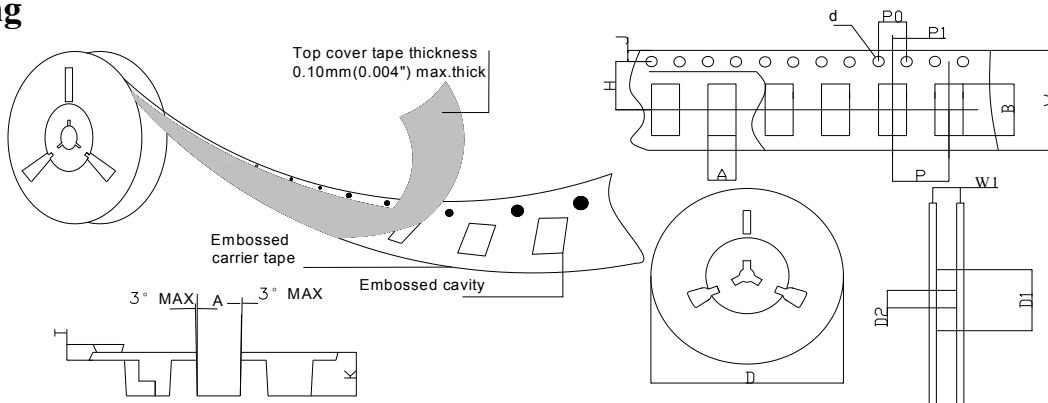
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PACKAGE OUTLINE DIMENSIONS



Packaging



SPECIFICATIONS mm(inch)		PACKAGE	SPECIFICATIONS mm(inch)		PACKAGE
ITEM	SYM BOL	PS-277B	ITEM	SYM BOL	PS-277B
Carrier width	A	4.45(0.175)Max	Carrier depth	K	1.60(0.063)Typ
Carrier length	B	7.0(0.276)Max	Punch hole pitch	P	8.00(0.315)Typ
Sprocket hole	d	ø1.55(0.061)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel outer diameter	D	330.0(13.0)Typ	Embossment center	P1	2.00(0.079)Typ
Reel inner diameter	D1	74.0(2.913)Min	Overall tape thickness	T	0.25(0.010)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	16.0(0.630)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	16.5(0.650)Min
Punch hole position	H	7.50(0.295)Typ			