SEMICONDUCTOR

EP5J

GLASS PASSIVATED SUPER FAST RECTIFIER

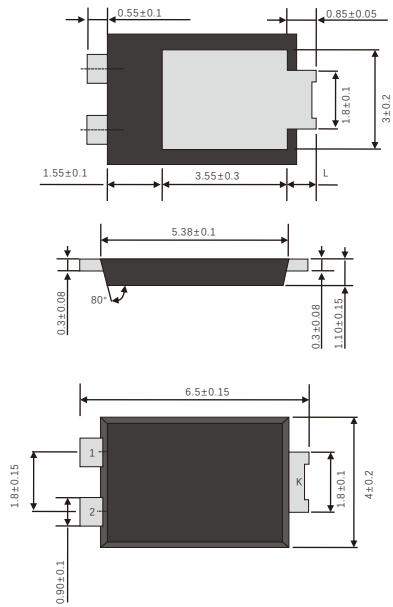
Reverse Voltage - 600 Volts
Forward Current - 5.0Amperes
Reverse Recovery Time - 35ns

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Fast switching for high efficiency
- Low VF ,Low power loss
- High current capability
- High surge capability
- High temperature soldering guaranteed:260℃/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU

Pb
RoHS
COMPLIANT

TO-277

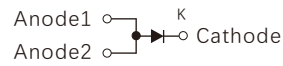


MECHANICAL DATA

- Case: TO-277 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Weight: 0.092 grams(approx)

TYPICAL APPLICATIONS

For use in high frequency inverters ,DC/DC converters,free wheeling , and polarity protection applications



Dimensions in inches and (millimetrers)

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	600	V
Maximum average forward rectified current (see fig.1)	$I_{F(AV)}$	5.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	120	A
Operating junction temperature range	T_J	-55 to+150	℃
Storage temperature range	T_{stg}	-55 to+150	℃

ELECTRICAL CHARACTERISTCS (TA=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	Min.	Typ.	Max.	Unit
Breakdown voltage Blocking voltage	IR=100μA		VBR VR	600	-	-	V
Instaneous forward voltage	TJ=25℃	IF=1.0A	VF 1)	-	0.97	-	V
		IF=3.0A		-	1.20	-	
		IF=5.0A		-	1.40	1.70	
	TJ=125℃	IF=1.0A		-	0.71	-	
		IF=3.0A		-	0.94	-	
		IF=5.0A		-	1.10	-	
Reverse current	TJ=25℃	VR=600V	IR 2)	-	-	10	μA
	TJ=100℃			-	-	100	μA
	TJ=125℃			-	-	500	
Junction capacitance	4V,1MHz		CJ	-	36	-	pF
Reverse Recovery Time	IF=0.5A,IRR=1.0A,IRR=0.25A		Trr	-	-	35	ns

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Pulse test: pulse width≤40ms

Thermal Characteristcs

Parameter	Symbol	TO-277	Unit
Typical thermal resistance 3)	RθJA	60.0	℃/W
	RθJL	3.0	

3 Units mounted on recommended PCB 1 oz. Pad layout

Availabale Pack Information

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Box Size L×W×H (mm)	Quantity (reel/box)	Carton Size L×W×H (mm)	Quantity (box/carton)
EP5J-TO-277	T/R	φ330	5000	338×338×40	2	365×365×360	7

FIG.1-FORWARD CURRENT DERATING CURVE

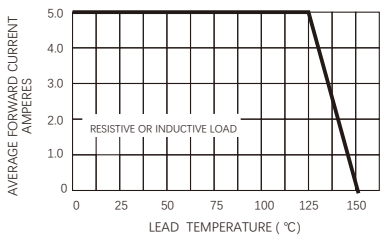


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

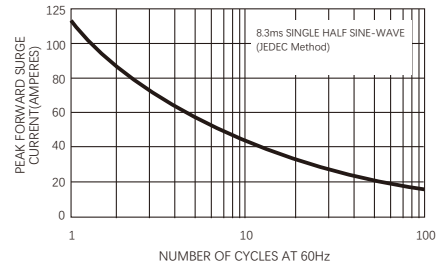


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

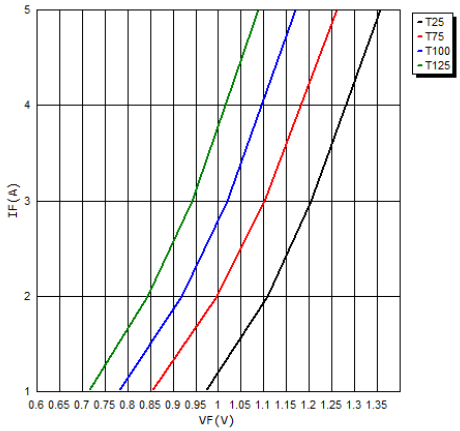


FIG.4-TYPICAL REVERSE CHARACTERISTICS

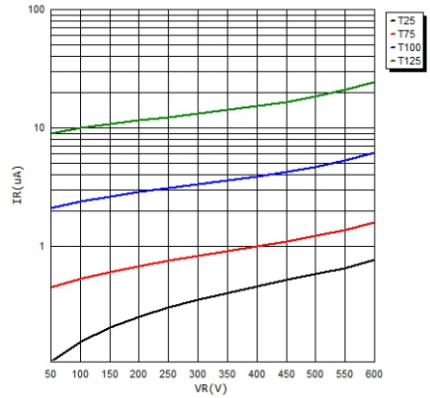
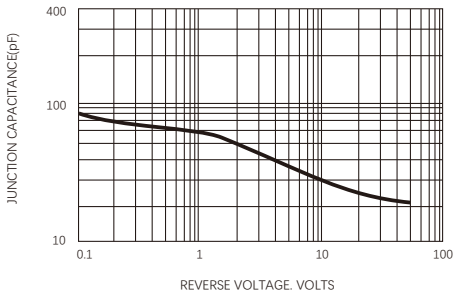
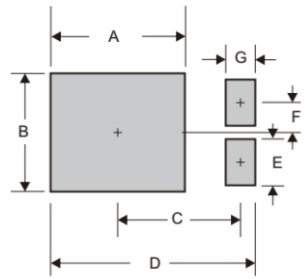


FIG.5-TYPICAL JUNCTION CAPACITANCE



Suggested Pad

■ 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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