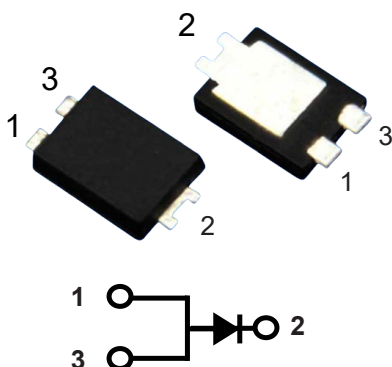


Surface Mount Fast Recovery Rectifier

ES5JSP TO-277



Features

- Low forward voltage drop
- Low leakage current
- High current capability
- Super fast switching speed
- High forward surge capability
- High reliability.

Mechanical Data

- Epoxy: UL 94V-O rate flame retardant
- Lead: lead solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end

■Maximum Ratings (T_a=25°C Unless otherwise specified)

Parameter	Symbols	ES5JSP		Units
Maximum Repetitive Peak Reverse Voltage	VRRM	600		V
Maximum RMS voltage	VRMS	420		V
Maximum DC Blocking Voltage	VDC	600		V
Maximum Average Forward Rectified Current	I(AV)	5.0		A
Reverse Recovery Time. IF=0.5A,IR=1A,IRR=0.25A	Trr	35		ns
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	IFSM	110		A
I ² t rating for fusing (1ms< t < 8.3ms)	I ² t	50.2		A ² S
Instantaneous Forward Voltage per Diode@TA=25 °C	VF	Typ	Max	V
		IF=1A	--	
		IF=5A	1.70	
Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=125 °C	IR	5 100		μA
Operating and Storage Temperature Range	Tj, Tstg	-55 ~ +150		°C
Typical thermal resistance (Note 1)	RthJC	12		°C/W

Note: 1. Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm copper pad areas.

RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

FIG. 1- FORWARD CURRENT DERATING CURVE

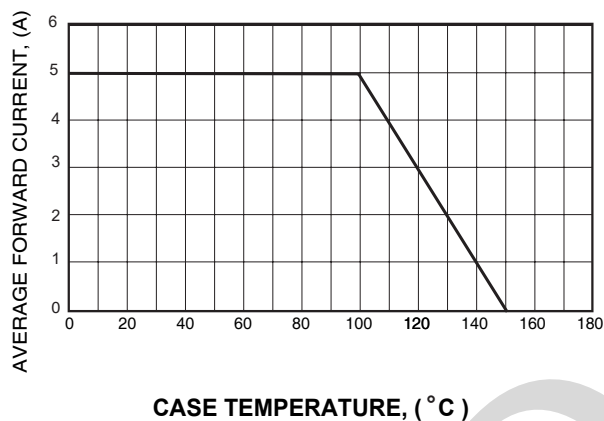


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

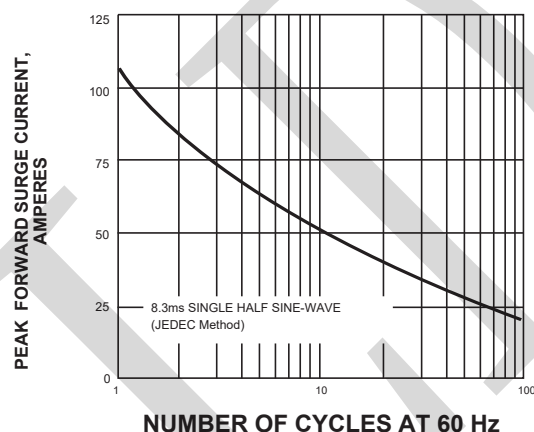


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

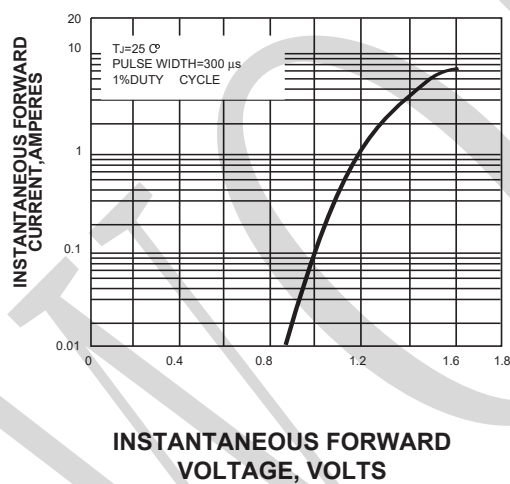
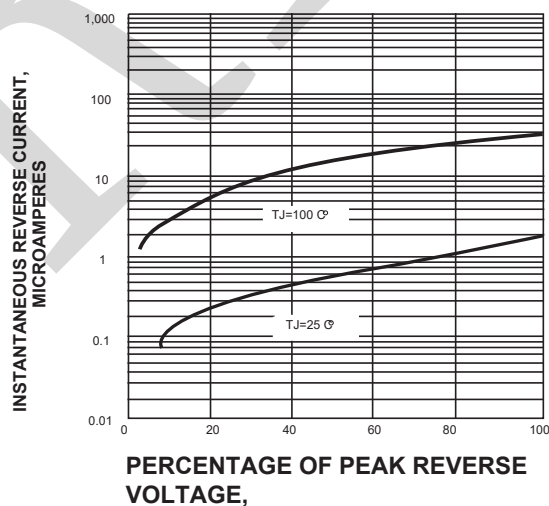
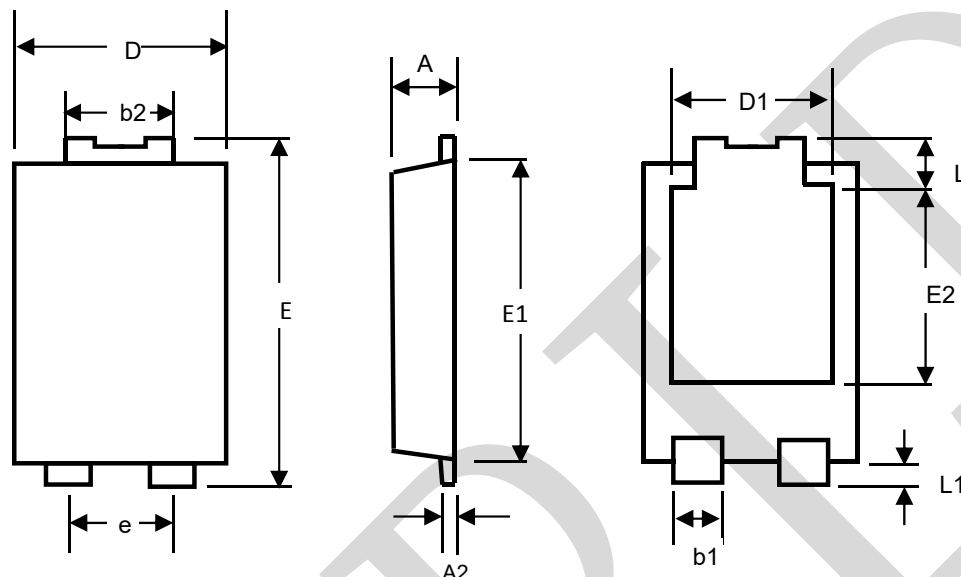


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

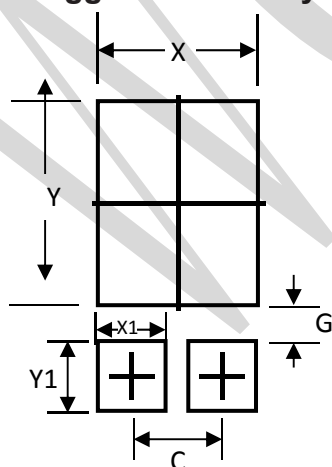
TO-277



TO-277 mechanical data

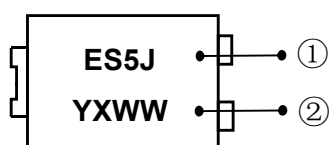
UNIT		A	A2	b1	b2	D	D1	e	E	E1	E2	L	L1
mm	max	1.3	0.4	1.0	1.9	4.3	3.05	2.0	6.6	5.75	3.55	1.0	0.7
	min	1.1	0.2	0.8	1.7	3.9		1.8	6.4	5.3		0.8	0.5
mil	max	51.18	15.75	39.37	74.80	169.3	120.0	78.74	259.8	226.3	139.7	39.37	27.55
	min	43.30	7.87	31.49	66.93	153.5		70.86	252.0	208.6		31.49	19.69

TO-277 Suggested Pad Layout



UNIT		C	G	X	X1	Y	Y1
mm	min	1.80	0.90	3.4	1.4	4.9	1.4
mil	min	78.86	35.43	133.86	35.43	192.91	55.12

Marking Information



①Product model :ES5JSP Referred to as ES5J

②PDC information:

Y X WW

WW:Week code(01 to 53)

X:Internal identification code

Y:Year code(ex:0=2020)