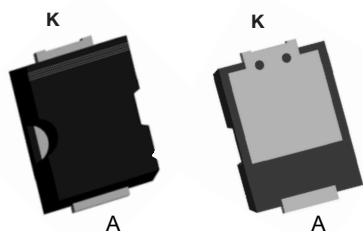


Surface Mount Fast Recovery Rectifier

ES5JP SMP6



Cathode K  Anode A

Marking: ES5J

Features

- Low forward voltage drop
- Low leakage
- 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	ES5JP	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	120	A
I ² t rating for fusing (1ms< t < 8.3ms)	I ² t	60	A ² S
Maximum Forward Voltage at 5.0A and 25°C	VF	1.5	V
Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=100 °C	IR	5 100	μA
Typical Junction Capacitance (Note1)	Cj	50	pF
Operating and Storage Temperature Range	Tj, Tstg	-55 ~ +150	°C
Typical thermal resistance (Note 2)	RthJA RthJC	40 10	°C/W

Note: 1. Measured at 1MHz and applied reverse voltage of 4 VDC.

2. 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

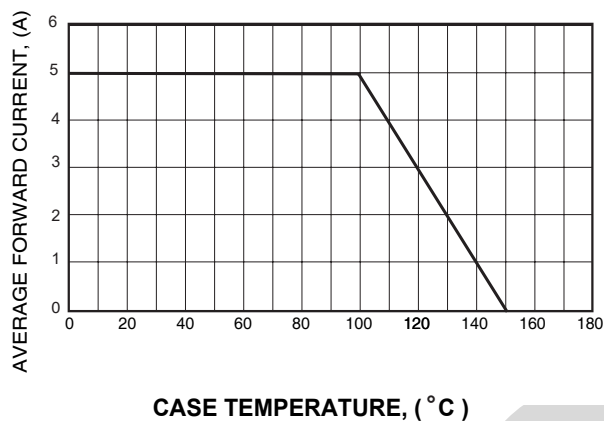


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

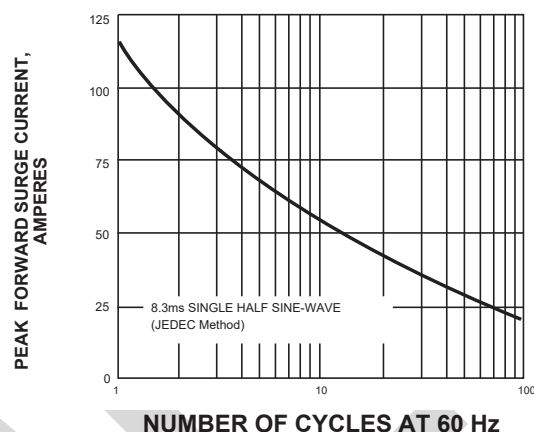


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

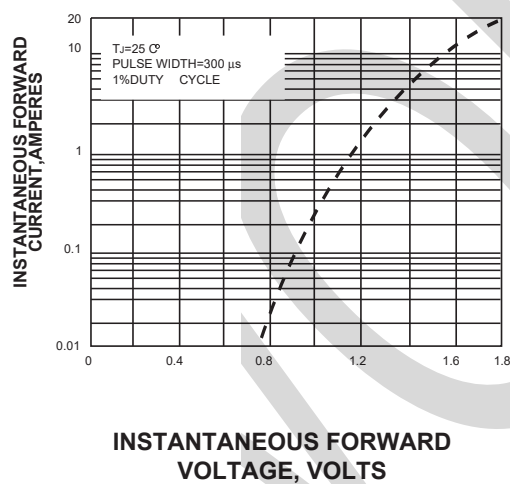
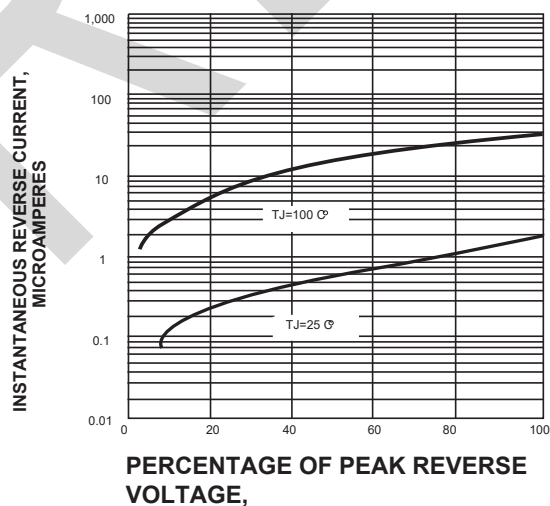
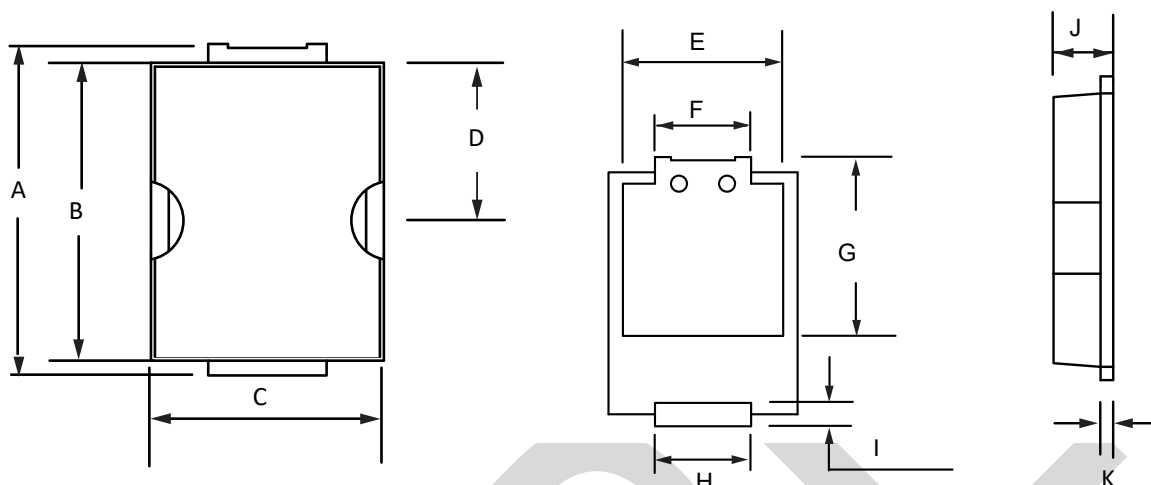


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

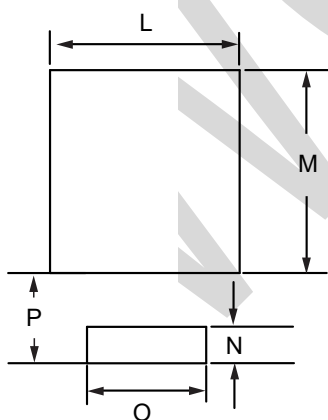
SMP6



SMP6 mechanical data

UNIT		A	B	C	D	E	F	G	H	I	J	K
mm	max	8.6	7.75	6.1	4.2	5.2	3.2	5.68	3.2	0.93	1.85	0.45
	min	8.0	7.35	5.7	3.8	4.8	2.8	5.28	2.8	0.53	1.45	0.25
mil	max	338.5	305.1	240.1	165.3	204.7	126.0	223.6	126.0	36.6	72.8	17.7
	min	314.9	289.3	224.4	149.6	188.9	110.2	207.8	110.2	20.8	57.1	9.8

SMP6 Suggested Pad Layout



UNIT		L	M	N	O	P
mm	min	5.40	5.78	1.0	3.4	1.8
mil	min	212.6	227.5	39.3	133.8	70.8