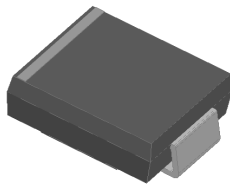


Surface Mount Fast Recovery Rectifier

SMC ES5JC



Cathode  Anode

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	ES5JC	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	59.7	A ² S
Instantaneous Forward Voltage per Diode@TA=25 °C	VF	Typ	Max
		0.95	--
		1.32	1.50
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)	RθJ-C	16	°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

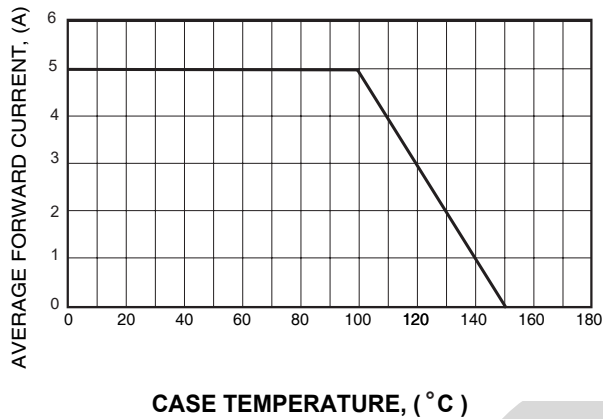


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

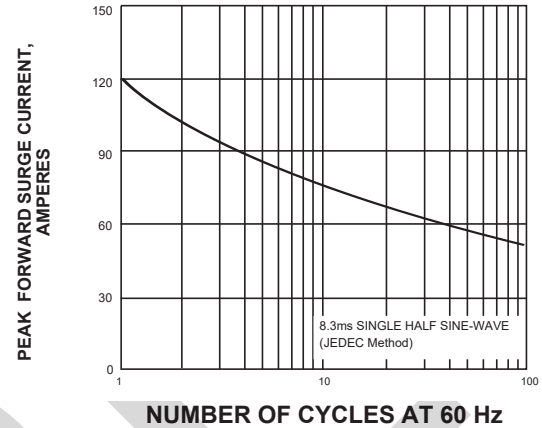


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

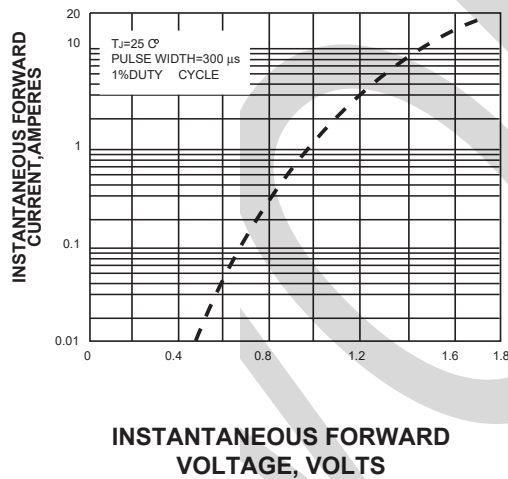
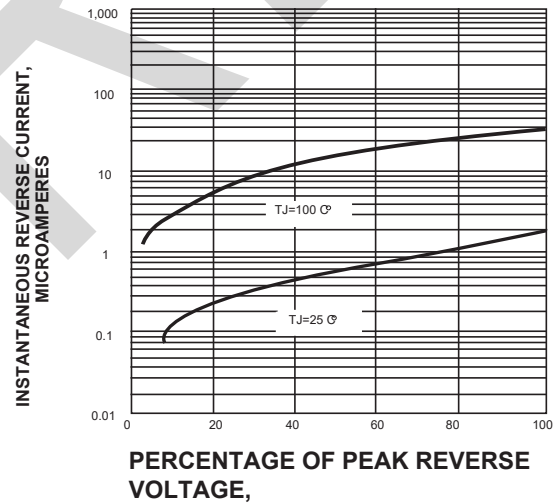
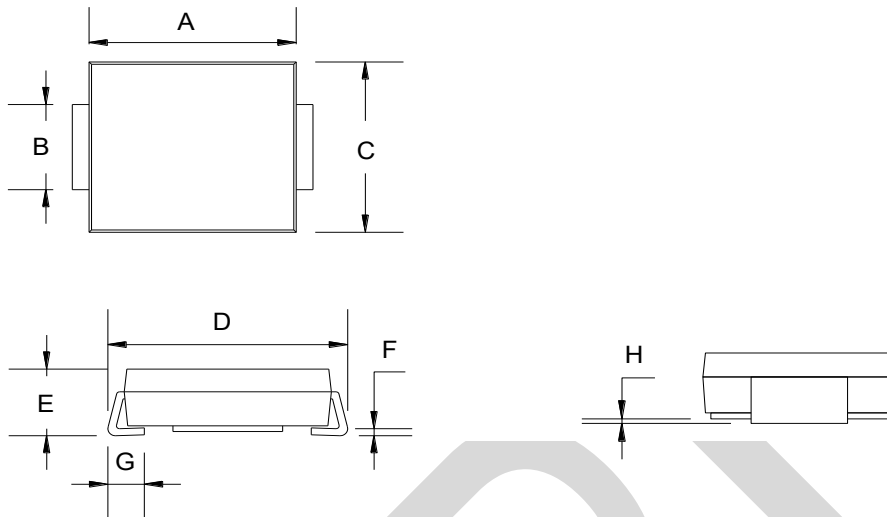


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PACKAGE OUTLINE DIMENSIONS

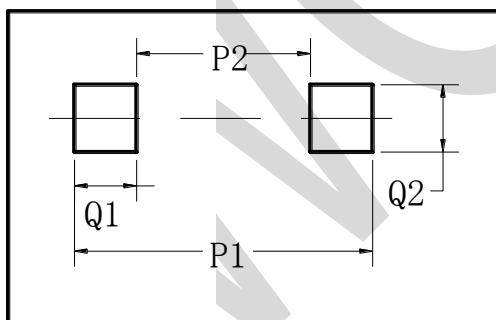
SMC



SMC Mechanical Data

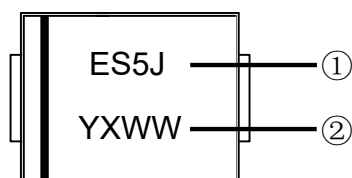
UNIT		A	B	C	D	E	F	G	H
mm	max	7.1	3.3	6.25	8.1	2.6	0.30	1.5	0.2
	min	6.6	2.8	5.6	7.7	2.0	0.15	0.75	0.1
mil	max	279.5	129.9	246.1	318.9	102.3	11.8	59.1	7.87
	min	259.8	110.2	220.5	303.1	78.7	5.90	29.5	3.93

SMC Suggested Pad Layout



UNIT		P1	P2	Q1	Q2
mm	Typ	9.9	3.85	3.0	3.8
mil	Typ	389.7	151.5	118.1	149.6

Marking Information



① Product model : ES5J

② PDC information:

Y X WW

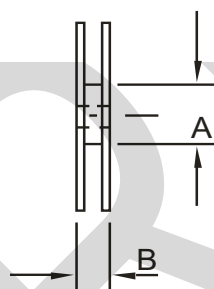
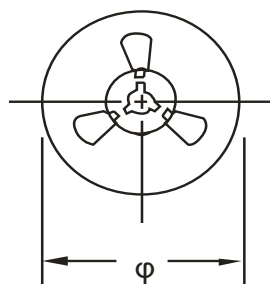
WW:Week code(01 to 53)

X:Internal identification code

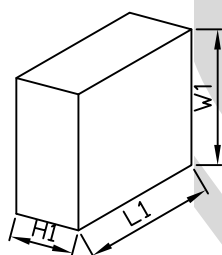
Y:Year code(ex:0=2020)

Packaging Information

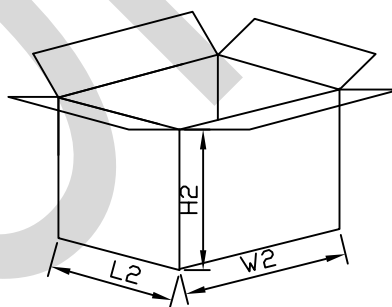
1.Reel Dimensions



2. Inside Box



3. Outside Box



Packaging Information

NO	UNIT	Reel Dimensions			Inside Box			Outside Box		
Size	mm	φ	A	B	L1	W1	H1	L2	W2	H2
		325	55	20	340	340	43	365	365	360
QTY	PCS	Smallest package,3000PCS/reel			6,000PCS,2reel in total			48,000PCS/carton,8boxes in total		
Note	Tolerance ≤20mm,±3mm; 21-100mm,±5mm; 101-500mm,±10mm									