ES5K

High Efficient Surface Mount Rectifiers
Reverse Voltage 800V Forward Current 5A

Features

- Glass passivated chip junction
- For surface mounted applications
- High forward surge capability
- Low forward voltage drop
- Ideal for automated placement
- Add suffix "E" for Halogen Free
- High temperature soldering guaranteed: 260℃/10 seconds at terminals

RoHS COMPLIANT

DO-214AB(SMC)

Mechanical Data

- Case:DO-214AB (SMC)
- Molding compound meets UL 94 V-0 flammability rating
- Terminals: Solder plated,solderable per J-STD-002,and JESD 22-B102
- Polarity: laser band denotes cathode end

Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbol	ES5K	Unit
Maximum repetitive peak reverse voltage	VRRM	800	V
Maximum RMS voltage	VRMS	560	V
Maximum DC blocking voltage	VDC	800	V
Maximum average forward rectified current	IF(AV)[1)]	5.0	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	150	A
Operating junction and storage temperature range	TJ, TSTG	- 55 to + 150	℃

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	ES5K	Unit
Maximum instantaneous forward voltage	IF=5A,Ta=25℃	V_F	2.0	Volts
Maximum DC reverse current at rated DC blocking voltage	Ta=25℃	I_R	5.0	μA
	Ta=125℃		100	
Maximum reverse recovery time	I_F=0.5A,I_R=1.0A, I_{RR}=0.25A	t_{rr}	35.0	ns
Typical junction capacitance	4.0 V, 1 MHz	C_J	210	pF
Typical thermal resistance	Juntion to Lead[1)]	$R_{\theta JL}$	3.7	℃/W
	Juntion to Ambient[2)]	$R_{\theta JA}$	65	
	Juntion to Case[2)]	$R_{\theta JC}$	21.0	
	Juntion to Lead[2)]	$R_{\theta JL}$	6.5	

Note:1),The thermal resistance from junction to lead,mounted on FR-4 P.C.B with 30×30mm copper pads

2),The thermal resistance from junction to ambient,case or lead,mounted on FR-4 P.C.B with 8×8mm copper pads

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

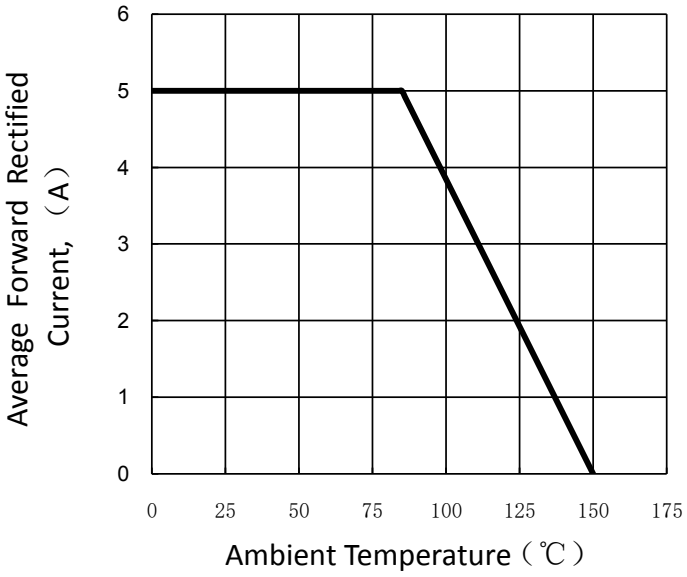


Figure 1.Forward Current Derating Curve

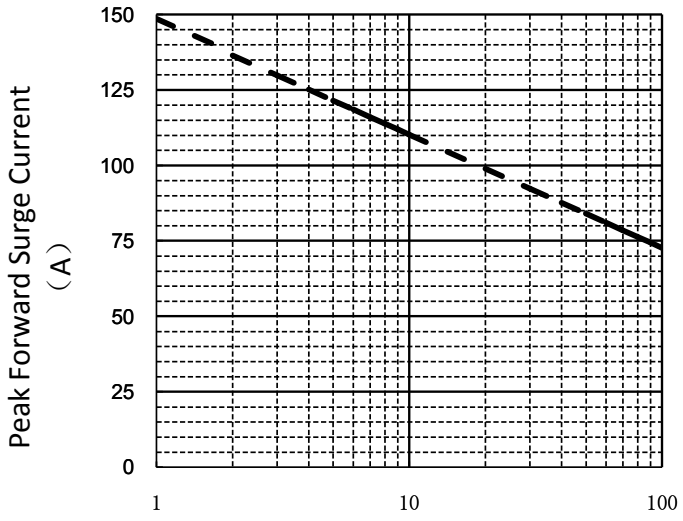


Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

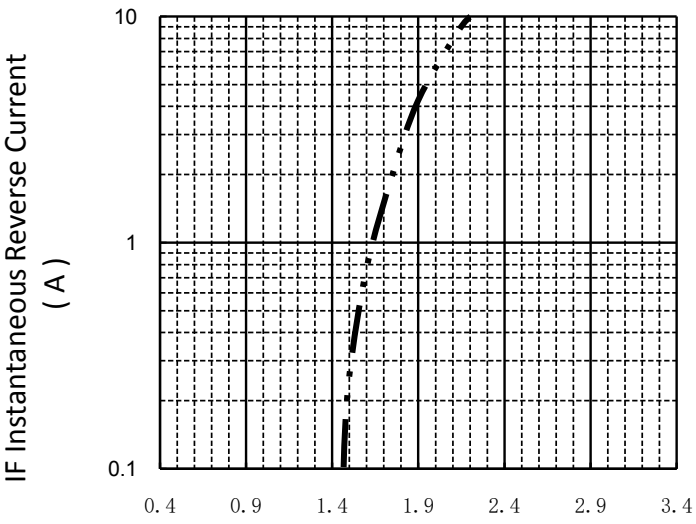


Figure 3. Typical Forward Characteristic

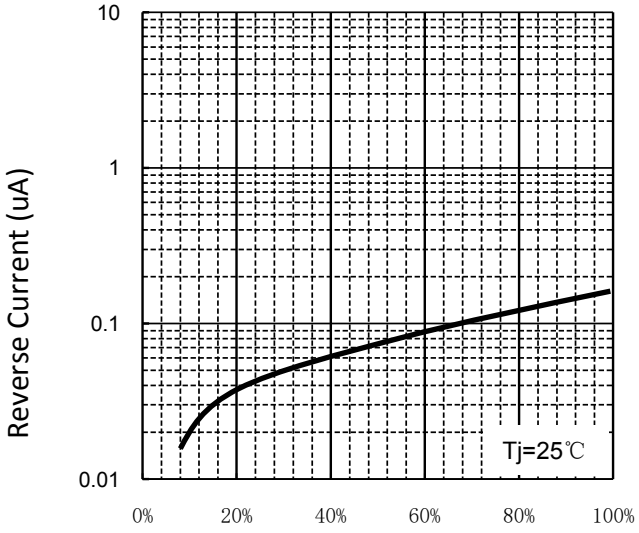
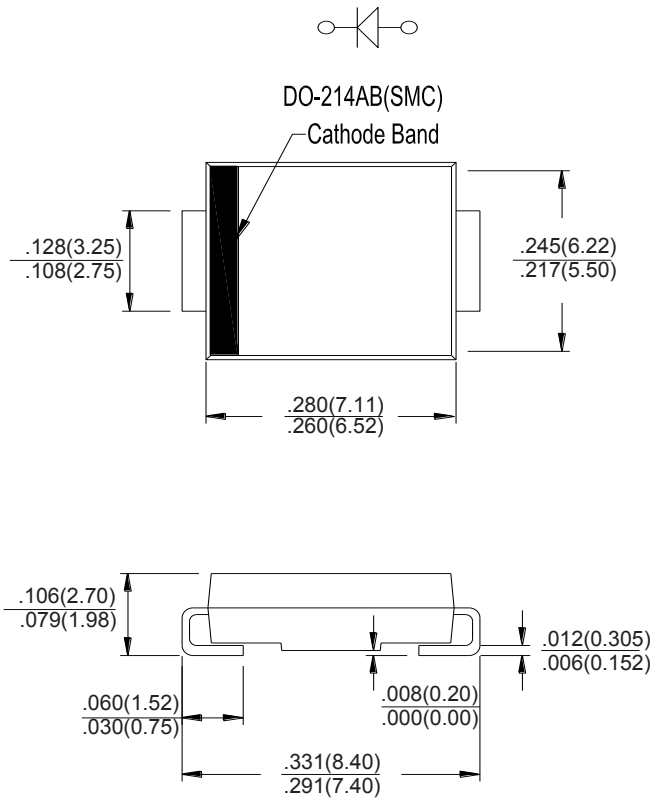
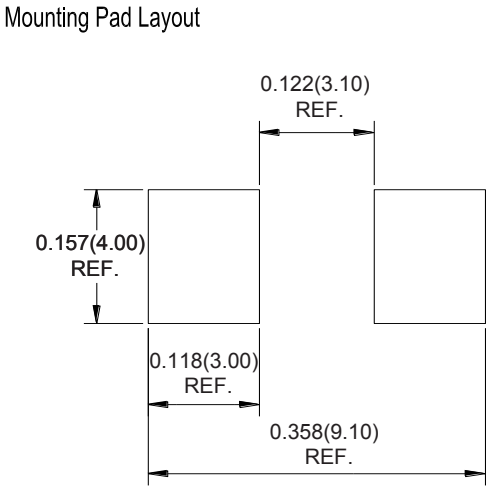


Figure 4. Typical Reverse Characteristic

Package Outline Dimensions

in inches (millimeters)

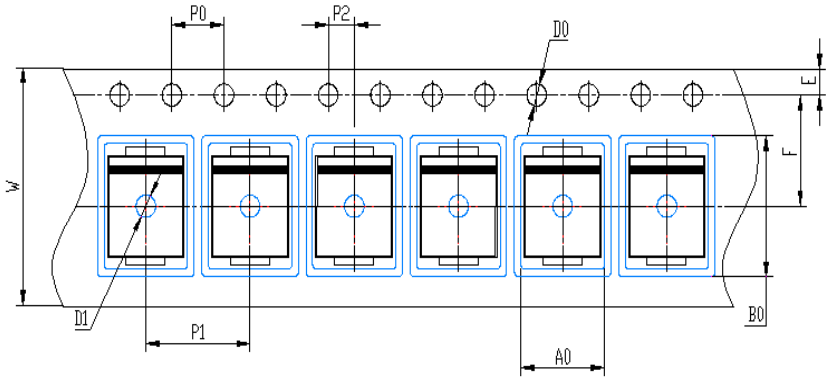




Packing Information

3000 pcs/Reel, 14 Reels/Box; 16mm Tape, 13" Reel

Tape & Reel Specification



Symbols	SMC(mm)
W	16±0.2
E	1.75±0.1
F	7.5±0.05
D0	1.5±0.1
D1	1.50 +0.1/-0
P0	4.0±0.1
P1	8.0±0.1
P2	2.0±0.05
A0	6.22±0.1
B0	8.31±0.1

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