



ES5AC-PJ~ES5JC-PJ

Surface Mount Fast Recovery Rectifiers

Features

- For surface mount applications
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Low profile package

SMC



1.Cathode —|← 2.Anode

Marking Code:

ES5AC-PJ: ES5A
 ES5BC-PJ: ES5B
 ES5CC-PJ: ES5C
 ES5DC-PJ: ES5D
 ES5EC-PJ: ES5E
 ES5GC-PJ: ES5G
 ES5JC-PJ: ES5J

Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	ES5AC-PJ	ES5BC-PJ	ES5CC-PJ	ES5DC-PJ	ES5EC-PJ	ES5GC-PJ	ES5JC-PJ	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at $T_C = 100^\circ\text{C}$	$I_{F(AV)}$	5.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	120							A
Maximum Instantaneous Forward Voltage at 5 A	V_F	1.0				1.25		1.68	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R	5 100							μA
Typical Junction Capacitance ^{Note1}	C_j	50							pF
Typical Thermal Resistance ^{Note2}	$R_{\theta JA}$ $R_{\theta JC}$	35 13							$^\circ\text{C/W}$
Maximum Reverse Recovery Time ^{Note3}	T_{rr}	35							nS
Junction Temperature	T_J	150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Note:

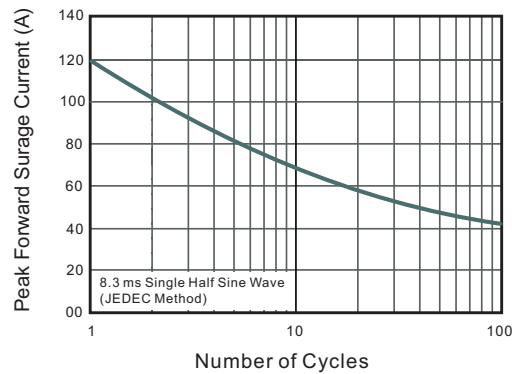
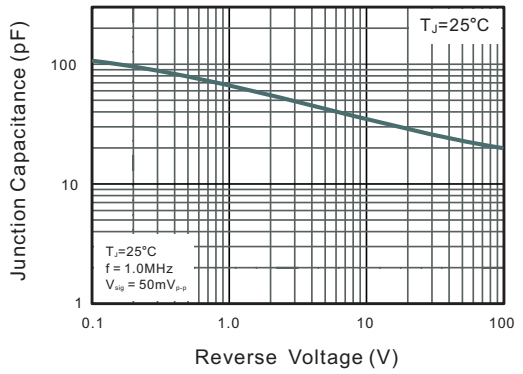
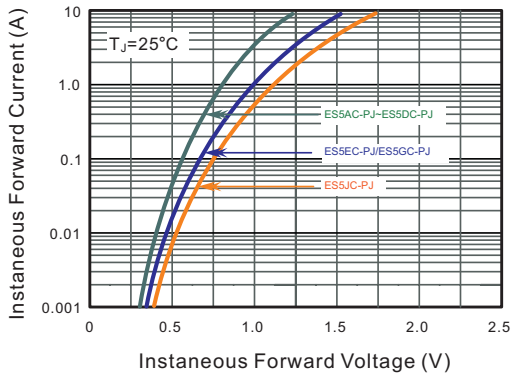
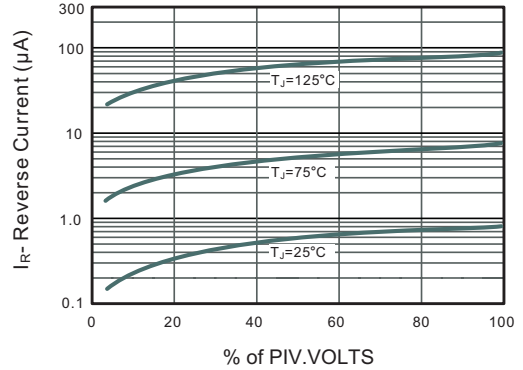
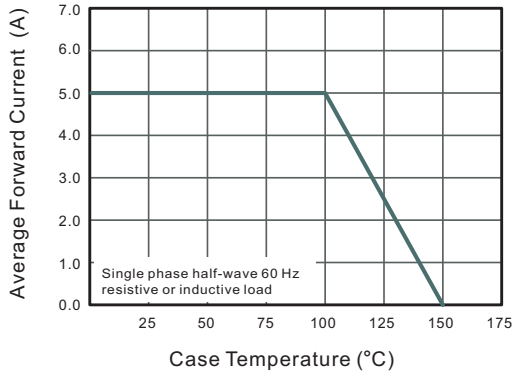
1. Measured at 1 MHz and applied reverse voltage of 4 V D.C
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.
3. Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$



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Typical Characteristic Curves





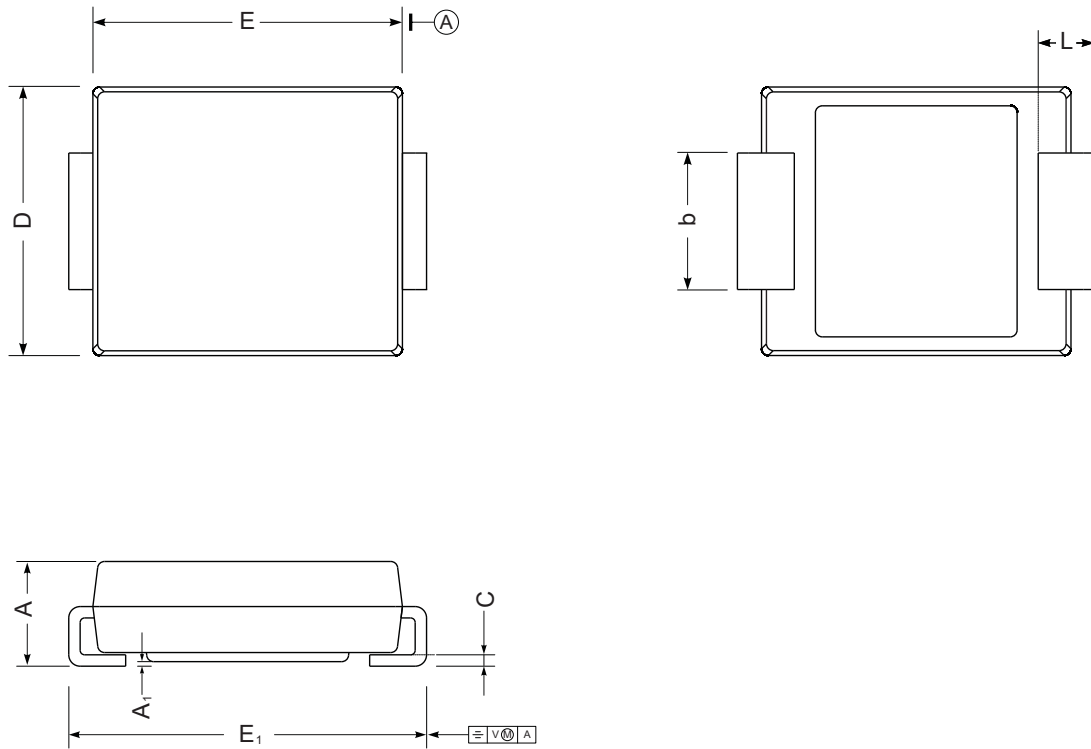
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Package Outline

SMC

Dimensions in mm



UNIT		A	E	D	E ₁	A ₁	C	L	b
mm	max	2.62	7.0	6.2	8.0	0.21	0.31	1.6	3.25
	min	2.00	6.5	5.6	7.6	0.05	0.15	0.9	2.75
mil	max	103	276	244	315	8.3	12	63	128
	min	79	256	220	299	2.0	5.9	35	108