



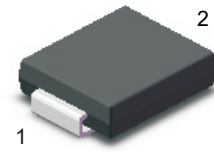
US5AC-PJ~US5MC-PJ

Surface Mount Superfast Recovery Rectifiers

Features

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

SMC



1.Cathode  2.Anode

Marking Code:

US5AC-PJ: US5A
 US5BC-PJ: US5B
 US5DC-PJ: US5D
 US5GC-PJ: US5G
 US5JC-PJ: US5J
 US5KC-PJ: US5K
 US5MC-PJ: US5M

Maximum Ratings and Electrical 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	US5AC-PJ	US5BC-PJ	US5DC-PJ	US5GC-PJ	US5JC-PJ	US5KC-PJ	US5MC-PJ	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	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		1.3		1.65		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}	$R_{\theta JA}$	35							$^\circ\text{C/W}$
Maximum Reverse Recovery Time ^{Note3}	T_{rr}	50				75			nS
Junction Temperature	T_J	150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150							$^\circ\text{C}$

Note:

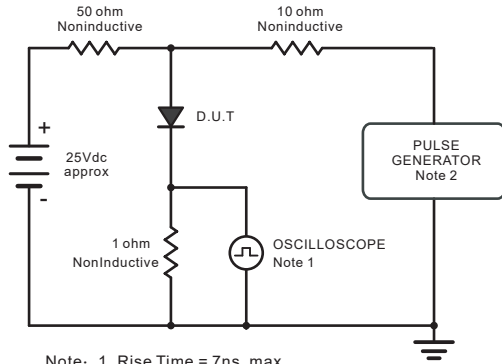
1. Measured at 1 MHz and applied reverse voltage of 4 V D.C
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.
3. Measured with $I_F = 0.5 \text{ A}$, $I_R = 1 \text{ A}$, $I_{rr} = 0.25 \text{ A}$.



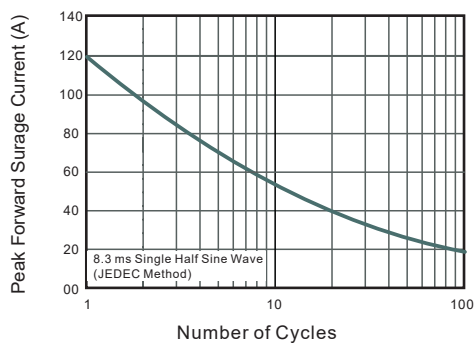
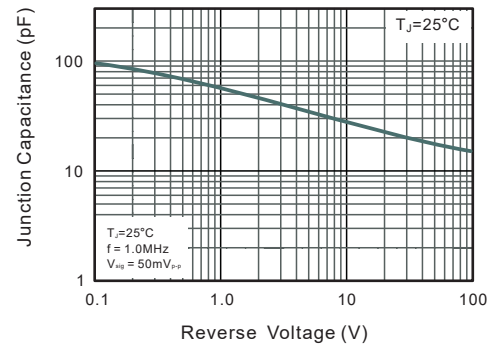
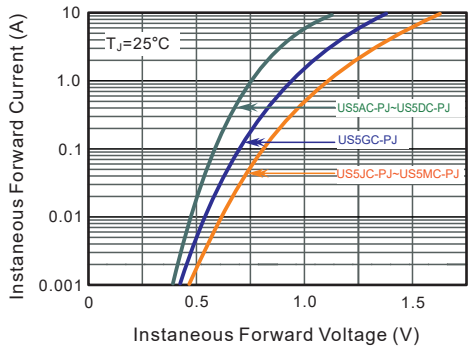
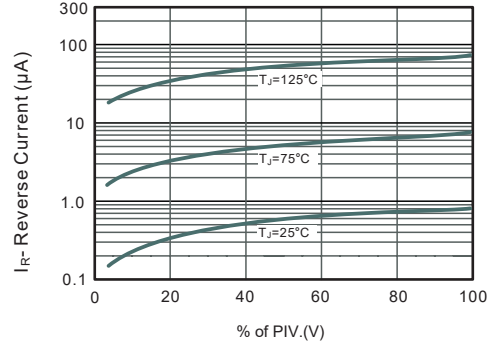
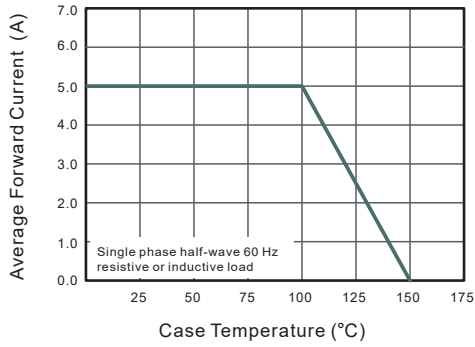
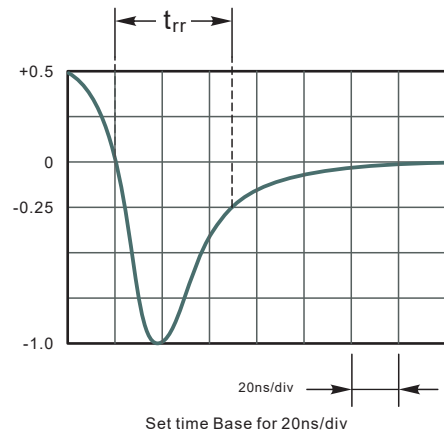
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Typical Characteristic Curves



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.





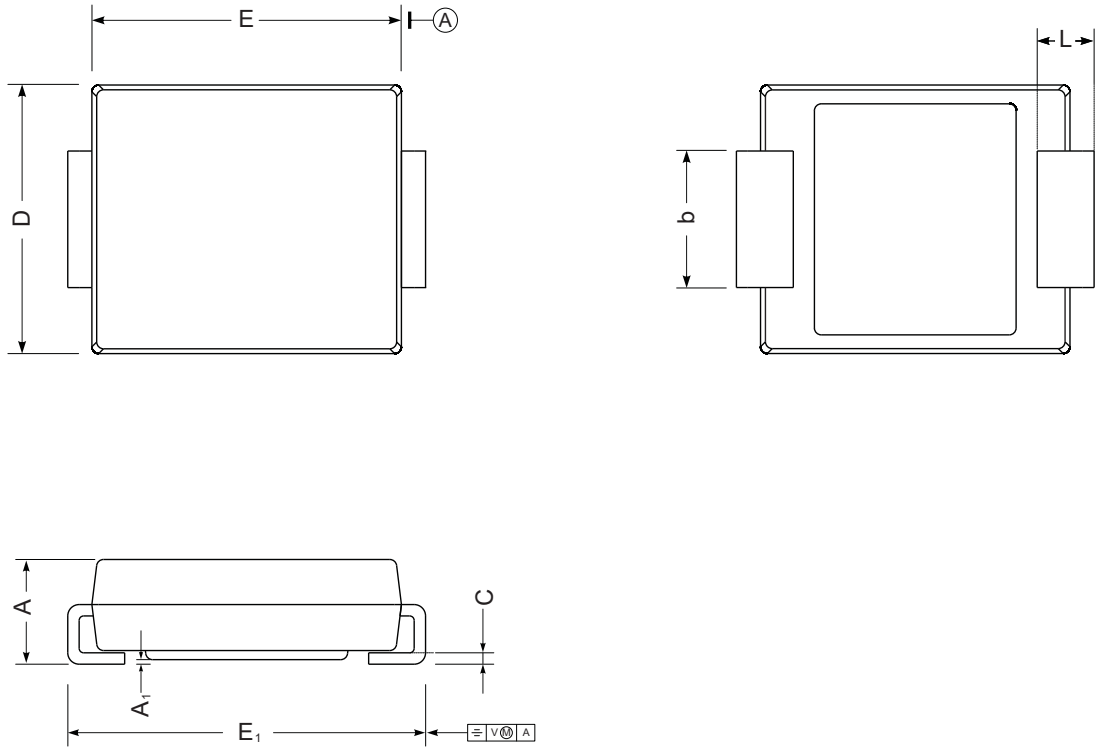
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Package Outline

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