

Superfast Recovery Rectifier DO-214AC SMA Package

ES1A to ES1K

MERITEK

FEATURE

- Operating temperature: -65 ~ 150°C
- Glass Passivated Die Construction
- Low Profile Construction
- Built-in Strain Relief
- Flame Resistance UL-94V-O
- Superfast Recovery Times for High Efficiency



ELECTRICAL CHARACTERISTICS

Parameter	Symbol	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	ES1K
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50V	100V	150V	200V	300V	400V	600V	800V
Maximum RMS Voltage	V_{RMS}	35V	70V	105V	140V	210V	280V	420V	560V
Maximum DC Blocking Voltage	V_{DC}	50V	100V	150V	200V	300V	400V	600V	800V
Maximum Average Forward Rectified Current	I_{AV}	1.0A							
Peak Forward Surge Current (JEDEC method)	I_{FSM}	30A							
Maximum Forward Voltage at 1.0A	V_F	0.95V			1.25V		1.70V		
Maximum Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	I_R 5.0 μ A							
	$T_J = 100^\circ\text{C}$	100 μ A							
Typical Junction Capacitance ^{Note 1}	C_J	10pF			8pF				
Typical Thermal Resistance ^{Note 1}	$R_{\theta JL}$	35°C/W							
Maximum Reverse Recovery Time ^{Note 2}	T_{RR}	35ns							
Operating Junction Temperature	T_J	-65 ~ 150°C							
Storage Temperature	T_{stg}	-65 ~ 150°C							

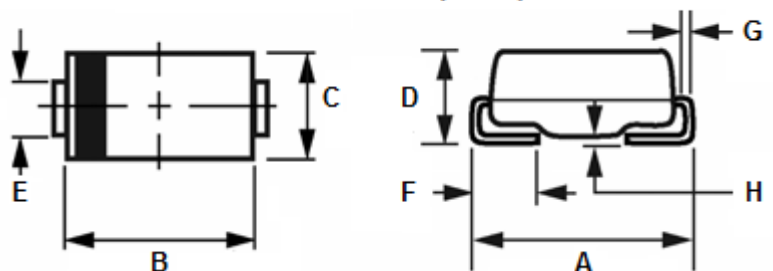
Notes:

1. PMeasured at 1MHz and applied reverse voltage of 4.0VDC, P.C.B. mounted with 8.0 x 8.0mm copper pad areas
2. Reverse Recovery Test Conditions: $I_F = 0.5A$, $I_R = 1A$, $I_{RR} = 0.25A$
3. $T_A = 25^\circ\text{C}$ unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load, for capacitive load, derate current by 20%.

DIMENSIONS

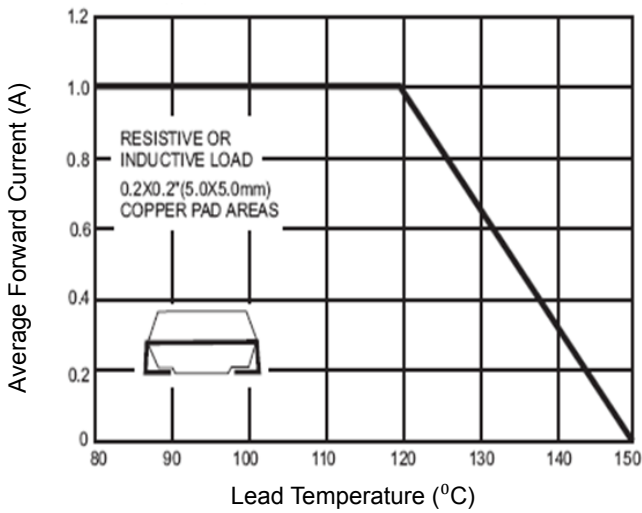
Item	Min (mm)	Max (mm)
A	4.70	5.31
B	4.00	4.60
C	2.18	2.90
D	1.70	2.44
E	1.23	1.70
F	0.76	1.52
G	0.152	0.305
H	0.000	0.203

DO-214AC (SMA)

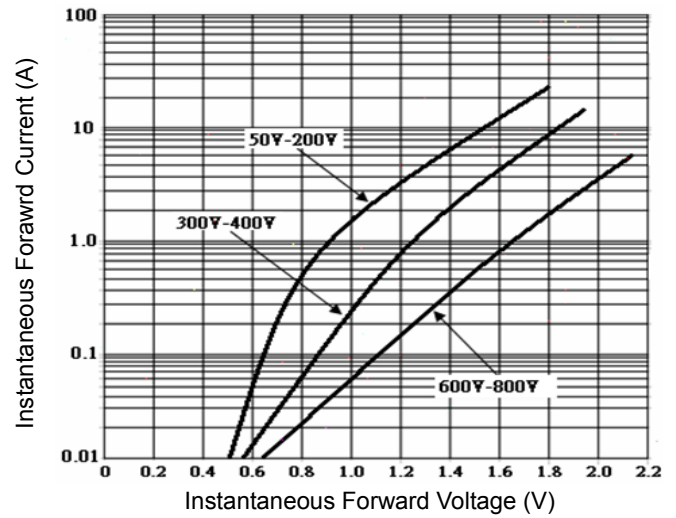


CHARACTERISTIC CURVES

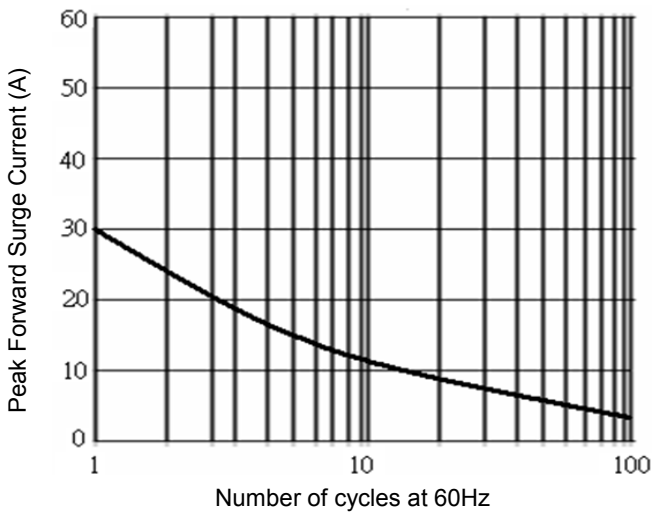
Maximum Forward Current Derating Curve



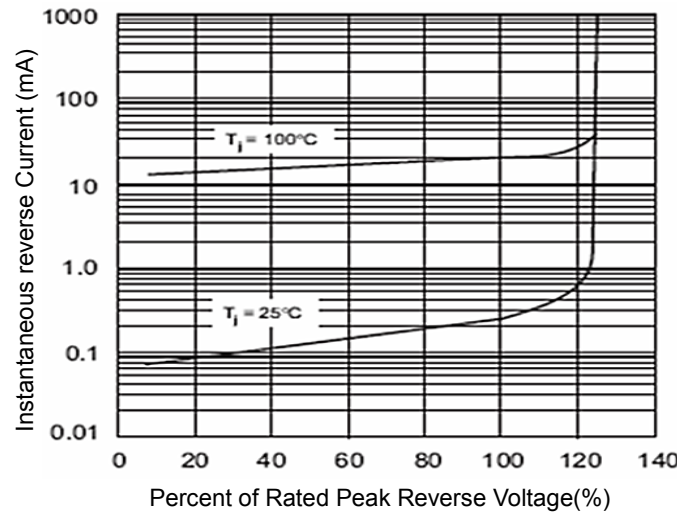
Typical Instantaneous Forward Characteristics



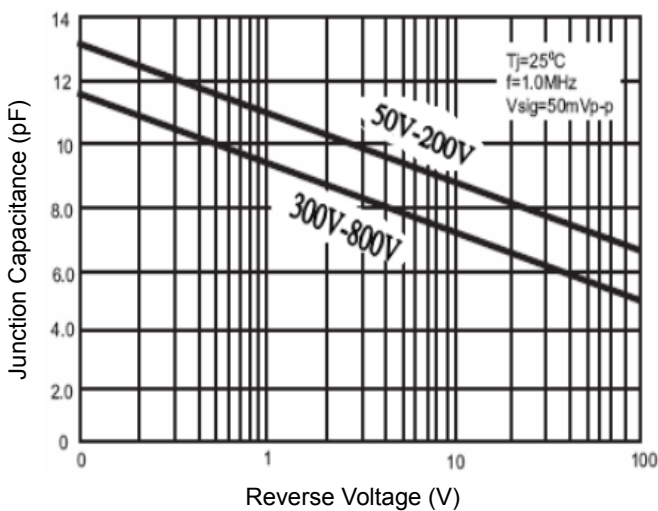
Maximum Non-Repetitive Peak Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance



Meritek Discrete Components Series: <http://www.meritekusa.com/EN/productlist/node/22>

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