

ES3D-K-18C

SURFACE MOUNT FAST ULTRAFAST RECTIFIER

VOLTAGE: 200V

CURRENT: 3.0A

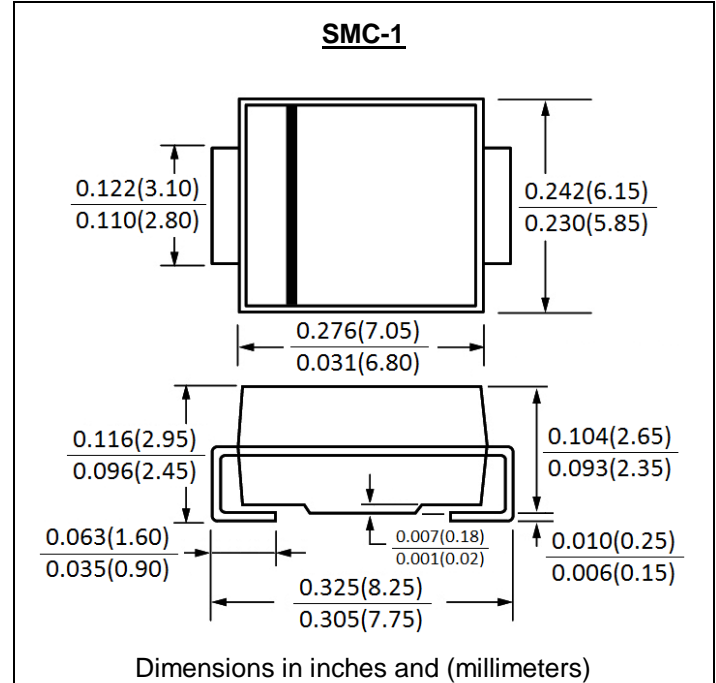


FEATURE

Ideal for surface mount pick and place application
Low profile package
Built-in strain relief
High surge capability
High temperature soldering guaranteed
260°C/10sec/at terminals
Glass passivated chip
Ultrafast recovery time for high efficiency
Meet Standard of AEC-Q101

MECHANICAL DATA

Terminal: Solder plated, solderable per J-STD-002
Case: Molded plastic body over passivated chip
Polarity: color band denotes cathode



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	Symbol	ES3D-K-18C	units
Maximum Recurrent Peak Reverse Voltage	Vrrm	200	V
Maximum RMS Voltage	Vrms	140	V
Maximum DC blocking Voltage	Vdc	200	V
Maximum Average Forward Rectified at T _L =100°C	I _{f(av)}	3.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I _{fsm}	100.0	A
Maximum Instantaneous Forward Voltage at rated forward current	V _f	0.90	V
Maximum DC Reverse Current at rated DC blocking voltage	I _r	10.0 500.0	μA
Maximum Reverse Recovery Time (Note1)	T _{rr}	20	nS
Typical Junction Capacitance (Note 2)	C _j	45.0	pF
Typical Thermal Resistance (Note 3)	R _{th(jl)}	12.0	°C/W
Storage and Operating Junction Temperature	T _{stg} , T _j	-55 to +150	°C

Note:

1. Reverse Recovery Condition I_f =0.5A, I_r =1.0A, I_{rr} =0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to terminal mounted on 8×8mm copper pad area

RATINGS AND CHARACTERISTIC CURVES ES3D-K-18C

Fig. 1 – Maximum Forward Current Derating Curve

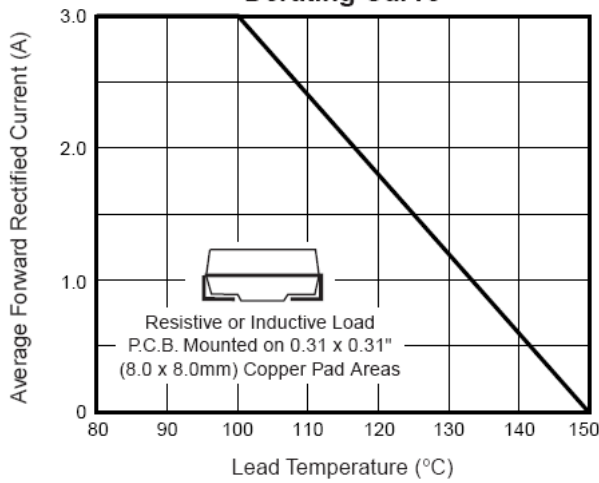


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

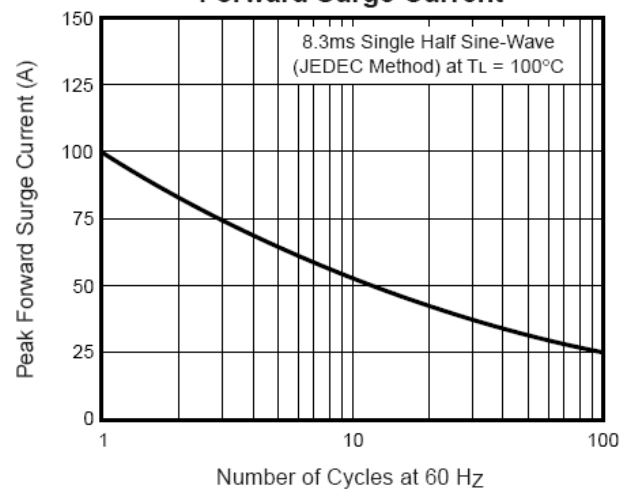


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

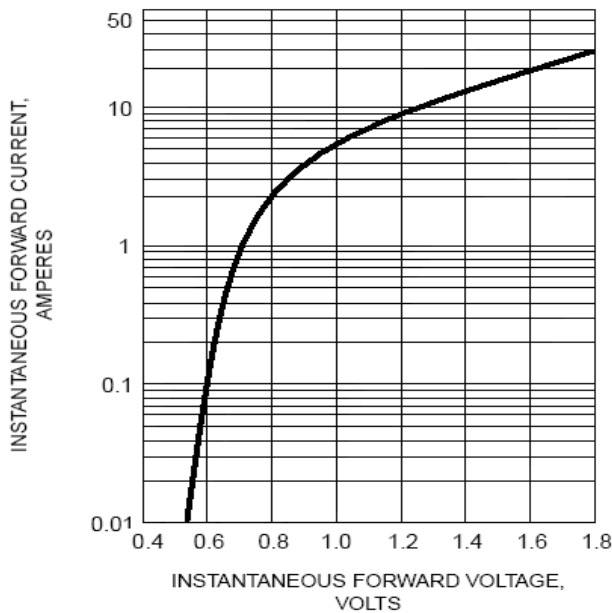


Fig. 4 – Typical Reverse Leakage Characteristics

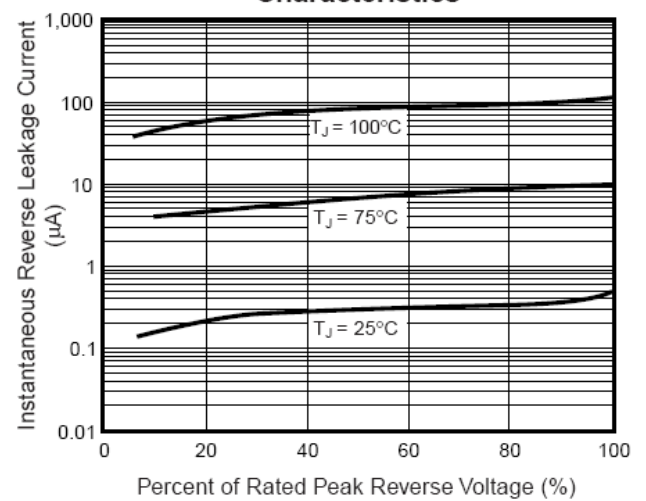


Fig. 5 – Typical Junction Capacitance

