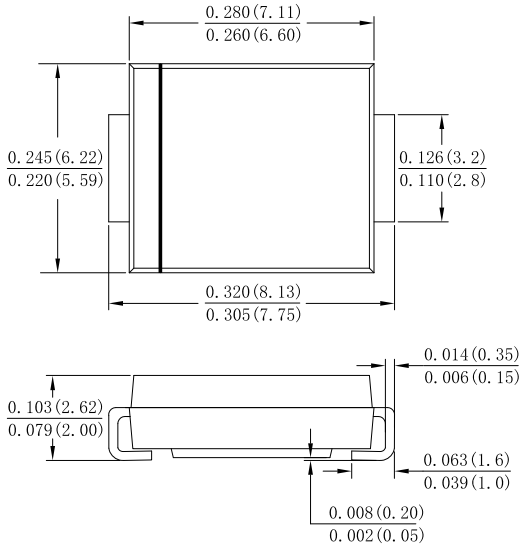
ER3AC THRU ER3KC

3.0 AMP Surface Mount Superfast Rectifiers

Features

- Glass passivated junction chip
- Low Power Loss, High Efficiency
- Ideally Suited for Automatic Assembly
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V- 0

Case: SMC(DO-214AB)



Dimensions in inches and (millimeters)

Mechanical Data

- Case: Molded plastic SMC
- Terminals: Plated leads solderable per MIL-STD-750,Method 2026 guaranteed
- Polarity: Color band dentes cathode end
- Mounting Position: Any
- Making: Type Number

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified
Single phase,half wave,60Hz,resistive or inductive load
For capacitive load derate current by 20%

Type Number	Symbols	ER3AC	ER3BC	ER3DC	ER3GC	ER3JC	ER3KC	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	V
Average Rectified Output Current @T_L =100 ℃	IF (AV)	3.0						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed On Rated Load (JEDEC Method)	I_{FSM}	110 88						A
Non-Repetitive Peak Forward Surge Current 1.0ms Single half sine-wave Superimposed On Rated Load (JEDEC Method)	I_{FSM}	220 176						A
10000 times of the wave surge current (time width 1ms, time interval 3s)	I_{FSM}	82.5						A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	41.5						A^2S
Forward Voltage @IF=3A	V_F	0.95			1.3	1.7	1.9	V
Peak Reverse Current @T_A=25℃	I_R	3.0						uA
At Rated DC Blocking Volta @T_A=125℃		100						
Maximum Reverse Recovery Time (Note 1)	Trr	35						ns
Typical Junction Capacitance (Note 2)	C_J	45			30			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	17						℃/W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to +150						℃

Note:

1.Reverse Recovery Test Conditions:IF=0.5A,IR=1.0A,IRR=0.25A.

2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C.

3.Thermal Resistance from Junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas.

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

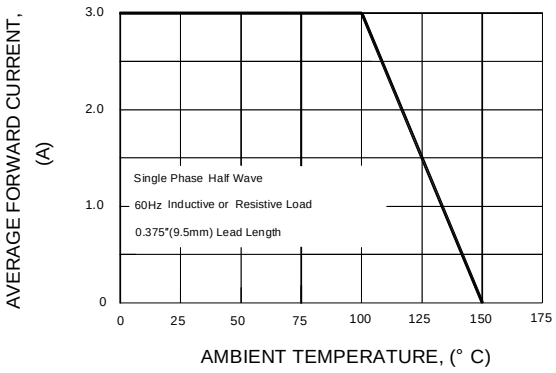


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

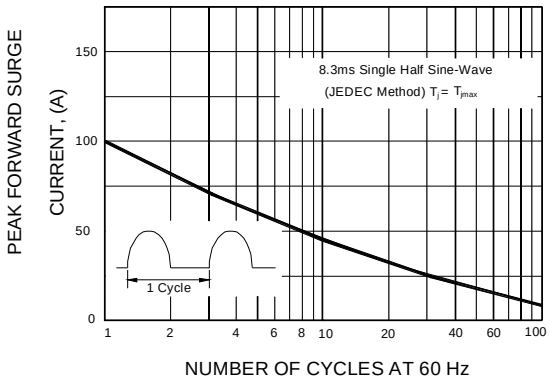


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

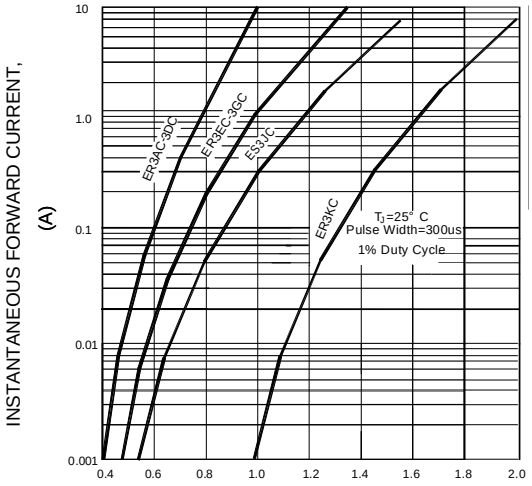


FIG.4-TYPICAL REVERSE CHARACTERISTICS

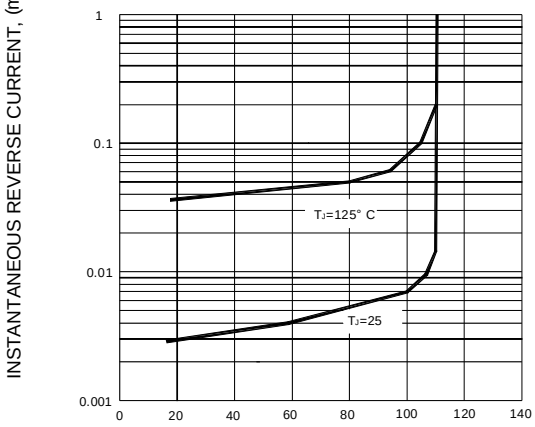


FIG.5-TYPICAL JUNCTION CAPACITANCE

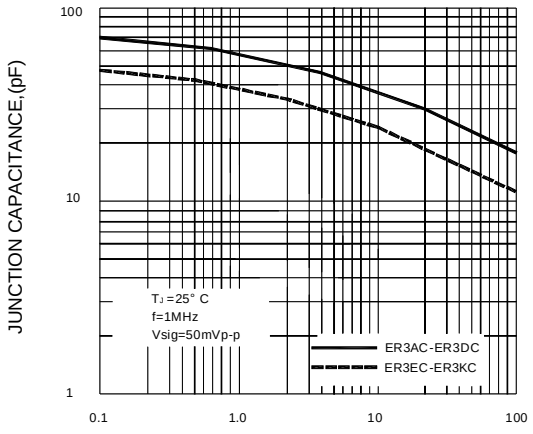
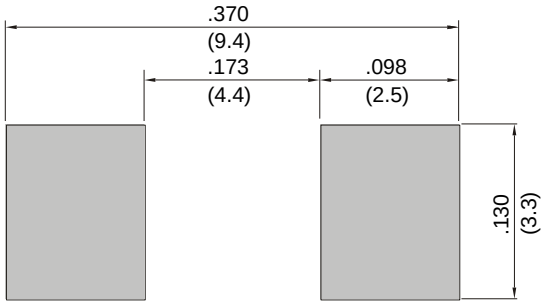


FIG.6 MOUNTING PAD LAYOUT



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