COMON SEMICONDUCTOR

ER3AB THRU ER3JB

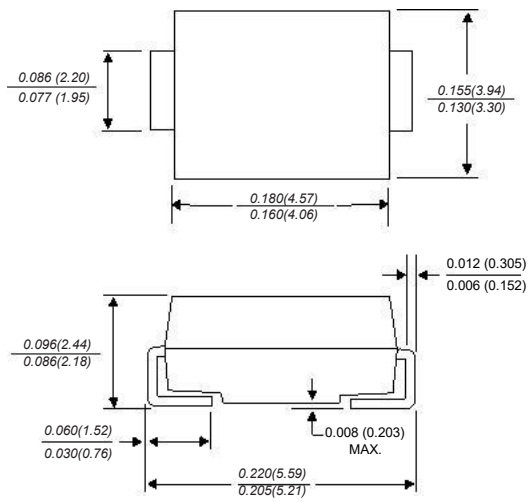
SURFACE MOUNT SUPER FAST RECTIFIER

***Reverse Voltage** - 50 to 600 Volts* ***Forward Current** - 3.0 Amperes*

DO-214AA

Features

- Glass passivated junction chip
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Ideal for automated placement
- Easy pick and place
- Superfast recovery time for high efficiency
- Glass passivated chip junction
- High temperature soldering:
  260°C/10 seconds at terminals
- Plastic material used carries Underwriters
  Laboratory Classification 94V-O



Dimensions in inches and (millimeters)

Mechanical Data

Cases: Molded plastic
Terminals: Solder plated
Polarity: Indicated by cathode band
Packaging: 16mm tape per EIA STD RS-481

Weight: 0.22 gram

Maximum Ratings and Electrical Characteristics

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

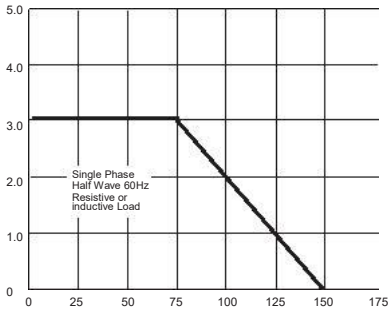
Type Number	Symbol	ER 3AB	ER 3BB	ER 3CB	ER 3DB	ER 3FB	ER 3GB	ER 3HB	ER 3JB	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	3.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) @T = 100℃	I_{FSM}	100								A
Maximum Instantaneous Forward Voltage @ 3.0A	V_F	0.95				1.3		1.7		V
Maximum DC Reverse Current @ T_A=25℃ at Rated DC Blocking Voltage @ T_A=100℃	I_R	10 250								uA uA
Maximum Reverse Recovery Time (Note 1)	Trr	35								nS
Typical Junction Capacitance (Note 2)	Cj	45				30				pF
Typical Thermal Resistance (Note 3)	$R\theta_{JA}$ $R\theta_{JL}$	47 12								℃/W
Operating Temperature Range	T_J	-55 to +150								℃
Storage Temperature Range	T_{STG}	-55 to + 150								℃

Notes: 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1 MHz and Applied V_R=4.0 Volts
3. Units Mounted on P.C.B. with 0.6 x 0.6"(16 x 16mm) Copper Pad Areas

COMON SEMICONDUCTOR

RATINGSANDCHARACTERISTIC CURVES(ER3ABTHRUER3JB)

FIG. 1- FORWARD CURRENT DERATING CURVE



AMBIENT TEMPERATURE, C

FIG.2-MAXIMUMNON-REPETITIVEPEAKFORWARD SURGECURRENT

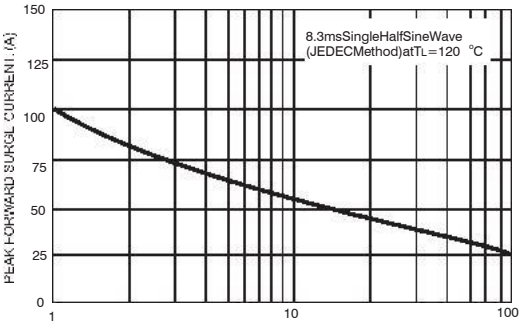


FIG.3-TYPICALINSTANTANEOUS FORWARDCHARACTERISTICS

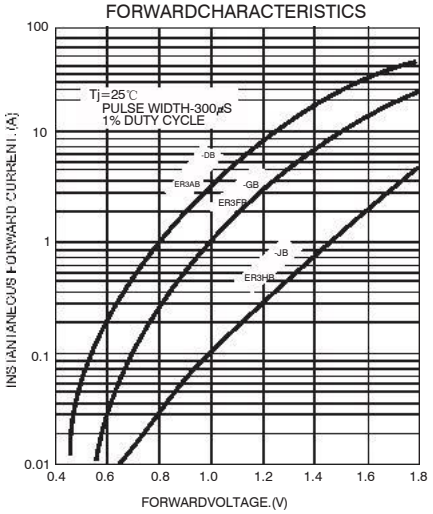


FIG.4-TYPICALREVERSECHARACTERISTICS

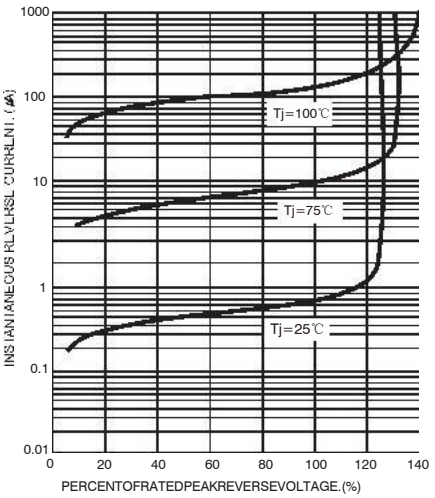


FIG.5-TYPICALJUNCTIONCAPACITANCE