Ultrafast Recovery Rectifier

Reverse Voltage - 1200 V

Forward Current - 3.0 A

Pinning

1.Cathode	2.Anode

DO-214AA/SMB

Marking Code	
US3QB	**YFW US3Q**

FEATURES

- For surface mounted applications
- Ideal for automated placement
- High forward surge current capability
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering guaranteed 260°C/10 seconds at terminals

Application

For use in ultrafast switching rectification of power suppliers, inverters, converters, and freewheeling diodes for consumer and telecommunication.

MECHANICAL DATA

- Case: DO-214AA/SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.095g / 0.003oz

Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.Single phase, half wave, 60Hz resistive or inductive load,for capacitive load, derate by 20 %

Parameter	Symbols	Value	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1200	V
Maximum RMS voltage	V_{RMS}	840	V
Maximum DC Blocking Voltage	V_{DC}	1200	V
Maximum Average Forward Rectified Current at T_C=120 °C	$I_{F(AV)}$	3.0	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80.0	A
Typical junction capacitance (Note1)	C_J	28	pF
Maximum Instantaneous Forward Voltage at 3.0 A	V_F	1.47	V
Minimum Reverse Breakdown Voltage I_R= 0.01mA	V_R	1200	V
Maximum Instantaneous Reverse Current at Rated DC Reverse Voltage T_A = 25°C T_A = 125°C	I_R	0.1 10	UA
Maxinum Reverse Recovery Time I_F=0.5A I_R=1.0A Irr=0.25A	T_{rr}	60	ns
Typical thermal resistance (Note2)	R_{thJA} R_{thJC}	70 18	°C/W
Operating Junction Temperature Range	T_j	-55 to +150	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C

Note: 1.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2.Thermal resistance from junction to ambient and 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

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

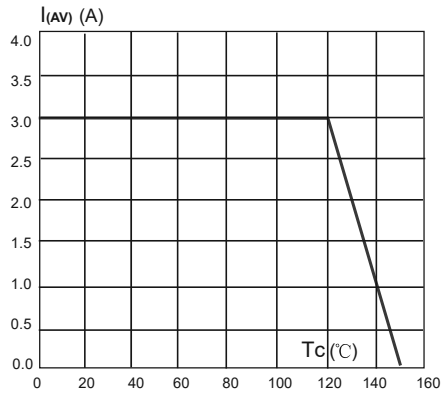


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

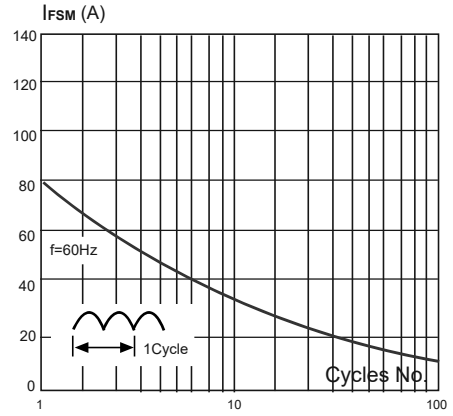


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

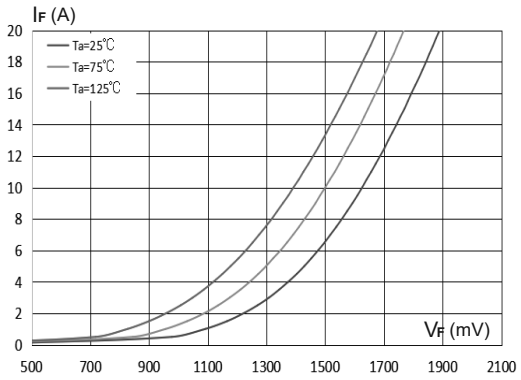
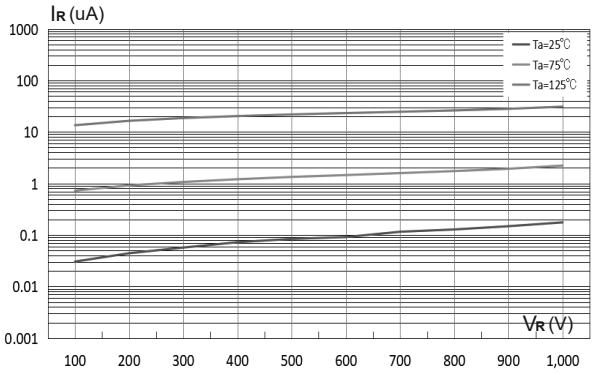


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



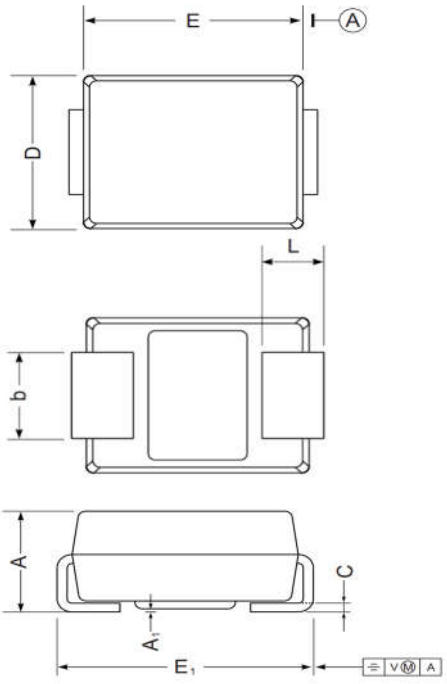
Marking Diagram

Ordering information

Package	Packing Description	Packing Quantity
DO-214AA SMB	Tape/Reel,13"reel	3000PCS/Reel 30000PCS/Carton

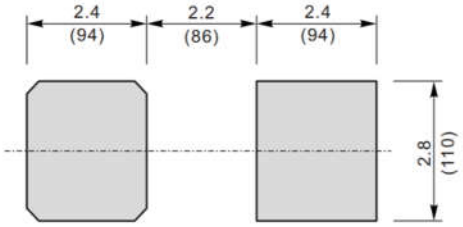
Package Dimensions

DO-214AA SMB



Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	2.13	2.44	84	96
E	4.06	4.70	160	185
D	3.3	3.94	130	155
E_1	5.08	5.59	200	220
A1	0.05	0.20	2.0	7.9
L	0.8	1.5	32	59
C	0.152	0.305	6	12
b	1.9	2.2	75	87

The recommended mounting pad size



Unit : mm (mil)

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