

Surface Mounted High-efficiency Rectifiers

Reverse Voltage - 2000 V

Forward Current - 2.0 A

FEATURES

- ◆ Low reverse leakage
- ◆ High forward surge capability
- ◆ High reliability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds
- ◆ Lead and body according with RoHS standard
- ◆ Green compound with suffix "-F" on Marking

MECHANICAL DATA

- ◆ Case: DO-214AA/SMB
- ◆ Epoxy: UL 94V-0 rate flame retardant
- ◆ Approx. Weight: 0.095g / 0.003oz

Absolute Maximum Ratings and characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	US2YB	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	2000	V
Maximum RMS voltage	V_{RMS}	1400	V
Maximum DC Blocking Voltage	V_{DC}	2000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	2.0	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30	A
Maximum Instantaneous Forward Voltage at 2 A	V_F	4.0	V
Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_a = 100\text{ }^{\circ}\text{C}$	I_R	5 100	μA
Maximum Reverse Recovery Time ⁽¹⁾	T_{rr}	75	nS
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$	85	$^{\circ}\text{C/W}$
Typical Junction Capacitance at $V_R=4\text{V}, f=1\text{MHz}$	C_j	42	pF
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	$^{\circ}\text{C}$

1) Thermal resistance from junction to ambient, PCB mounted.

Pinning

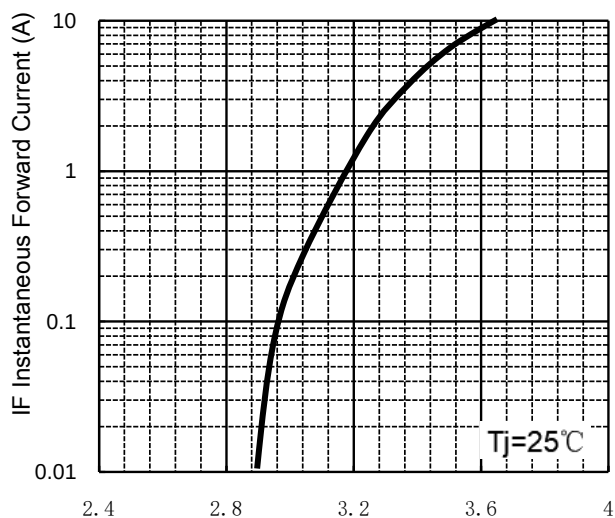
1.Cathode	2.Anode
	
DO-214AA/SMB	

Marking Code

US2YB	YFW US2Y
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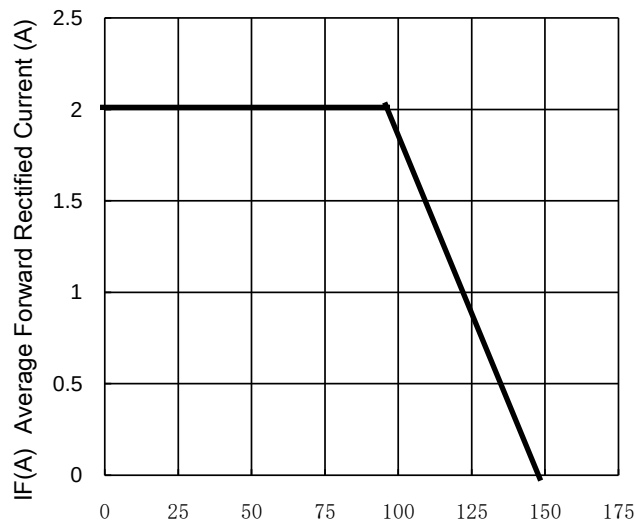
Characteristic Curves

TYPICAL FORWARD CHARACTERISTIC



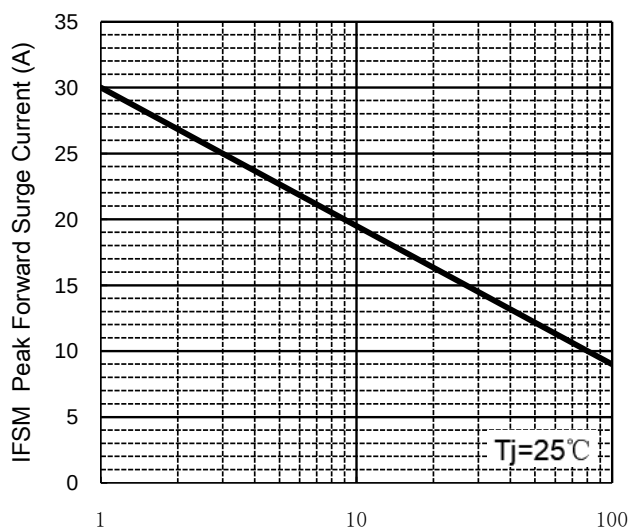
V_F Instantaneous Forward Voltage (V)

FORWARD CURRENT DERATING CURVE



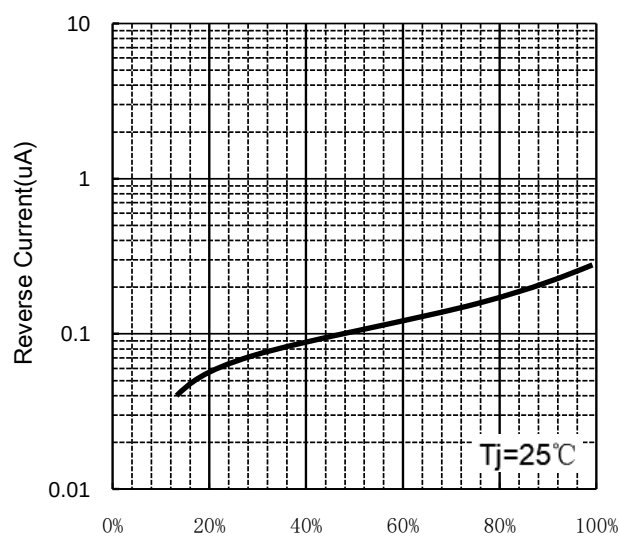
T_{amb} , ambient temperature ($^\circ\text{C}$)

**MAXIMUM NON REPETITIVE
PEAK FORWARD SURGE CURRENT**



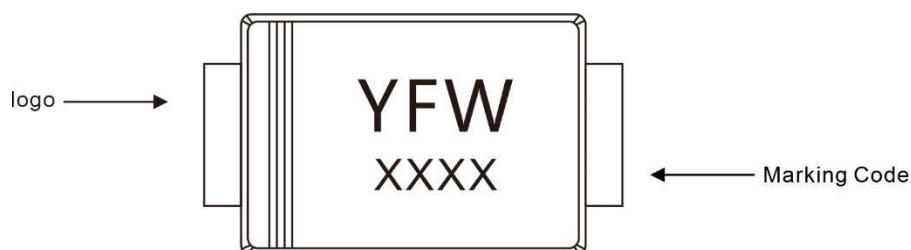
Number of Cycles at 60 Hz.

TYPICAL REVERSE CHARACTERISTICS



Percent Of Rated Peak Reverse voltage %

Marking Diagram



Ordering information

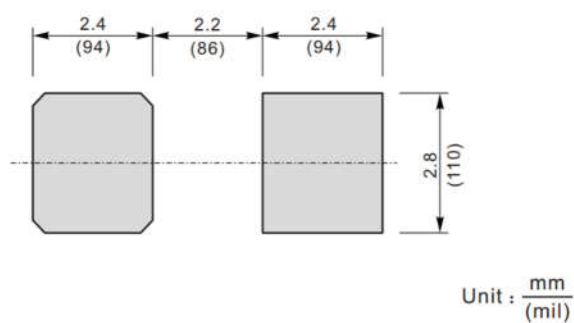
Package	Packing Description	Packing Quantity
DO-214AA SMB	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

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
A ₁	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



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