

Surface Mount Ultrafast Recovery Rectifier

Reverse Voltage - 50 to 1000 V

Forward Current - 5 A

FEATURES

- ♦For surface mounted applications
- ♦Low profile package
- ♦Glass Passivated Chip Junction
- ♦High efficiency
- ♦Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

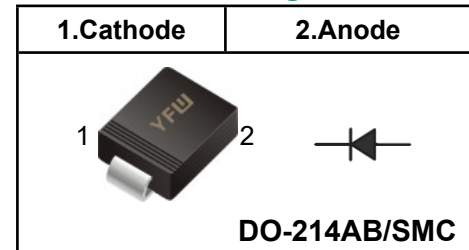
- ♦Case: DO-214AB/SMC
- ♦Terminals: Solderable per MIL-STD-750, Method 2026
- ♦Approx. Weight: 0.22g /0.0077oz

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 %.

Pinning



Marking Code

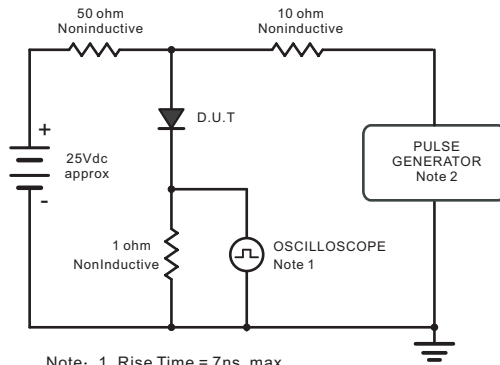
US5AC	YFW US5A
US5BC	YFW US5B
US5DC	YFW US5D
US5GC	YFW US5G
US5JC	YFW US5J
US5KC	YFW US5K
US5MC	YFW US5M

Parameter	Symbols	US5AC	US5BC	US5DC	US5GC	US5JC	US5KC	US5MC	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T _c = 125 °C	I_{F(AV)}	5							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	120							A
Maximum Instantaneous Forward Voltage at 5A	V_F	0.95			1.25	1.65			V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a =125 °C	I_R	5 100							μA
Maximum Reverse Recovery Time ⁽¹⁾	T_{rr}	50				75			nS
Typical Thermal Resistance ⁽²⁾	R_{θJA}	35							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

(1) Measured with $I_F=0.5A, I_R=1A, I_n=0.25A$

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.

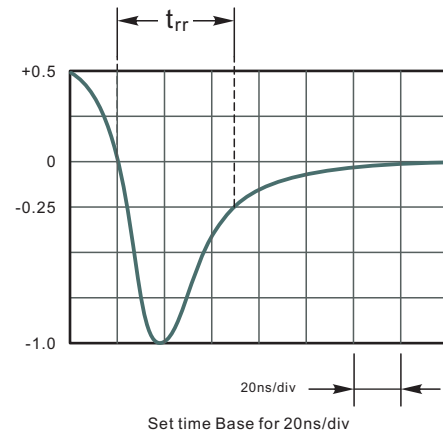


Fig.2 Maximum Average Forward Current Rating

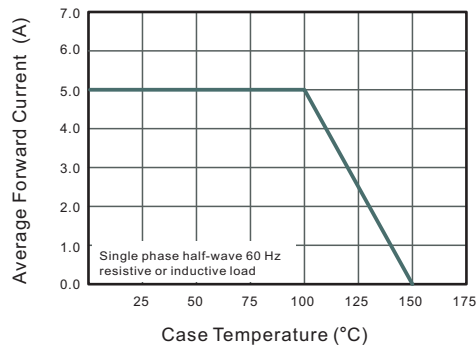


Fig.3 Typical Reverse Characteristics

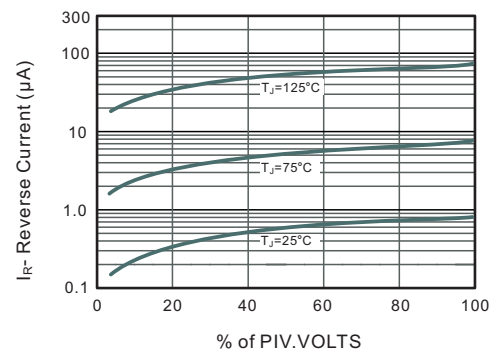


Fig.4 Typical Forward Characteristics

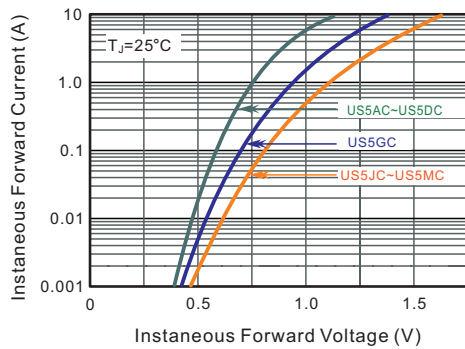


Fig.5 Typical Junction Capacitance

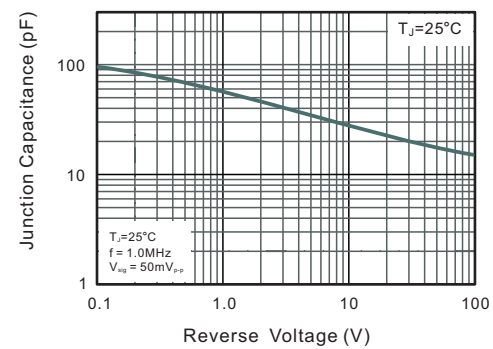
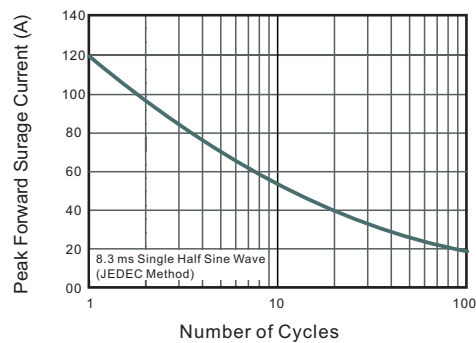
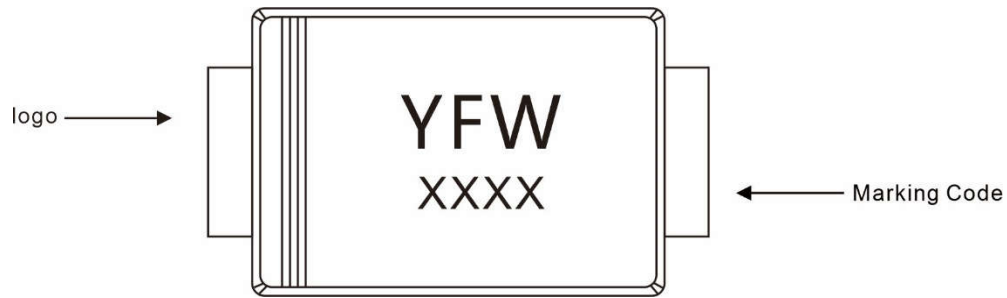


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Marking Diagram



Ordering information

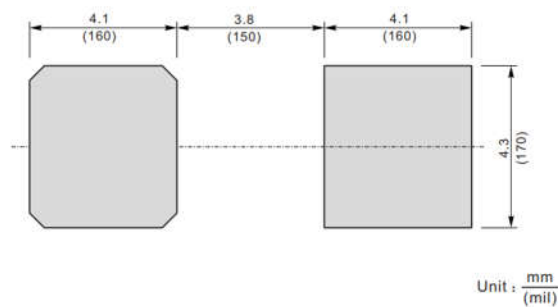
Package	Packing Description	Packing Quantity
DO-214AB SMC	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

Package Dimensions

DO-214AB SMC

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	2.00	2.62	79	103
E	6.5	7.0	256	276
D	5.6	6.2	220	244
E ₁	7.6	8.0	299	315
A ₁	0.05	0.21	2.0	8.3
C	0.15	0.31	5.9	12
L	0.9	1.6	35	63
b	2.75	3.25	108	128

The recommended mounting pad size



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