

Surface Mount Superfast Recovery Rectifier

Reverse Voltage - 50 to 600 V

Forward Current - 6 A

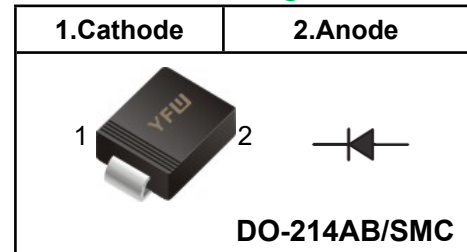
FEATURES

- ◆Glass Passivated Chip Junction
- ◆For surface mounted applications
- ◆Low profile package
- ◆Superfast reverse recovery time
- ◆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

Pinning



Marking Code

ES6AC	YFW ES6A
ES6BC	YFW ES6B
ES6DC	YFW ES6D
ES6GC	YFW ES6G
ES6JC	YFW ES6J

Absolute Maximum Ratings and characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

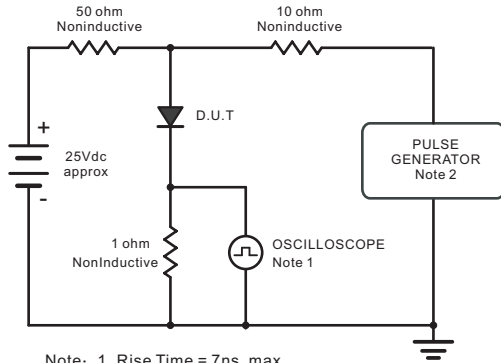
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	ES6AC	ES6BC	ES6DC	ES6GC	ES6JC	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	V
Maximum Average Forward Rectified Current at T _c = 125 °C	I_{F(AV)}	6					A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	150					A
Maximum Instantaneous Forward Voltage at 6 A	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
Typical Junction Capacitance at V _R =4V,f=1MHZ	C_J	50					pF
Maximum Reverse Recovery Time ⁽¹⁾	T_{rr}	35					nS
Typical Thermal Resistance ⁽²⁾	R_{θJA}/ R_{θJC}	35/13					°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150					°C

(1) Measured with $I_F=0.5\text{A}, I_R=1\text{A}, I_n=0.25\text{A}$

(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.

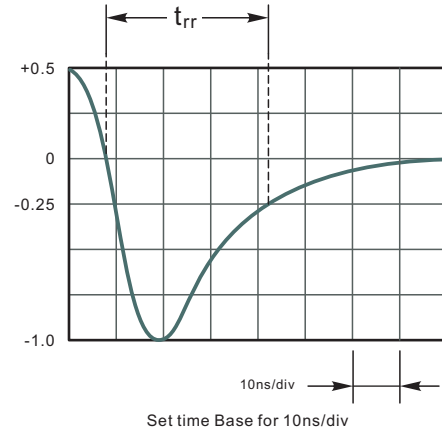


Fig.2 Maximum Average Forward Current Rating

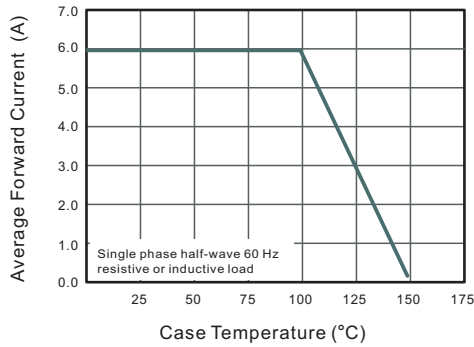


Fig.3 Typical Reverse Characteristics

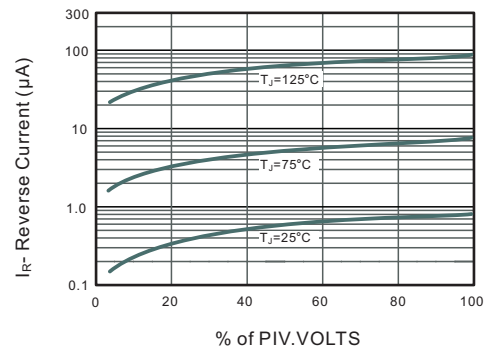


Fig.4 Typical Forward Characteristics

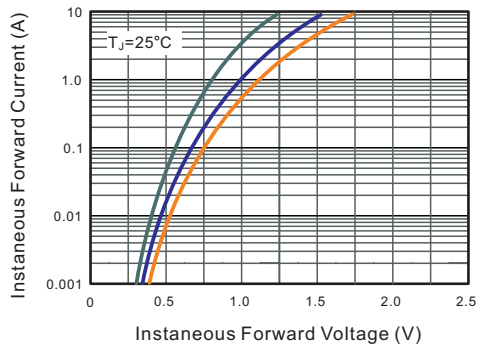


Fig.5 Typical Junction Capacitance

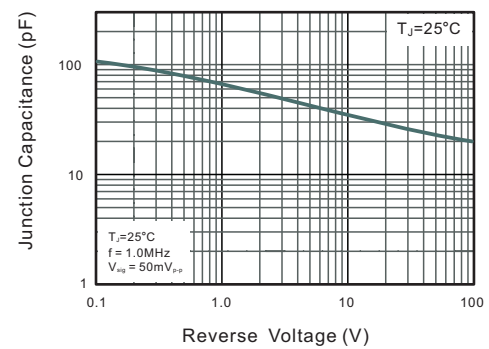
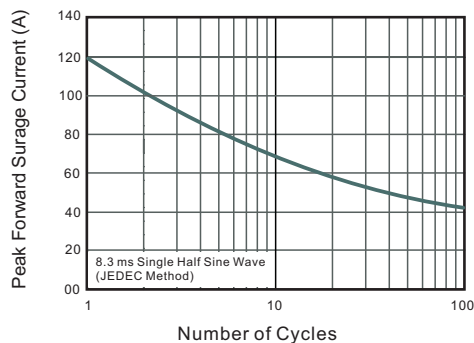
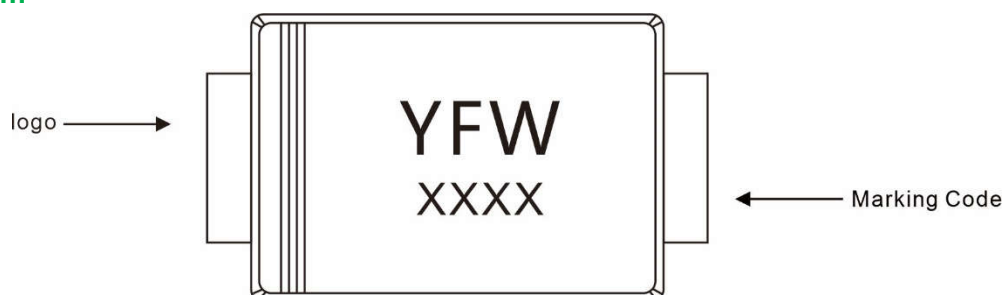


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Marking Diagram



Ordering information

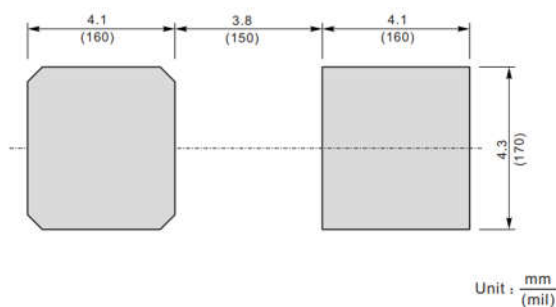
Package	Packing Description	Packing Quantity
DO-214AB SMC	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

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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