

Surface Mount Superfast Recovery Rectifier

Reverse Voltage - 50V to 600V

Forward Current - 10 A

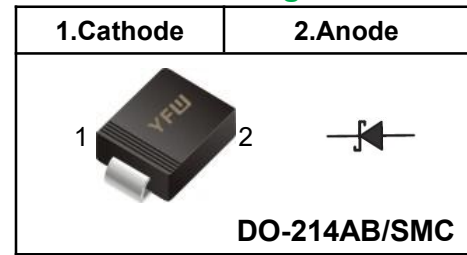
FEATURES

- ◆For surface mounted applications
- ◆Low profile package
- ◆Glass Passivated Chip Junction
- ◆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

ES10AC	YFW ES10A
ES10BC	YFW ES10B
ES10CC	YFW ES10C
ES10DC	YFW ES10D
ES10EC	YFW ES10E
ES10GC	YFW ES10G
ES10JC	YFW ES10J

Absolute Maximum Ratings and Electrical characteristics

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

Parameter	Symbols	ES10AC	ES10BC	ES10CC	E S10DC	E S10EC	ES10GC	ES10JC	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current	I_{F(AV)}	10							A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load (JEDEC method)	I_{FSM}	240							A
Peak Forward Surge Current, 1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	480							A
I ² t Rating for fusing (3ms≤t≤8.3ms)	I²t	239							A ² S
Maximum Instantaneous Forward Voltage at 10 A	V_F	1.0				1.3		1.7	V
Maximum Instantaneous Reverse Current T _A = 25°C at Rated DC Reverse Voltage T _A = 125°C	I_R	10 500							μA
Typical Junction Capacitance ⁽¹⁾	C_j	280				190		100	pF
Maximum reverse recovery time ⁽²⁾	t_{rr}	35							ns
Typical Thermal Resistance ⁽³⁾	R_{θJA}	37							°C/W
	R_{θJC}	10							
	R_{θJL}	13							
Operating and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150							°C

1.Measured at 1 MHz and applied reverse voltage of 4 V D.C

2.Measured with $I_F = 0.5 A$, $I_R = 1 A$, $t_{rr} = 0.25 A$.

3.P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

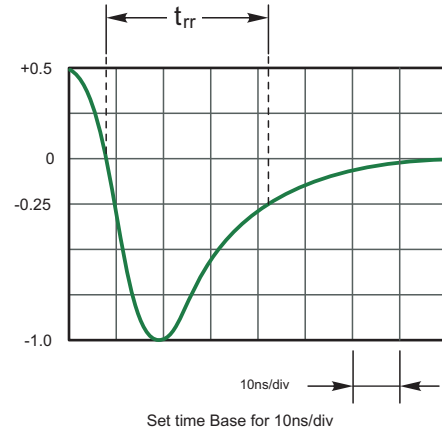
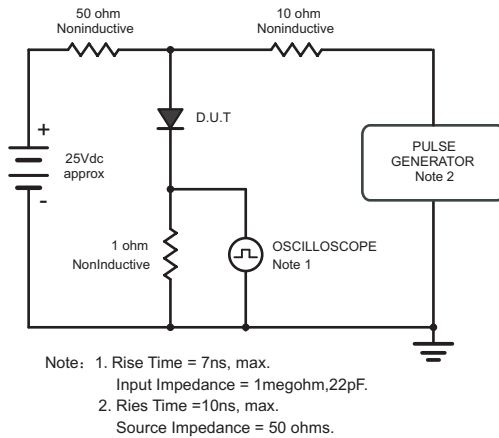


Fig.2 Maximum Average Forward Current Rating

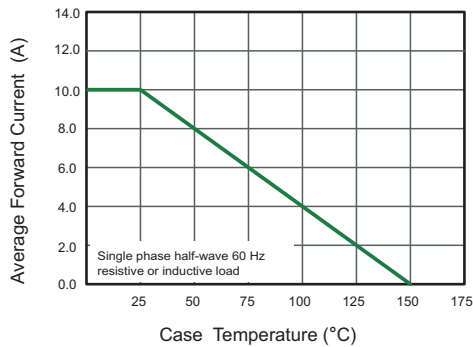


Fig.3 Typical Reverse Characteristics

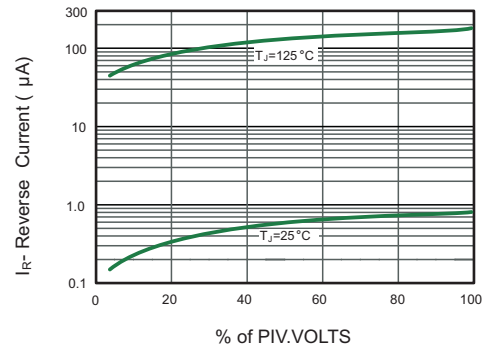


Fig.4 Typical Forward Characteristics

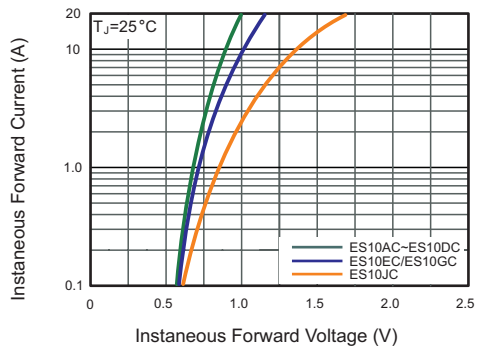


Fig.4 Typical Junction Capacitance

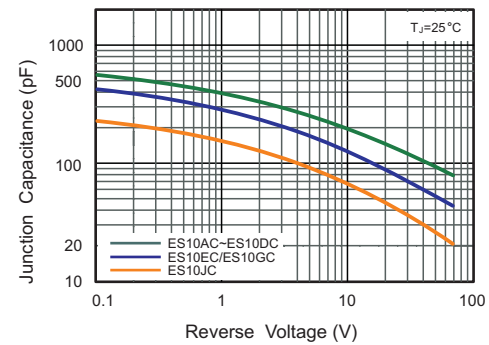
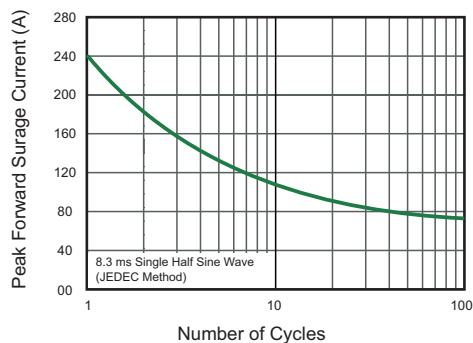


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Marking Diagram



Ordering information

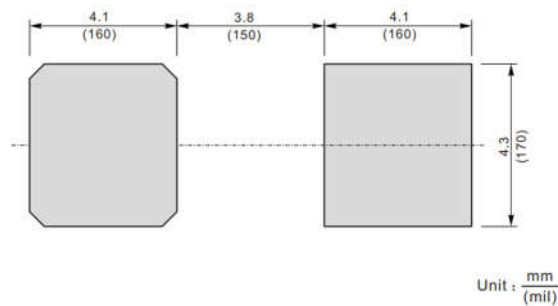
Package	Packing Description	Packing Quantity
DO-214AB SMC	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

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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