

Descriptions

This is Surface Mount Superfast Recovery Rectifier, Reverse Voltage:50 to600V, Forward Current:3.0A, SMC package.

Features

- Glass Passivated Chip Junction
- Chip Junction
- Fast reverse recovery time
- Lead free in comply with EU ROHS 2011/65/EU directives
- For surface mounted applications
- Halogen free product

Applications

General purpose.

Equivalent Circuit

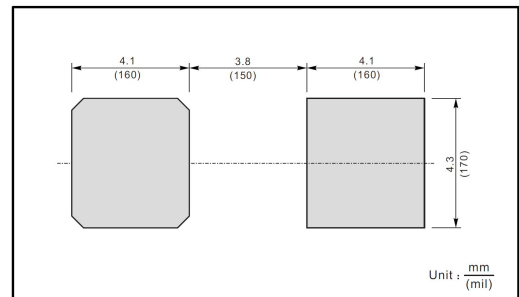


Pinning



PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



Marking

See Marking Instructions

Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating							Unit
		ES3AC	ES3BC	ES3CC	ES3DC	ES3EC	ES3GC	ES3JC	
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 at T _c = 125°C	I _{F(AV)}	3.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	90							A
Typical Junction Capacitance at V _R =4V, f=1MHZ	C _j	40							pF
Typical Thermal Resistance ⁽¹⁾	R _{θJA}	40							°C/W
	R _{θJC}	16							
Operating and Storage Temperature Range	T _j , T _{stg}	-55~+150							°C

Note:

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

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Conditions	Rating						Unit
			ES3AC	ES3BC	ES3CC	ES3DC	ES3EC	ES3GC	
Maximum Forward Voltage	V _F	I _F =3.0A	1.0			1.25		1.68	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	T _a =25°C	5.0						µA
		T _a =125°C	100						µA
Maximum Reverse Recovery Time	t _{rr}	I _F =0.5A I _R =1.0A I _{rr} =0.25A	35						ns

Electrical Characteristic Curve

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram

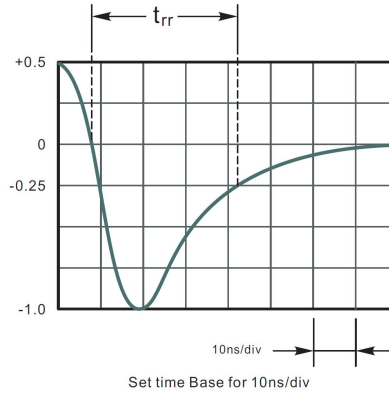
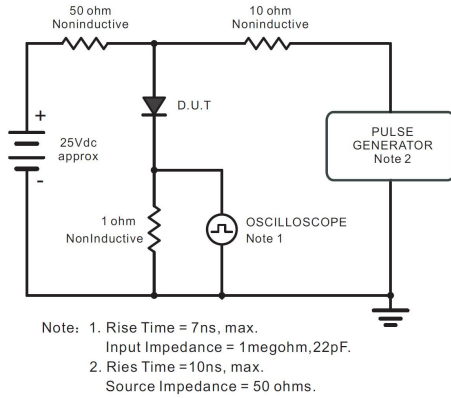


Fig.2 Maximum Average Forward Current Rating

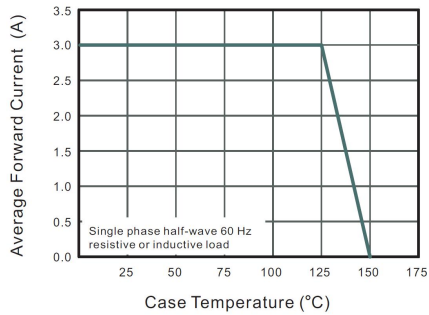


Fig.3 Typical Reverse Characteristics

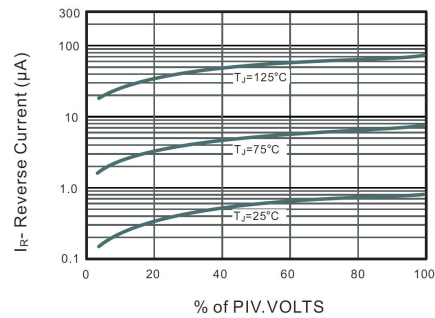


Fig.4 Typical Forward Characteristics

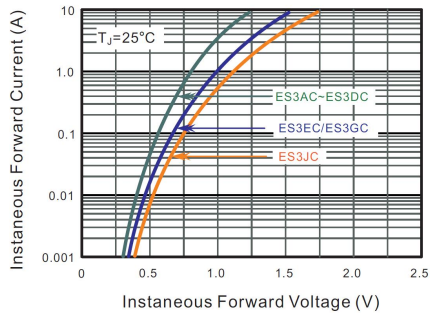


Fig.5 Typical Junction Capacitance

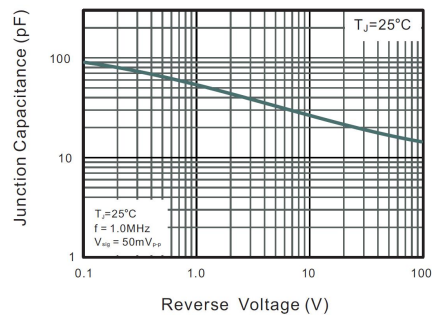
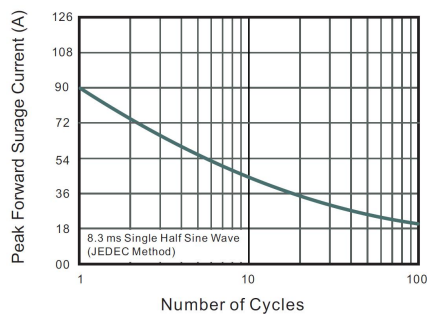
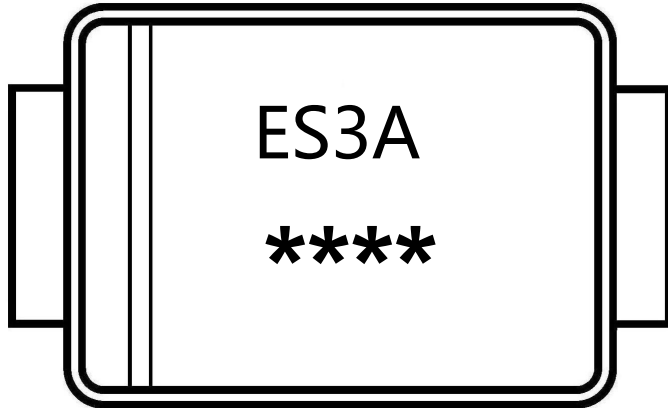


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



Marking Instructions



Marking

Type number	Marking code
ES3AC	ES3A
ES3BC	ES3B
ES3CC	ES3C
ES3DC	ES3D
ES3EC	ES3E
ES3GC	ES3G
ES3JC	ES3J

Note:

ES3A: Product Type Code

****: Lot No. Code, The 1st * means:YM Code, The last 3 * means:little Lot No Code

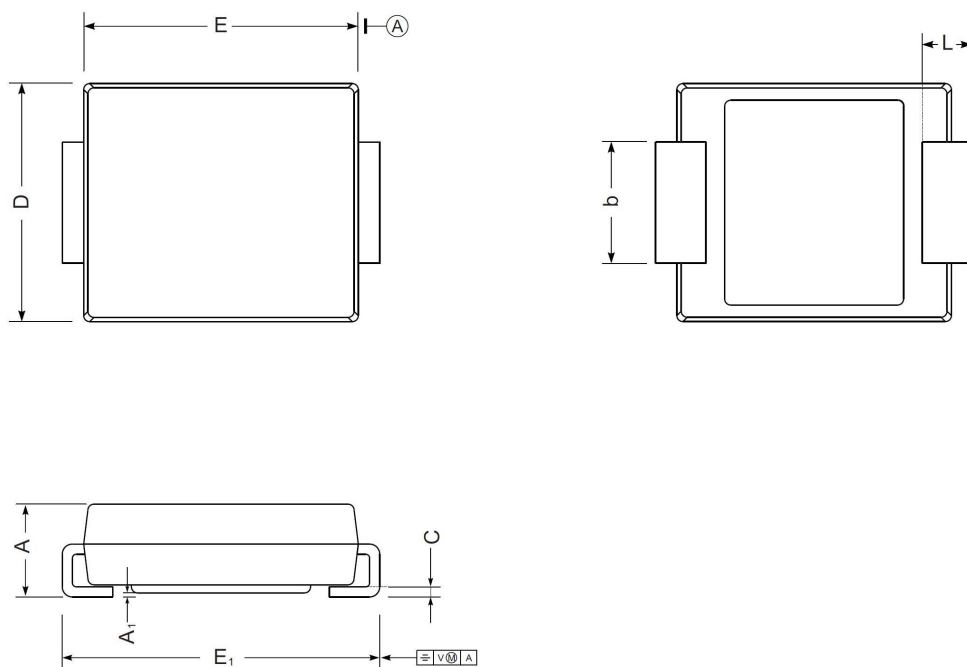
Packaging SPEC

REEL

Package Type	Units					Dimension (unit: mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SMC	3000	2	6000	6	36000	13" ×16	337X337X49	380X335X366

Package Dimensions

SMC



SMC mechanical data

UNIT		A	E	D	E_1	A_1	C	L	b
mm	max	2.62	7.0	6.2	8.0	0.21	0.31	1.6	3.25
	min	2.00	6.5	5.6	7.6	0.05	0.15	0.9	2.75
mil	max	103	276	244	315	8.3	12	63	128
	min	79	256	220	299	2.0	5.9	35	108