ES5AC THRU ES5JC

Reverse Voltage - 50 to 600 Volts Forward Current - 5.0 Ampere

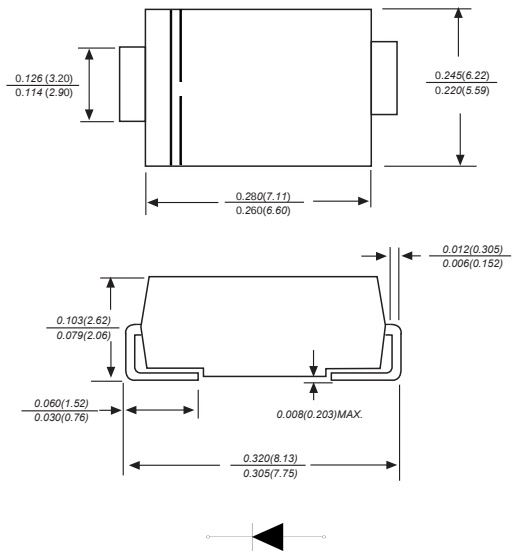
SURFACE MOUNT SUPER FAST RECOVERY RECTIFIER

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief,ideal for automated
- placement High forward surge current capability
- High temperature soldering guaranteed:
- 250°C/10 seconds at terminals

  Glass passivated chip junction

DO-214AB/SMC RoHS COMPLIANT



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC DO-214AB/SMC Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.007 ounce, 0.25 grams

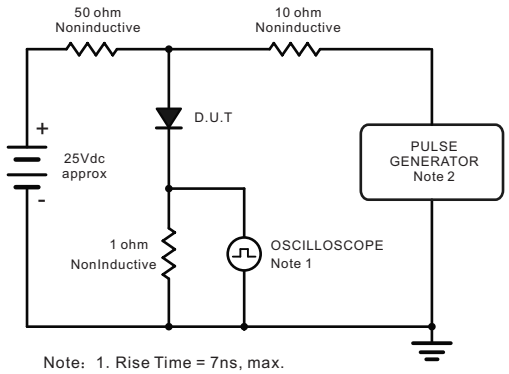
Maximum Ratings And Electrical Characteristics

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

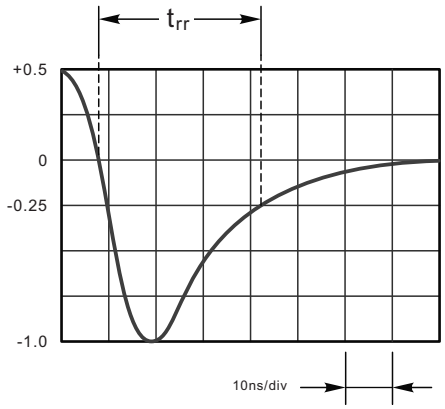
Parameter	SYMBOLS	ES5AC	ES5BC	ES5CC	ES5DC	ES5EC	ES5GC	ES5JC	UNITS
Marking Code		MDD ES5AC	MDD ES5BC	MDD ES5CC	MDD ES5DC	MDD ES5EC	MDD ES5GC	MDD ES5JC	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current at TL=55℃	$I_{(AV)}$	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed onrated load (JEDEC Method)	I_{FSM}	150				135			A
Maximum instantaneous forward voltage at 5.0A	V_F	1				1.25		1.70	V
Maximum DC reverse current T_A=25℃ at rated DCblocking voltage T_A=125℃	I_R	10.0 100.0							μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	35							ns
Typical junction capacitance (NOTE 2)	C_J	95.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	45.0							℃/W
Operating junction and storage temperature range	T_J,T_{STG}	-50to+150							℃

Note:1.Reverse recovery condition I_F=0.5A,I_R=1.0A,Irr=0.25A
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3.P.C.B. mounted with 0.2x0.2”(5.0x5.0mm) copper pad areas

Ratings And Characteristic Curves



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



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

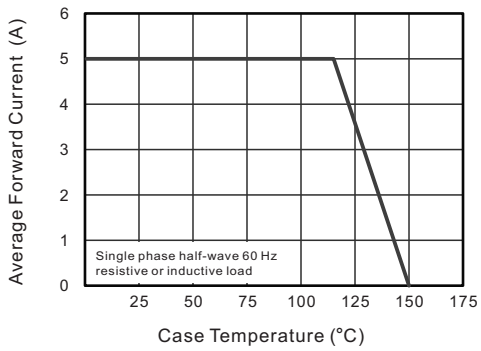


Fig.3 Typical Reverse Characteristics

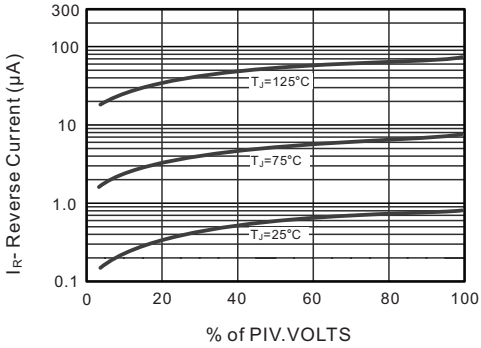


Fig.4 Typical Forward Characteristics

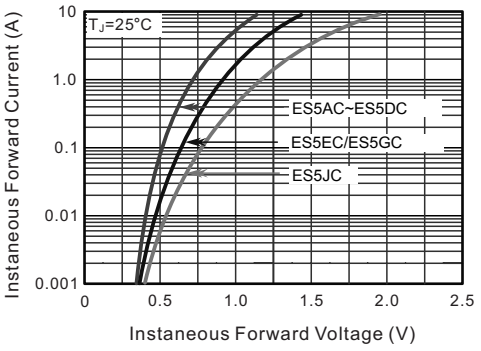


Fig.5 Typical Junction Capacitance

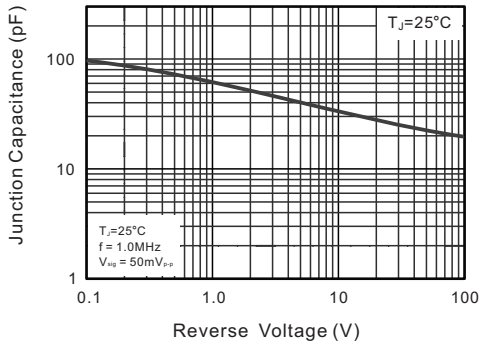
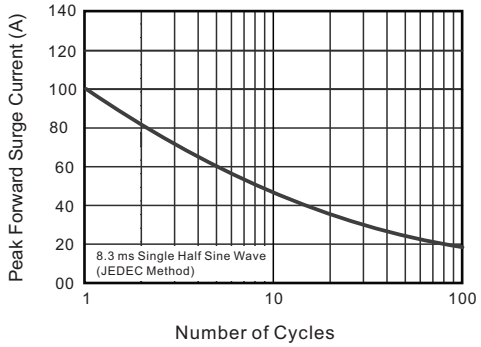
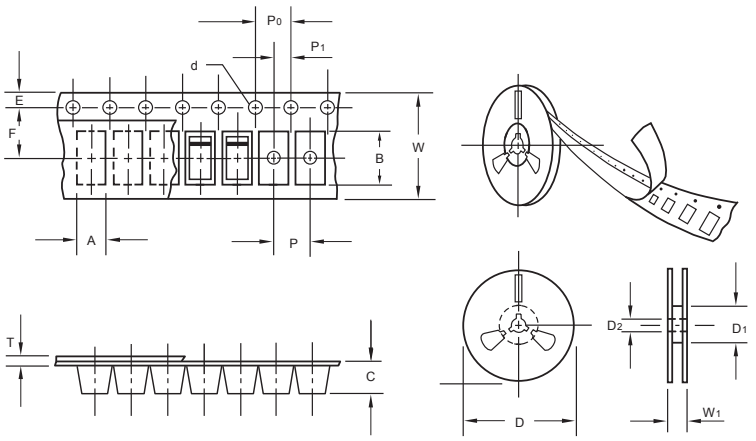


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.

Packing information



unit:mm

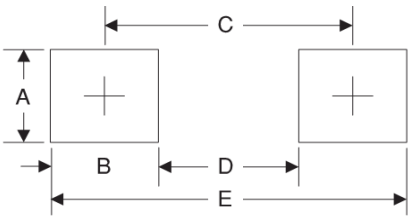
Item	Symbol	Tolerance	SMC
Carrier width	A	0.1	6.15
Carrier length	B	0.1	8.41
Carrier depth	C	0.1	2.42
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D_1	min	50.00
Feed hole diameter	D_2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	7.50
Punch hole pitch	P	0.1	8.00
Sprocket hole pitch	P_0	0.1	4.00
Embossment center	P_1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	16.00
Reel width	W_1	1.0	16.50

Note:Devices are packed in accor dance with EIA standar RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (mm)	BOX (pcs)	INNER BOX (mm)	REEL DIA, (mm)	CARTON SIZE (mm)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMC	13"	3,000	4.0	6000	190*190*41	330	365*365*340	42000	14.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	4.3	0.170
B	4.1	0.160
C	7.9	0.311
D	3.8	0.150
E	12	0.472

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