ES5A THRU ES5J

SURFACE MOUNT SUPER FAST RECTIFIER

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

FEATURES

◆Plastic package has underwrites laboratory Flammability Classification 94V-0

◆For surface mounted applications

◆Low profile package

◆Built-in strain relief, ideal for automated placement

◆High temperature soldering : 250℃/10 seconds at terminals

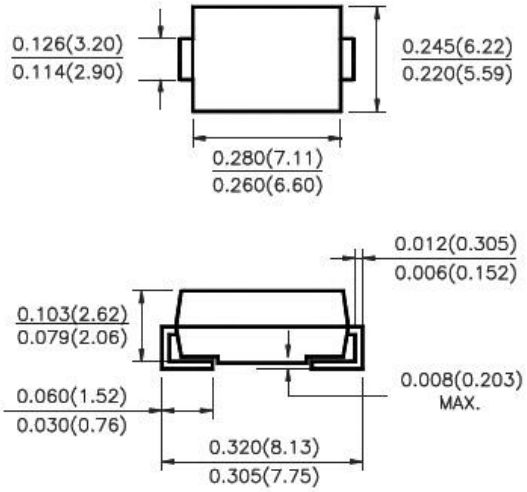
Mechanical Data

◆Case: JEDED DO-214AA molded plastic over glass passivated chip

◆Terminals: Solder plated, solderable per MIL-STD-750 Method 2026

◆Polarity: Color band denotes cathode end

DO-214AB（SMC）



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOL	ES5A	ES5B	ES5C	ES5D	ES5E	ES5G	ES5J	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	VOLTS
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	VOLTS
Maximum Average Forward Rectified Current at T_L=100℃	$I_{(AV)}$	5.0							Amps
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150							Amps
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	0.95				1.25		1.7	Volts
Maximum DC Reverse Current at Rated DC Blocking voltage T_A = 25℃	I_R	5.0							uA
Maximum DC Reverse Current at Rated DC Blocking voltage T_A = 125℃	I_R	300							uA
Typical Reverse Recovery Time Test conditions I_F =0.5A, I_R =1.0A, I_{RR} =0.25A	t_{rr}	35							nS
Typical Junction Capacitance(Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	45				30			pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	47							℃/W
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	13							℃/W
Operating Junction Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃

Note: 1. Thermal resistance from Junction to ambient and from junction to lead mounted on P.C.B. with 0.3 × 0.3″ (8.0 × 8.0mm) copper pad areas

ES5A THRU ES5J

SURFACE MOUNT SUPER FAST RECTIFIER

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

RATING AND CHARACTERISTIC CURVES ES5A THRU ES5J

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

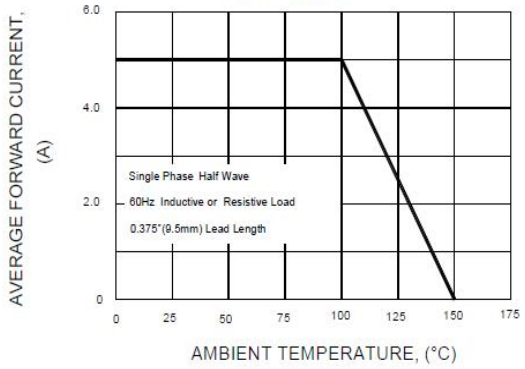


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

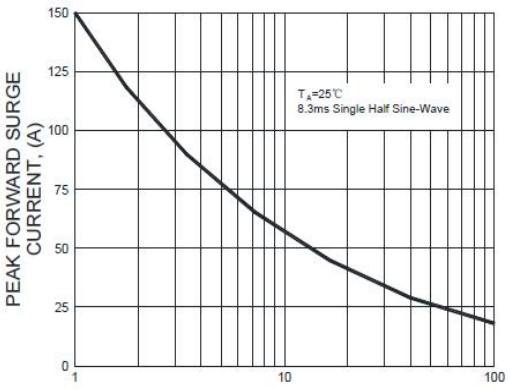


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

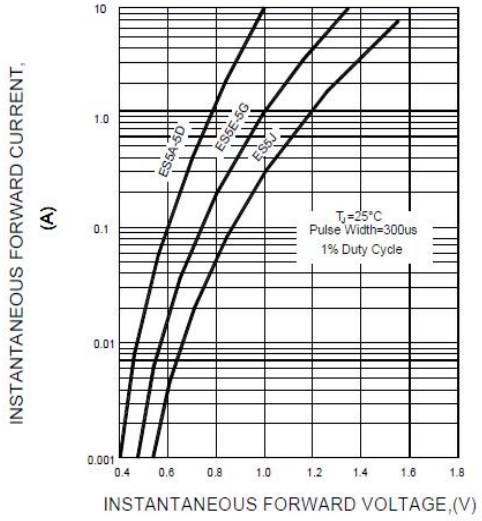


FIG.4-TYPICAL REVERSE CHARACTERISTICS

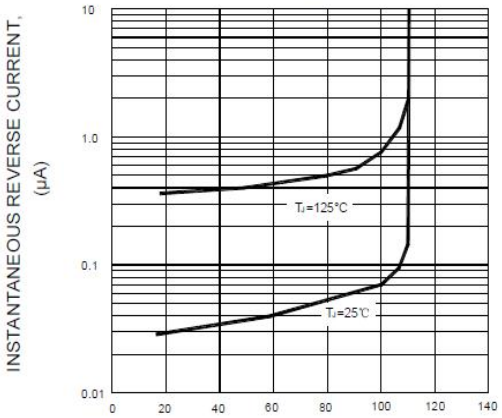
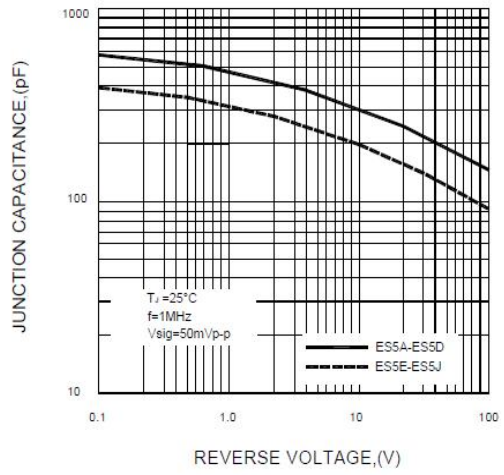
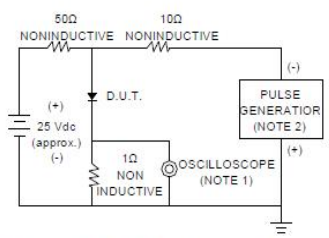
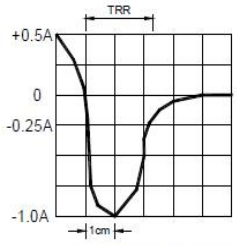


FIG.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC





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

SET TIME BASE FOR 50/100ns/cm

Note: Specifications are subject to change without notice. For more detail and update, please visit our website.