www.eicsemi.com

ES2A - ES2J

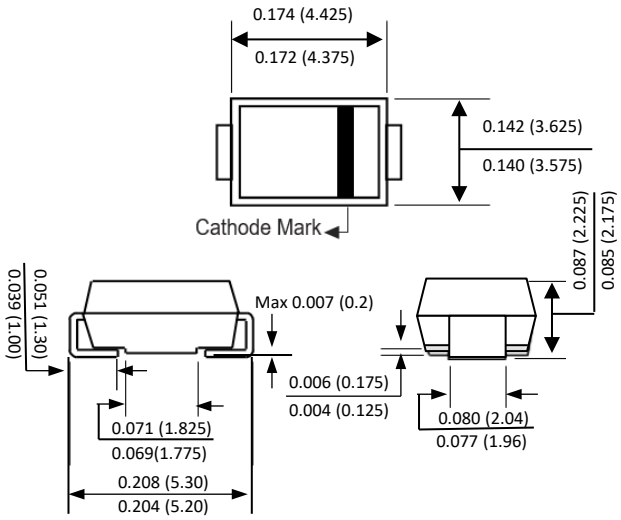
SURFACE MOUNT SUPER FAST RECTIFIE

PRV : 50 - 600 Volts
Io : 2.0 Amperes

FEATURES :
* High current capability
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* Super fast recovery time
* Pb / RoHS Free

MECHANICAL DATA :
* Case : SMB Molded plastic
* Epoxy : UL94V-0 rate flame retardant
* Lead : Lead Formed for Surface Mount
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.1079 gram

SMB (DO-214AA)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

RATING	SYMBOL	ES2A	ES2B	ES2C	ES2D	ES2F	ES2G	ES2J	UNIT
Maximum Recurrent 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 Current T_L = 110°C	$I_{F(AV)}$	2.0							A
Maximum Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	50							A
Maximum Peak Forward Voltage at I_F = 2.0 A.	V_F	0.95				1.25		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5.0 (Ta = 25°C) 350 (Ta = 100°C)							µA
Maximum Reverse Recovery Time (Note 1)	Trr	35							ns
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	75							°C/W
Total Capacitance (Note 2)	C_T	18							pf
Junction Temperature Range	T_J	- 65 to + 150							°C
Storage Temperature Range	T_{STG}	- 65 to + 150							°C

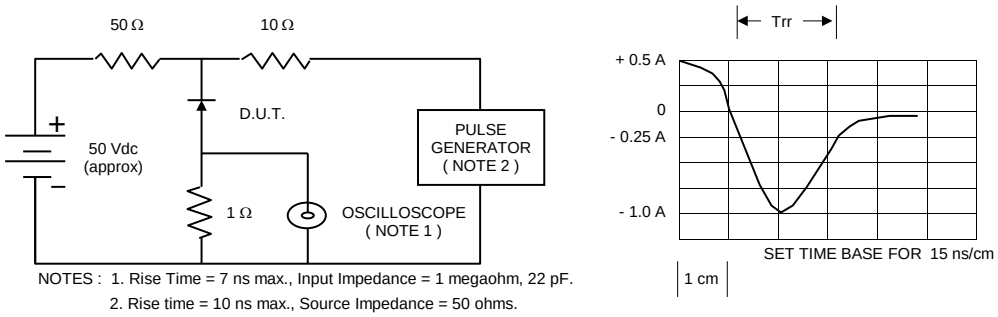
Notes :

(1) Reverse Recovery Test Conditions : I_F = 0.5 A, I_R = 1.0 A, Irr = 0.25 A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}

RATING AND CHARACTERISTIC CURVES (ES2A - ES2J)

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
2. Rise time = 10 ns max., Source Impedance = 50 ohms.
3. All Resistors = Non-inductive Types.

FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

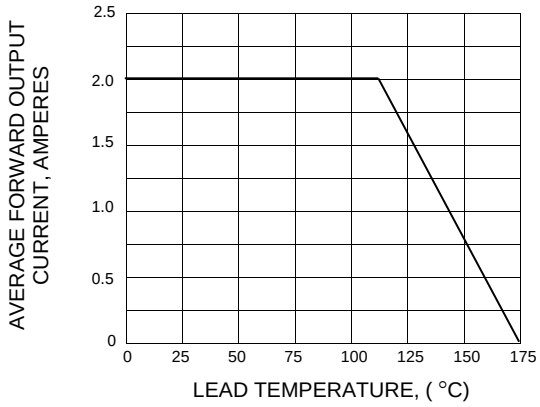


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

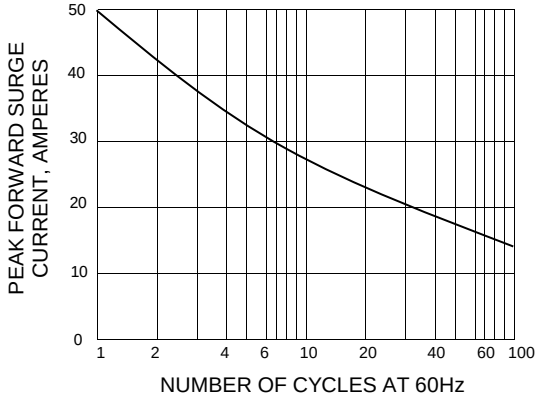


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

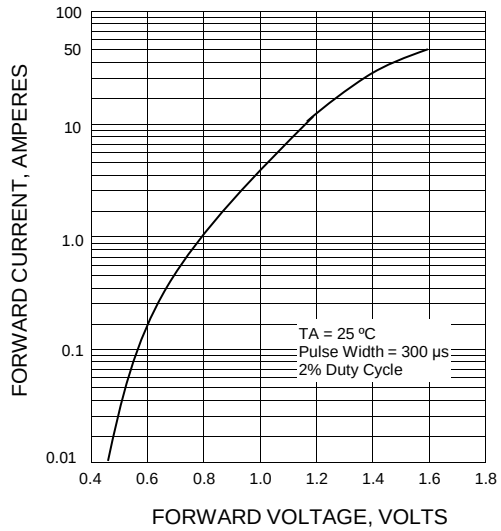


FIG.5 - TYPICAL REVERSE CHARACTERISTICS