

# ES2A - ES2D

**PRV : 50 - 200 Volts**  
**Io : 2.0 Amperes**

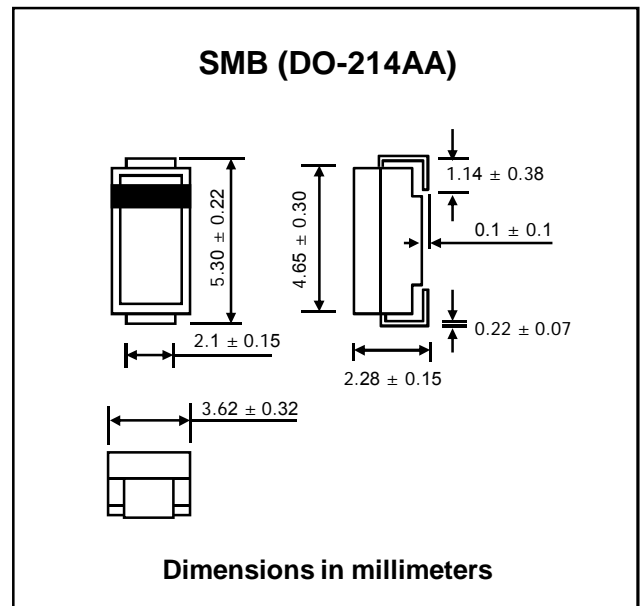
### FEATURES :

- \* 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

## SURFACE MOUNT SUPER FAST RECTIFIERS



### 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	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	V
Maximum RMS Voltage	VRMS	35	70	105	140	V
Maximum DC Blocking Voltage	VDC	50	100	150	200	V
Maximum Average Forward Current $T_L = 110^{\circ}\text{C}$	IF(AV)	2.0				A
Maximum Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	IFSM	50				A
Maximum Peak Forward Voltage at IF = 2.0 A.	VF	0.9				V
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	5.0 (Ta = 25°C)				μA
		350 (Ta = 100°C)				
Maximum Reverse Recovery Time ( Note 1 )	Trr	20				ns
Typical Thermal Resistance, Junction to Ambient	RθJA	75				°C/W
Total Capacitance ( Note 2 )	CT	18				pf
Junction Temperature Range	TJ	- 65 to + 150				°C
Storage Temperature Range	TSTG	- 65 to + 150				°C

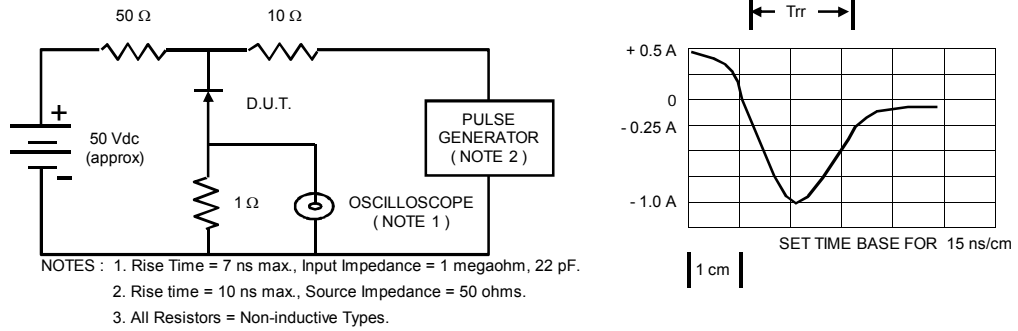
### Notes :

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

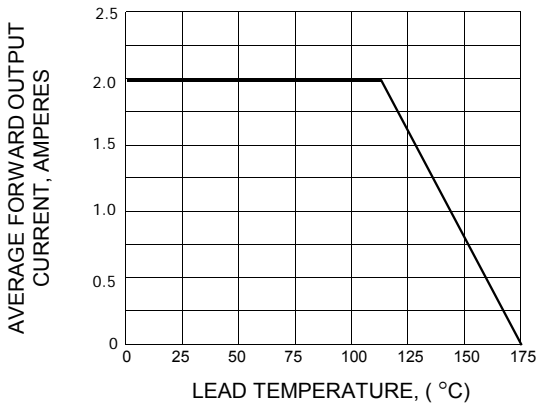
( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 VDC

## RATING AND CHARACTERISTIC CURVES ( ES2A - ES2D )

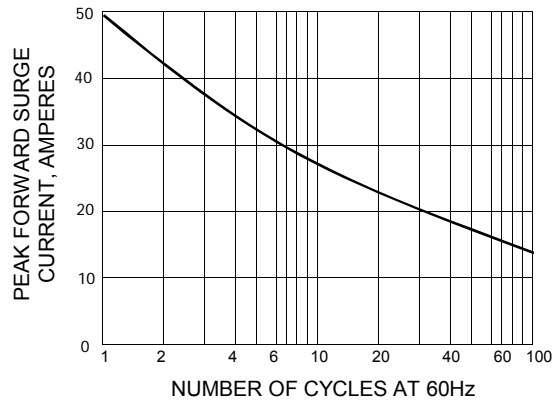
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



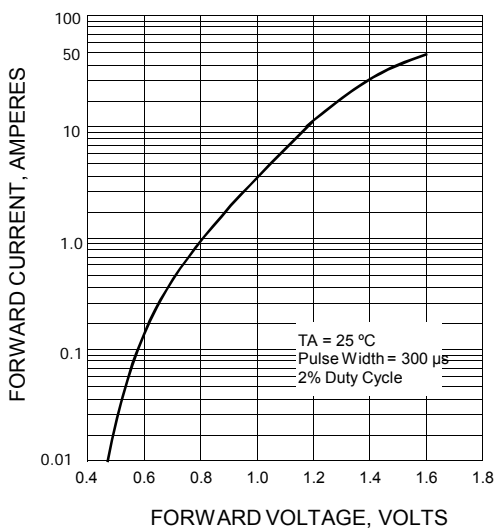
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

