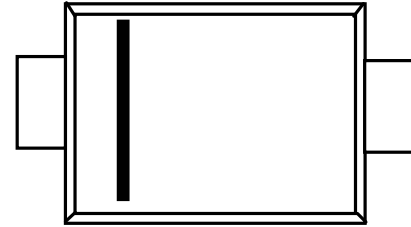


»Features

- Super fast switching time for high efficiency
- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction



SMB(DO-214AA)

»General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SMB Plastic Package

» Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half wave 60HZ. resistive or inductive load. For capacitive load current derate by 20%

	SYMBOLS	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	UNIT
Maximum Repetitive 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 $T_L=100^{\circ}C$	$I_{(AV)}$	2.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	50							Amps
Maximum Instantaneous Forward Voltage @ 2.0A	V_F	0.95			1.25	1.7			Volts
Maximum DC Reverse Current at rated DC Blocking voltage per element	$T_A=25^{\circ}C$	5.0							μA
	$T_A=125^{\circ}C$	200							
Maximum 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	25			208				pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	75							$^{\circ}C/W$
	$R_{\theta JL}$	17							
Operating Junction Temperature Range	T_J	(-55 to +150)							$^{\circ}C$
Storage Temperature Range	T_{STG}	(-55 to +150)							$^{\circ}C$

NOTES: 1.Measured with $I_F=0.5A, I_R=1A, I_{RR}=0.25A$

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

»Typical Performance Characteristics ((T_J = 25 °C, unless otherwise noted))

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

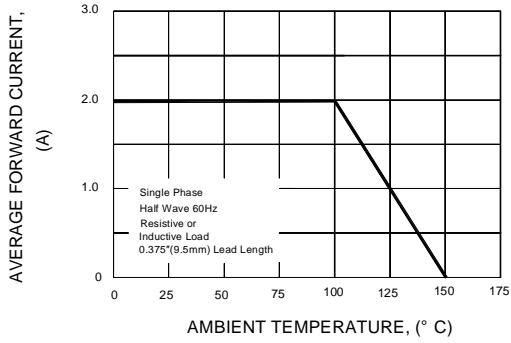


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

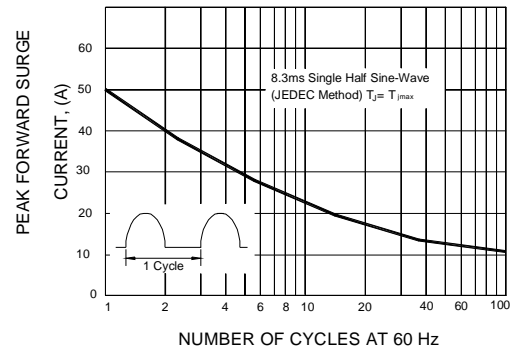


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

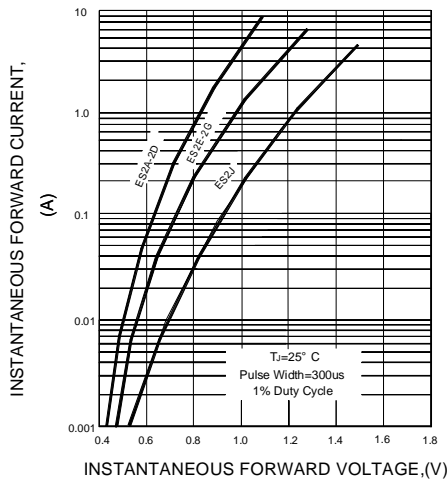


FIG.4-TYPICAL REVERSE CHARACTERISTICS

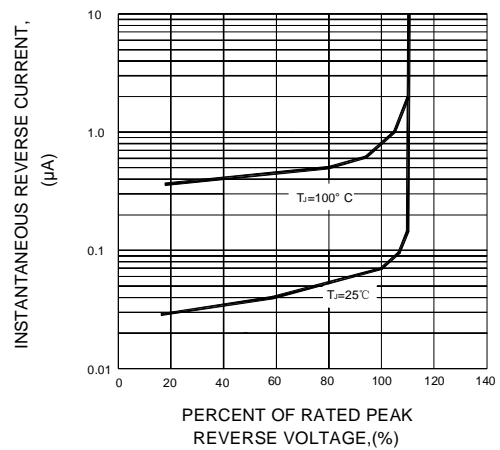


FIG.5-TYPICAL JUNCTION CAPACITANCE

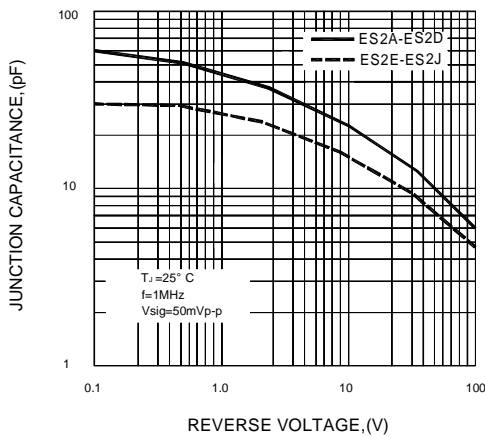
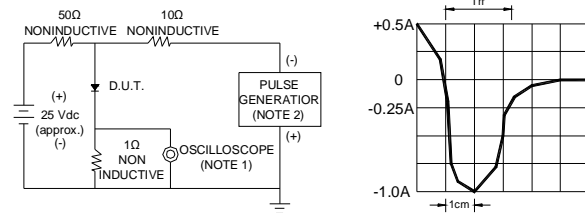


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

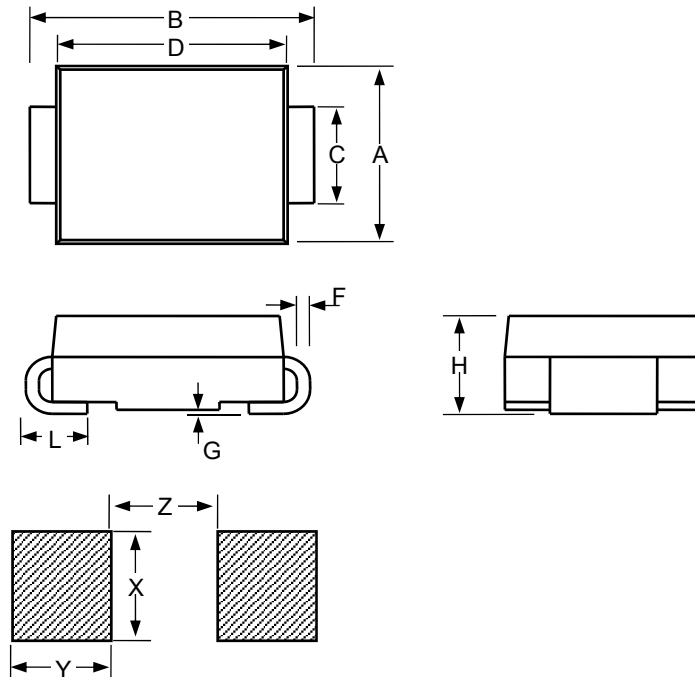


NOTES : 1. Rise Time = 7ns max. Input Impedance = 1 magohm. 22pF
2. Rise time = 10ns max. Source Impedance = 50 ohms

SET TIME BASE FOR 50/100ns/cm

»Package Information

SMB



SMB						
Dimension	Inches			Millimeters		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.134	0.144	0.155	3.4	3.67	3.94
B	0.205	0.213	0.22	5.21	5.4	5.59
C	0.075	0.079	0.083	1.9	2	2.1
D	0.169		0.185	4.3		4.7
F	0.006		0.012	0.152		0.305
G	-		0.008	-		0.203
H	0.085	0.091	0.096	2.15	2.3	2.45
L	0.03		0.06	0.76		1.52
X		0.11			2.8	
Y		0.079			2	
Z		0.079			2	

»Ordering information

Part Number	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J
Marking	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J
Base qty	3K	3K	3K	3K	3K	3K	3K