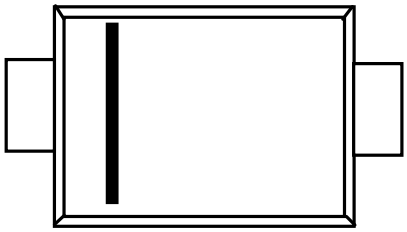
伯恩半导体
BORN SEMICONDUCTOR

ES2A-ES2J

Fast Recovery Rectifier Diode

»Features

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



SMA(DO-214AC)

»General Description

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

» Maximum Ratings and Electrical Characteristics

Ratings at 25 ℃ ambi ent temperature unless otherwise specifoed.
Single phase half wave 60HZ. resistive or inductive load. For capacitive load current derate by 20%

	SYMBOL	ES2A	ES2B	ES2C	ES2D	ES2E	ES2G	ES2J	UNITS
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 Rectified Current at TL = 110℃	$I_{(AV)}$	2.0							A
Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated Tj = 125℃	I_{FSM}	30							A
Maximum Forward Voltage at 2.0A DC	V_F	**0.95**				**1.25**			V
Maximum Reverse Current TA = 25℃ at Rated DC Blocking Voltage TA = 100℃	I_R	**5.0** **50**							μA
Maximum reverse recovery time（Note 1）	trr	**35**							**ns**
Typical Junction Capacitance (Note 2)	C_j	**17**							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	**60**							℃/W
Operating Junction Temperature Range	T_j	— 55 to 150							℃
Storage Temperature Range	T_{STG}	— 55 to 150							℃

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 ((TJ = 25 °C, unless otherwise noted))

FIG. 1 -- TYPICAL FORWARD CHARACTERISTIC

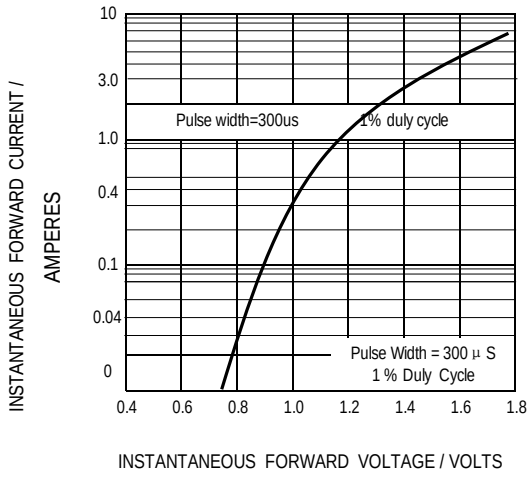


FIG. 2 -- TYPICAL JUNCTION CAPACITANCE

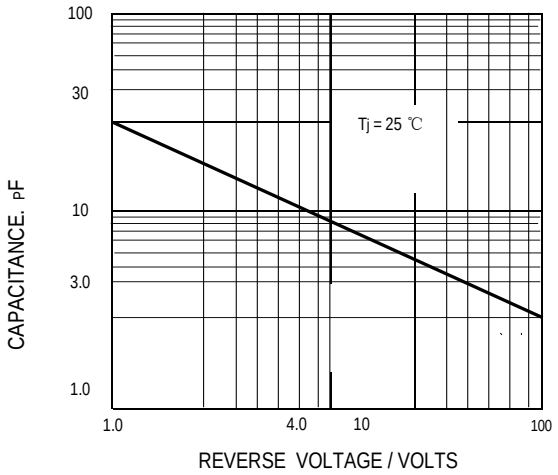


FIG. 3 -- FORWARD CURRENT DERATING CURVE

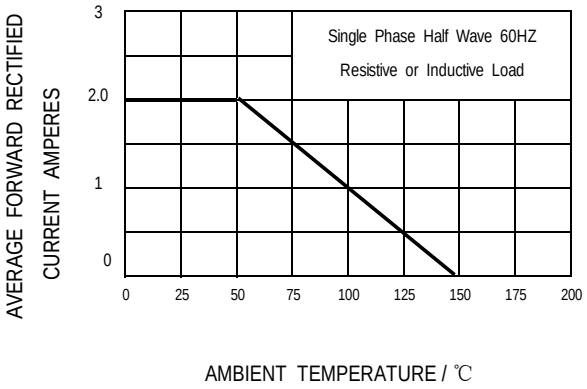


FIG. 4 -- PEAK FORWARD SURGE CURRENT

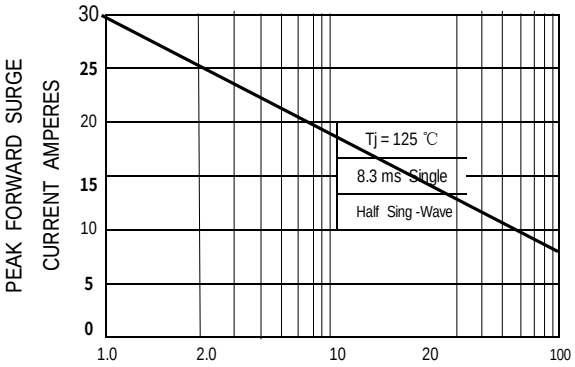
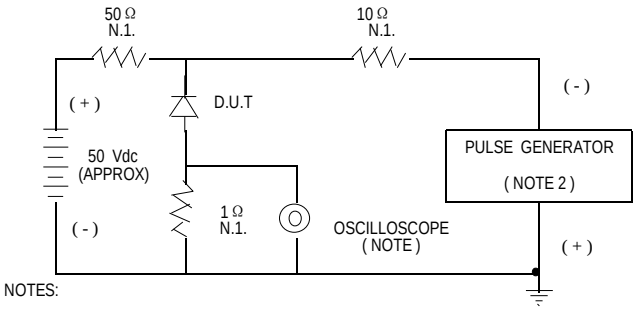
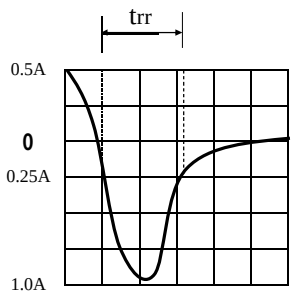


FIG. 5 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC





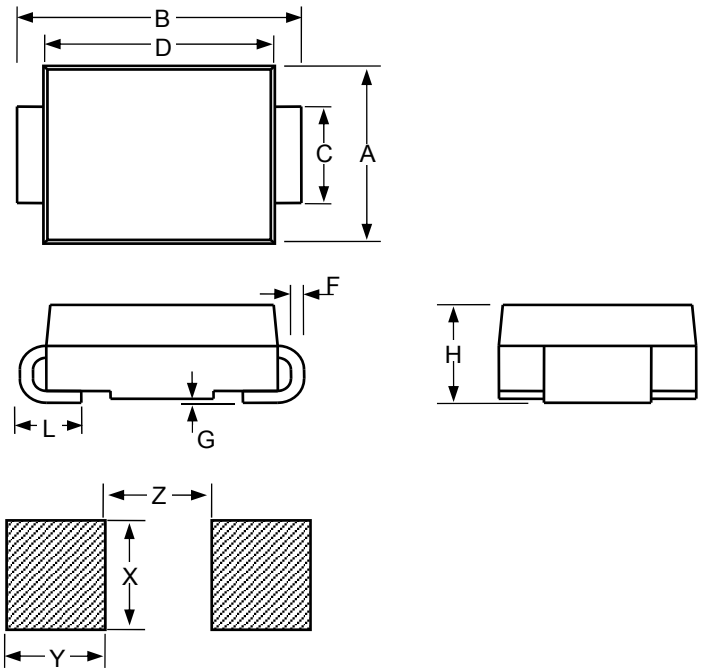
NOTES:

1. RISE TIME = 7n SEC MAX. INPUT IMPEDANCE = 1 MEGOHM. 22PF
2. RISE TIME = 10n SEC MAX. SOURCE IMPEDANCE = 50 OHM.

SET TIME BASE FOR 15 ns / cm

»Package Information

SMA



SMA						
Dimension	Inches			Millimeters		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.098		0.114	2.5		2.9
B	0.194		0.223	4.93		5.66
C	0.051		0.067	1.3		1.7
D	0.157		0.181	3.99		4.6
F	0.006		0.012	0.152		0.305
G	-		0.008	-		0.203
H	0.078		0.095	1.98		2.42
L	0.03		0.06	0.76		1.52
X		0.085			2.16	
Y		0.07			1.78	
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	5K	5K	5K	5K	5K	5K	5K