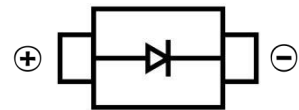


SUPER FAST RECOVERY RECTIFIER DIODE
FEATURES

- Glass Passivated Die Construction
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- Super fast recovery time
- Surface Mount device


SMA

MECHANICAL DATA

- Case: SMA(DO-214AC)
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.065 grams (approximate)

MAXIMUM RATINGS AND CHARACTERISTICS(T_A = 25°C unless otherwise noted)

Parameter	Symbol	ES1A	ES1B	ES1D	ES1G	ES1J	ES1K	ES1M	Unit
Marking		ES1A	ES1B	ES1D	ES1G	ES1J	ES1K	ES1M	
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
DC Blocking Reverse Voltage	V _R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	V
Maximum Average Forward Rectified Current	I _F	1							A
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I _{FSM}	30							A
Reverse Recovery Time (@I _F =0.5A, I _R =1.0A, I _{RR} =0.25A)	t _{rr}	50			60		100		nS
Thermal Resistance From Junction To Lead	R _{θJL}	40							°C/W
Junction Temperature	T _J	-55 ~+150							°C
Storage Temperature	T _{STG}	-55 ~+150							°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	ES1A	ES1B	ES1D	ES1G	ES1J	ES1K	ES1M	Unit	Conditions
Maximum Forward voltage	V _F	1.0			1.3	1.68			V	I _F =1A
Maximum Reverse current	I _R	5							µA	V=V _R @T _A =25°C
Maximum Reverse current	I _R	100							µA	V=V _R @T _A =100°C
Type Diode capacitance	C _D	10							pF	V _R =4V _{DC} , f=1MHz

*Pulse test: Pulse width 200 µs , Duty cycle 2%

SUPER FAST RECOVERY RECTIFIER DIODE

Typical Characteristics

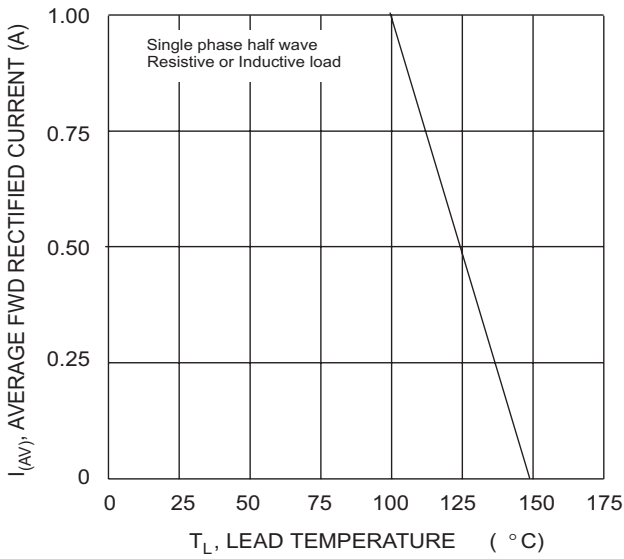


Fig. 1 Forward Current Derating Curve

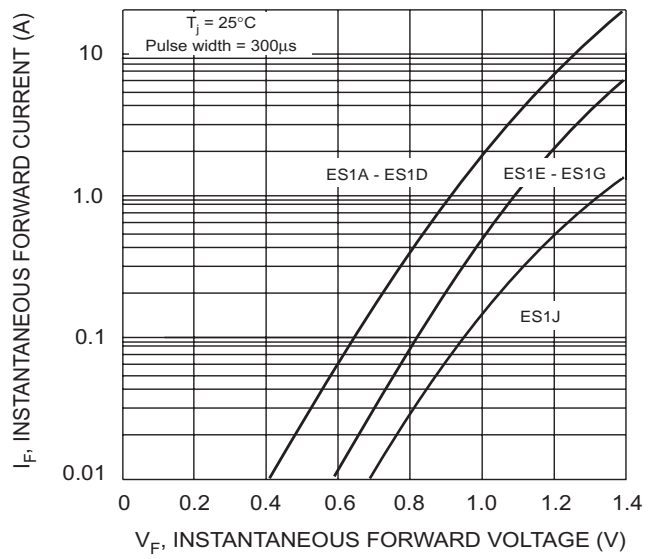


Fig. 2 Typical Forward Characteristics

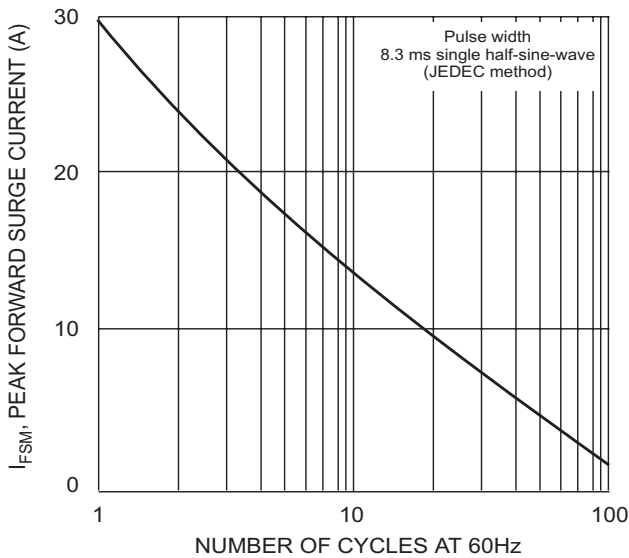


Fig. 3 Peak Forward Surge Current

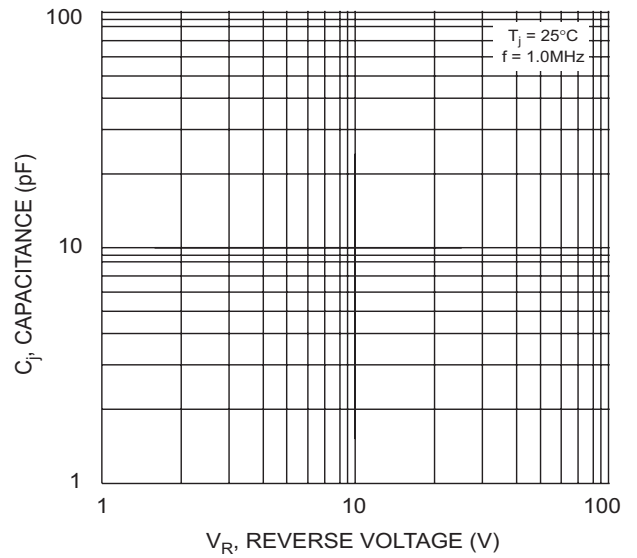
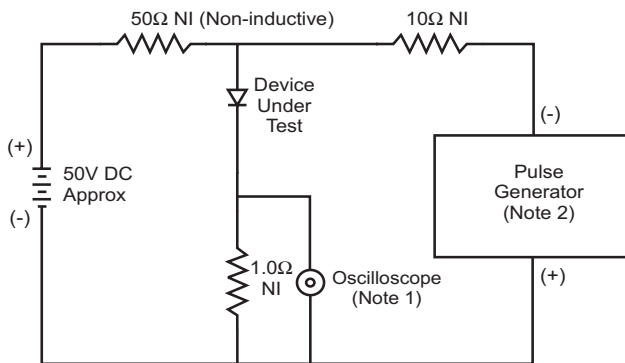
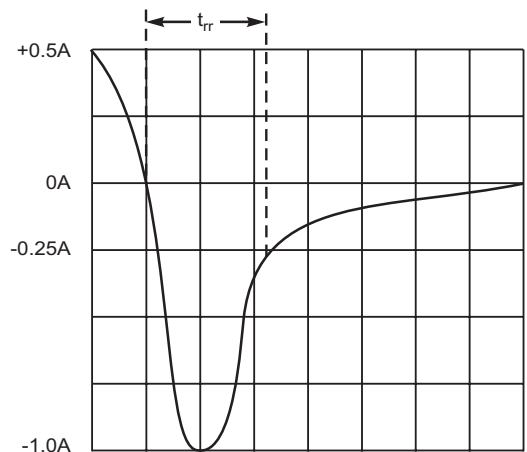


Fig. 4 Typical Junction Capacitance

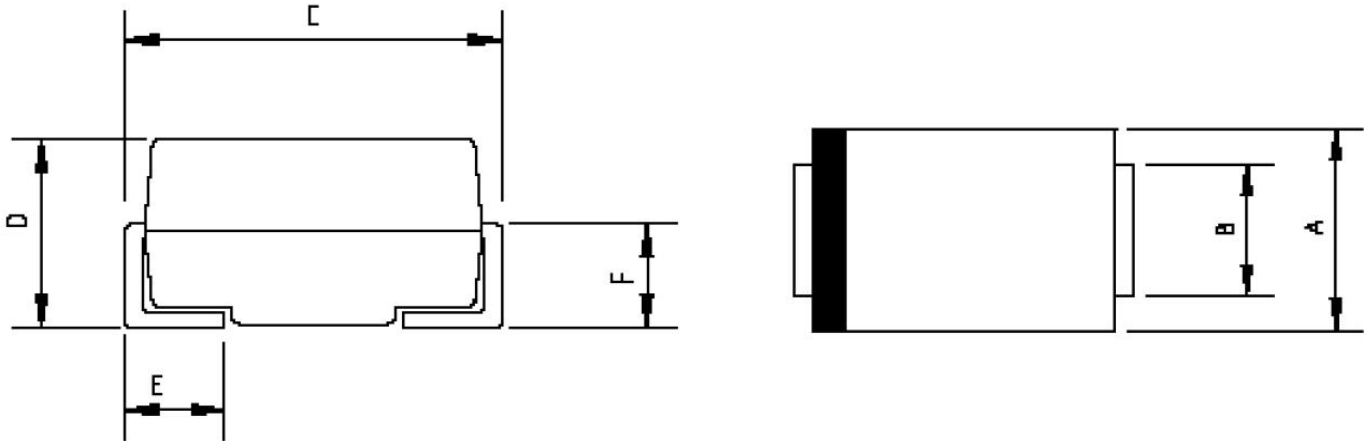


- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.

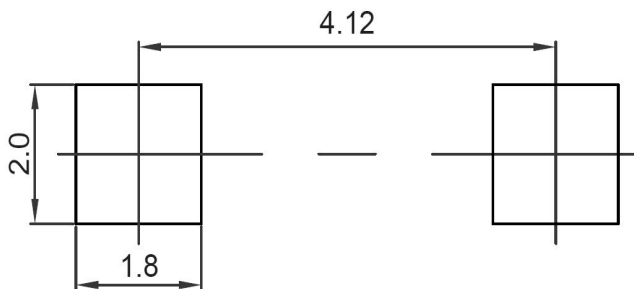


Set time base for 5/10ns/cm

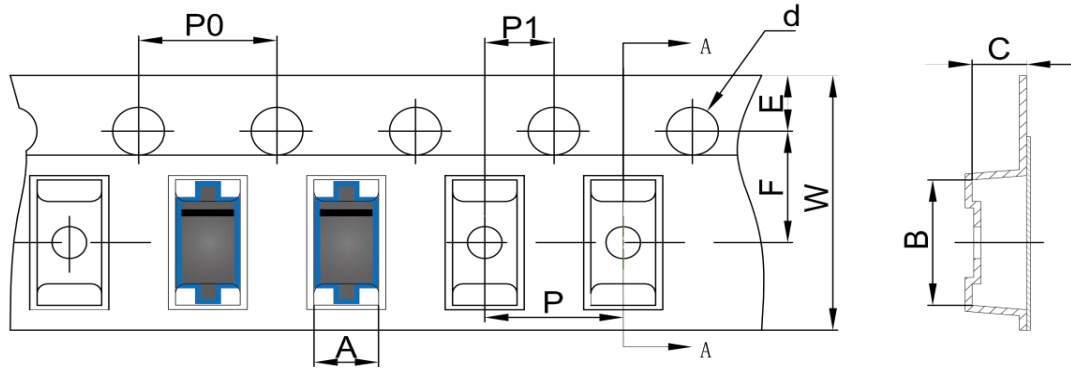
Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

SUPER FAST RECOVERY RECTIFIER DIODE
SMA Package Outline Dimensions


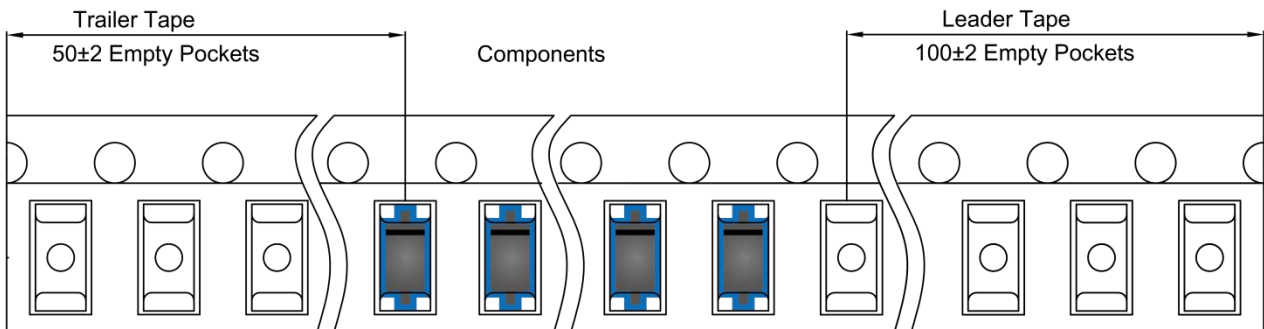
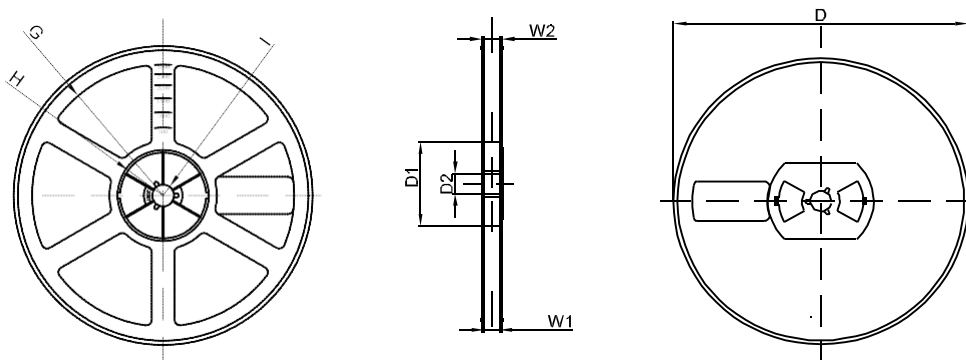
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.80	0.086	0.110
B	1.30	1.70	0.051	0.067
C	4.70	5.30	0.185	0.209
D	1.70	2.55	0.067	0.100
E	0.90	1.50	0.035	0.059
F	0.90	1.50	0.035	0.059

SMA Suggested Pad Layout

Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

SUPER FAST RECOVERY RECTIFIER DIODE
SMA Tape and Reel
SMA Embossed Carrier Tape


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMA	2.89	5.35	2.68	Ø1.50	1.75	5.50	4.00	4.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SMA Tape Leader and Trailer

SMA Reel


DIMENSIONS ARE IN MILLIMETER								
REEL OPTION	D	D1	D2	G	H	I	W1	W2
7" DIA	Ø178	54.40	13.00	R78	R25.60	R6.50	12.40	17.60
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1