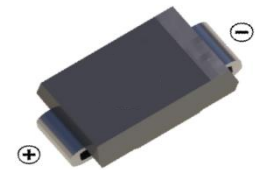
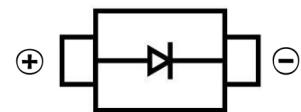


ULTRA FAST RECOVERY RECTIFIER DIODE
FEATURES

- Glass Passivated Die Construction
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- 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)

ABSOLUTE MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward current at $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Maximum forward voltage @ $I_F=1\text{A}$	V_F	1.0		1.3		1.7		V	
Maximum DC reverse current at rated DC blocking voltage	$T_j=25^\circ\text{C}$	5							μA
	$T_j=100^\circ\text{C}$	50							μA
Typical junction capacitance $V_R=4.0\text{V}$, $f=1\text{MHz}$	C_J	7							pF
Maximum reverse recovery time $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$	t_{rr}	50				75			ns
Operating junction and storage temperature range	T_j, T_{stg}	-55 to +150							$^\circ\text{C}$

ULTRA FAST RECOVERY RECTIFIER DIODE

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

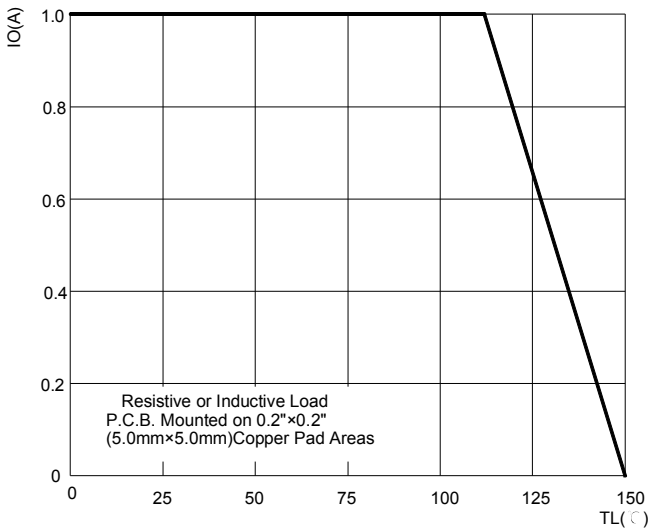


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

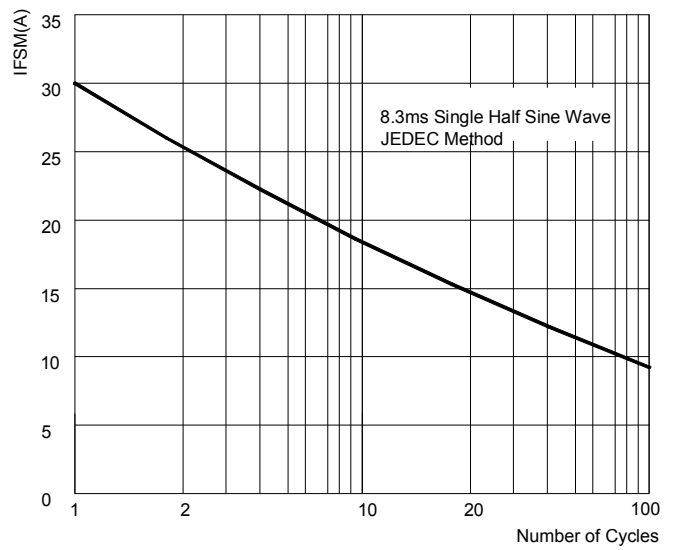


FIG.3: TYPICAL FORWARD CHARACTERISTICS

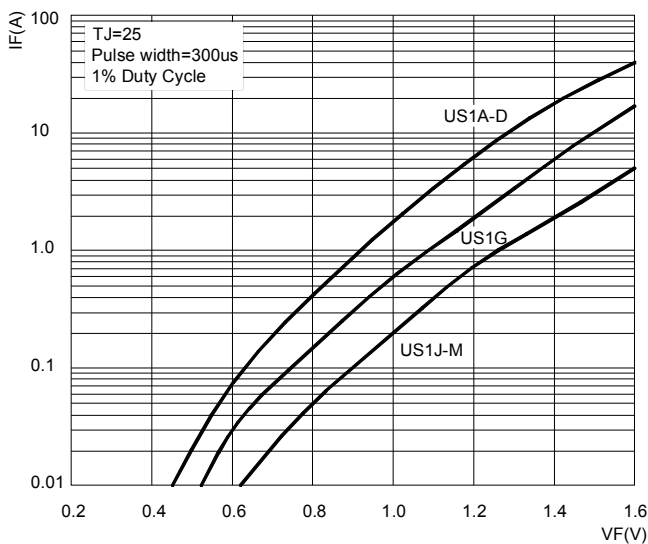
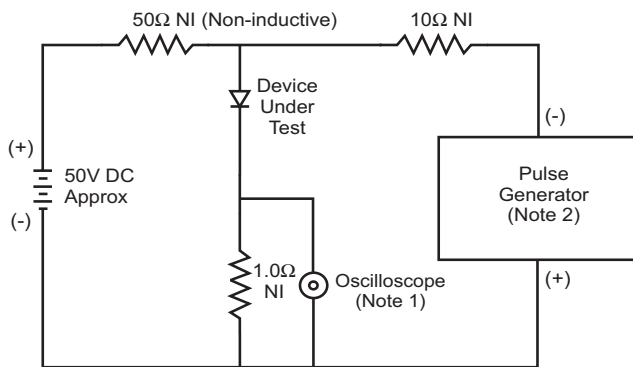
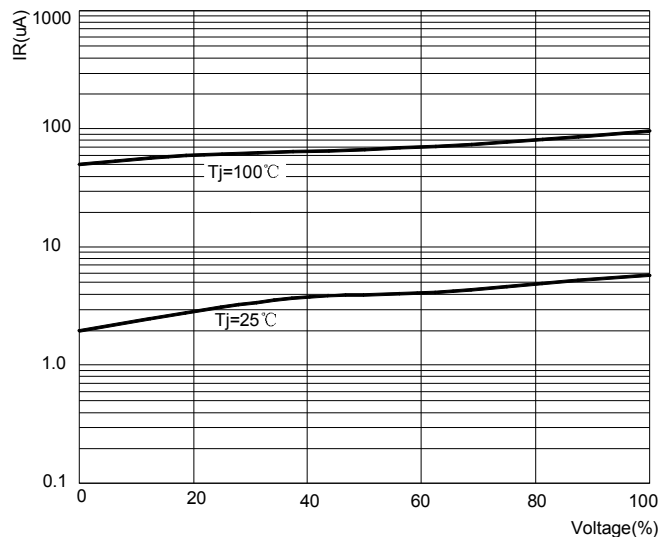


FIG.4: TYPICAL REVERSE CHARACTERISTICS



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

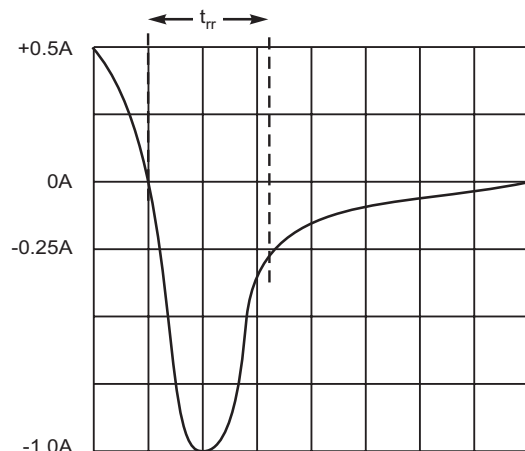
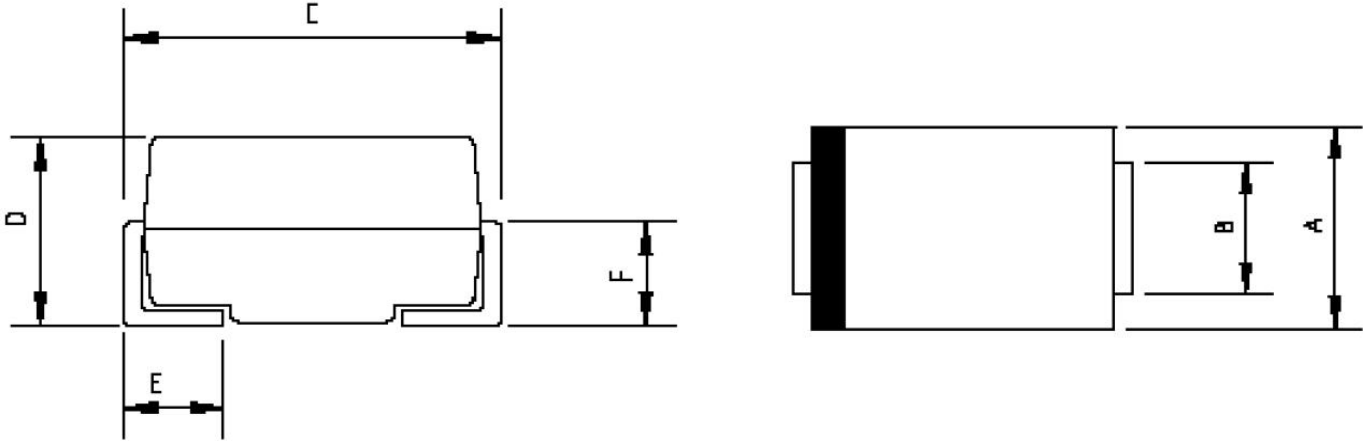


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

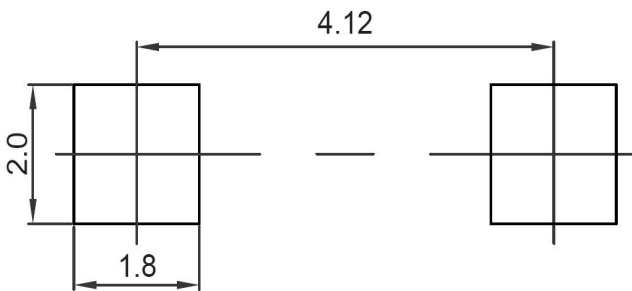
ULTRA FAST RECOVERY RECTIFIER DIODE

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



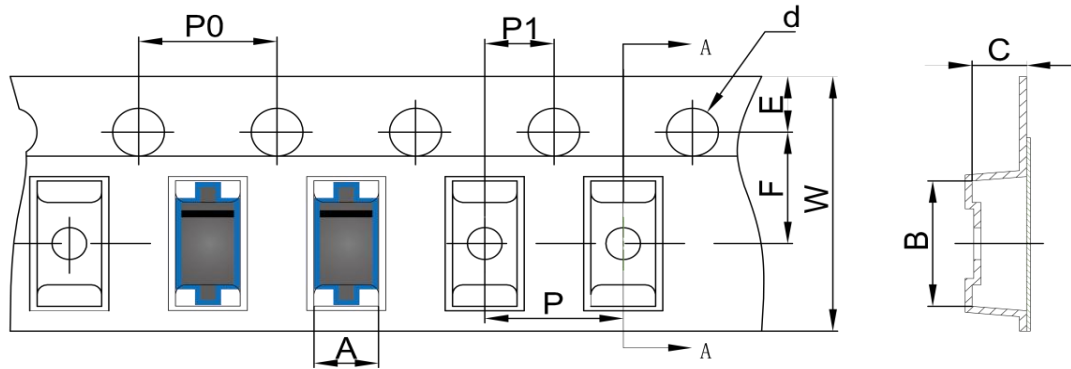
Note:

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

ULTRA FAST RECOVERY RECTIFIER DIODE

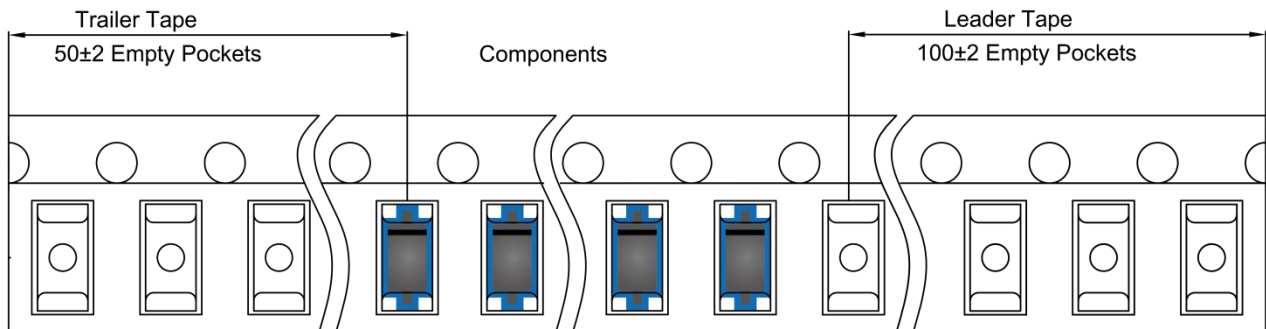
SMA Tape and Reel

SMA Embossed Carrier Tape

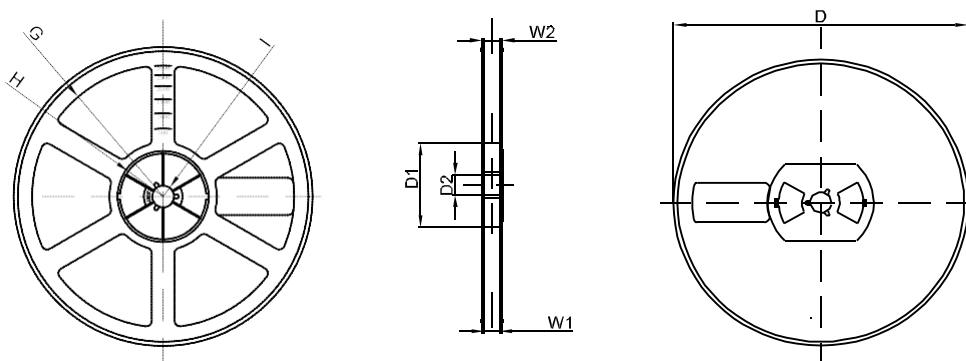


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMA	2.89	5.35	2.68	Ø1.50	1.75	5.50	4.00	4.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

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