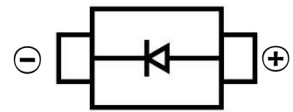


ULTRA FAST RECOVERY RECTIFIER DIODE**FEATURES**

- Glass passivated junction
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- Surface Mount device

**SMC****MECHANICAL DATA**

- Case: SMC(DO-214AB)
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Weight: 0.21 grams (approximate)

MAXIMUM RATINGS AND CHARACTERISTICS($T_A = 25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	V
DC Blocking Reverse Voltage	V_R	50	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	V
Maximum Average Forward Rectified Current	I_F	4	A
Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	240	A
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	20	$^{\circ}\text{C/W}$
Reverse Recovery Time(@ $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$)	t_{rr}	50	nS
Junction Temperature	T_J	-55 ~+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 ~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Forward voltage	V_F			1.0	V	$I_F=4\text{A}$
Reverse current @ $T_A=25^{\circ}\text{C}$	I_R			5	μA	$V_R=50\text{V}$
Reverse current @ $T_A=125^{\circ}\text{C}$	I_R			150	μA	$V_R=50\text{V}$
Diode capacitance	C_D		75		pF	$V_R=4\text{V}, f=1\text{MHz}$

ULTRA FAST RECOVERY RECTIFIER DIODE

Typical Characteristics

FIG.1-TYPICAL FORWARD CHARACTERISTICS

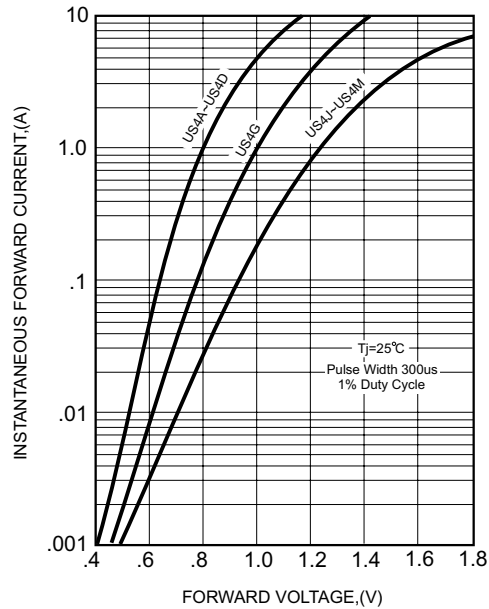


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

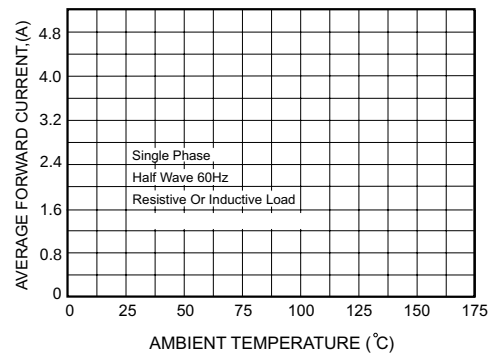


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

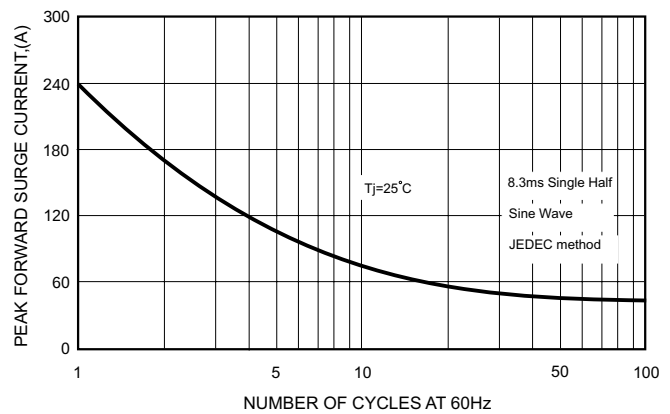
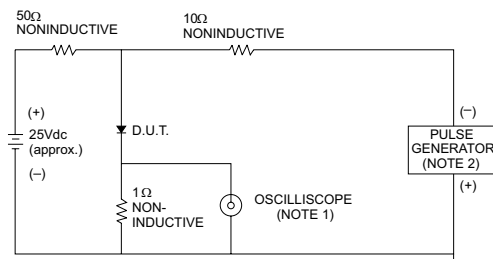


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.

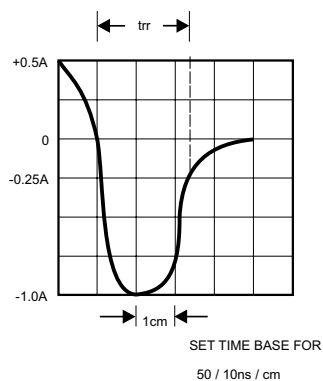
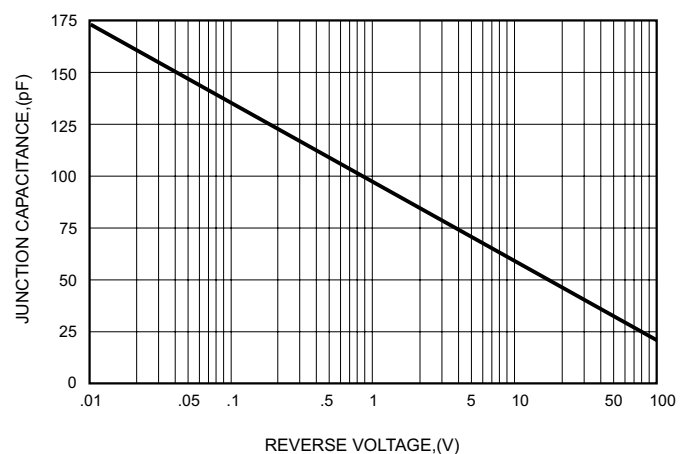
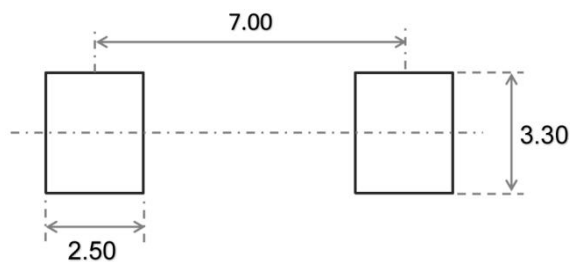


FIG.5-TYPICAL JUNCTION CAPACITANCE



ULTRA FAST RECOVERY RECTIFIER DIODE**SMC Package Outline Dimensions**

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	7.75	8.13	0.305	0.320
B	5.59	6.22	0.220	0.245
C	6.60	7.11	0.260	0.280
D	2.75	3.25	0.108	0.128
E	2.25	2.82	0.089	0.111
G	2.00	2.62	0.079	0.103
H	1.26	1.56	0.050	0.061
I	0.05	0.15	0.002	0.006
K	4.30	6.00	0.169	0.236
L	1.25	1.75	0.049	0.069
N	0.10	0.30	0.004	0.012

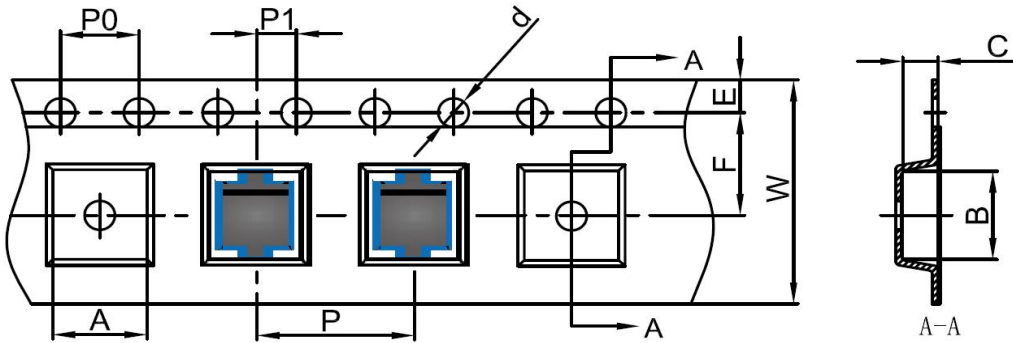
SMC Suggested Pad Layout**Note:**

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

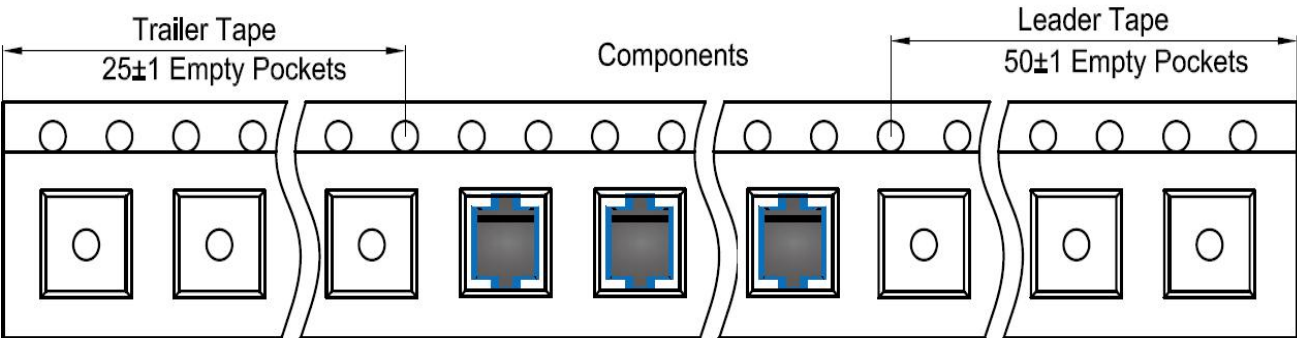
SMC Tape and Reel

SMC Embossed Carrier Tape

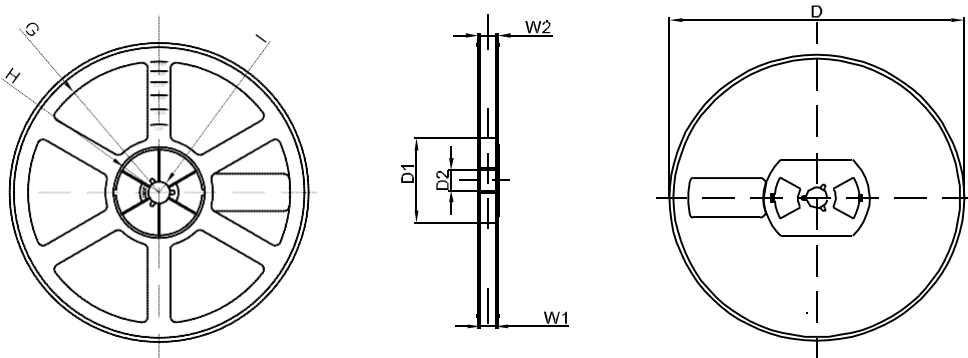


	DIMENSIONS ARE IN MILLIMETER									
TYPE	A	B	C	d	E	F	P0	P	P1	W
SMC	6.3	8.25	2.90	Ø1.55	1.75	7.50	4.00	8.00	2.00	16.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

SMC Tape Leader and Trailer



SMC Reel



	DIMENSIONS ARE IN MILLIMETER							
REEL OPTION	D	D1	D2	G	H	I	W1	W2
13" DIA	Ø330	100	21	R165	R50	R6.50	16.4	21.00
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1