

U1NF

1.0AMP. SURFACE MOUNT ULTRA FAST RECTIFIER

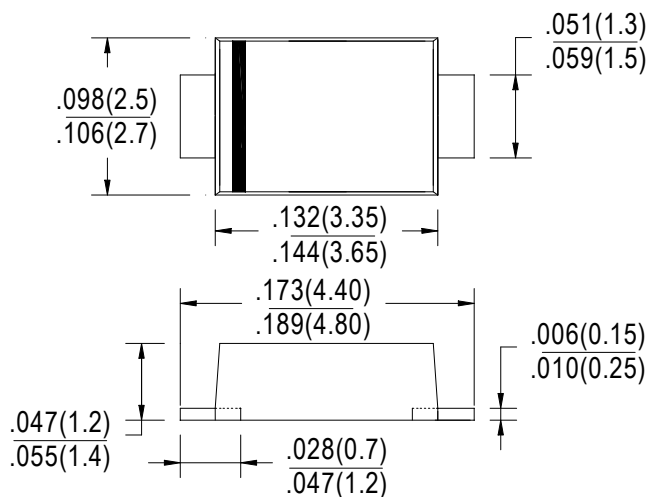
FEATURE

- . Low leakage
- . Low forward voltage drop
- . High current capability
- . High surge capability
- . High reliability
- . High temperature soldering guaranteed:
260°C/10 seconds at terminals.
- . For surface mounted application.
- . Easy pick and place.

MECHANICAL DATA

- . Terminal: Plated axial leads solderable per
MIL-STD 202E, method 208C
- . Case: Molded with UL-94 Class V-0 recognized
Flame Retardant Epoxy
- . Polarity: color band denotes cathode
- . Mounting position: any

SMF



Dimensions in inches and (millimeters)

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, derate current by 20%

Type Number	SYM BOL	U1NF	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1200	V
Maximum RMS Voltage	V_{RMS}	840	V
Maximum DC blocking Voltage	V_{DC}	1200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30.0	A
Maximum Instantaneous forward Voltage at 1.0A DC	V_F	2.2	V
Maximum DC Reverse Current @ $T_J = 25^\circ C$ at rated DC blocking voltage @ $T_J = 100^\circ C$	I_R	5.0 100.0	μA
Maximum Reverse Recovery Time (Note 1)	t_{rr}	75	nS
Typical Junction Capacitance (Note 2)	C_J	8	pF
Typical Thermal Resistance (Note 3)	$R_{(JA)}$	80	$^\circ C / W$
	$R_{(JC)}$	28	
Storage Temperature	T_{STG}	-55 to +150	$^\circ C$
Operation Junction Temperature	T_J	-55 to +150	$^\circ C$

Note:

1. Test Conditions: $I_F = 0.5A$, $I_R = 1.0A$, $I_{RR} = 0.25A$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Measured on P.C.Board with 0.2×0.2”(5.0×5.0mm) Copper Pad Areas.

RATING AND CHARACTERISTIC CURVES (U1NF)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

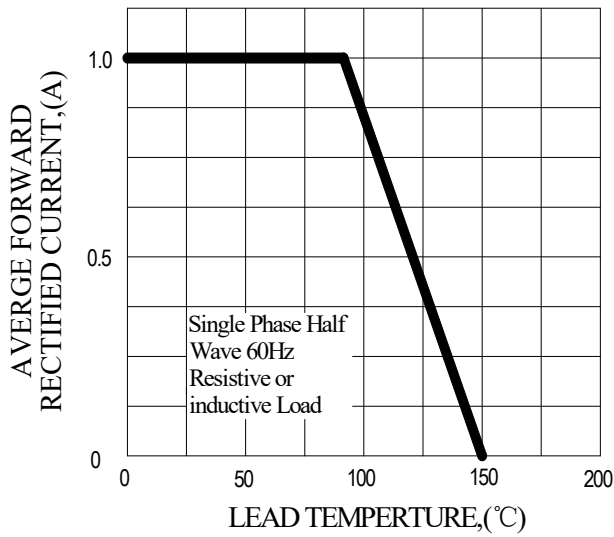


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

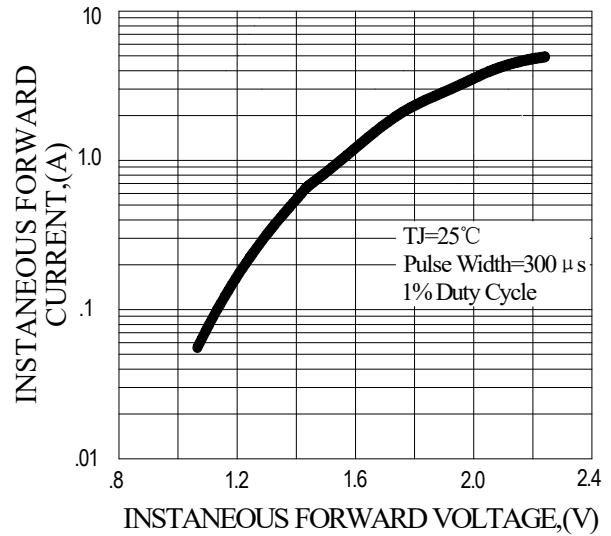


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

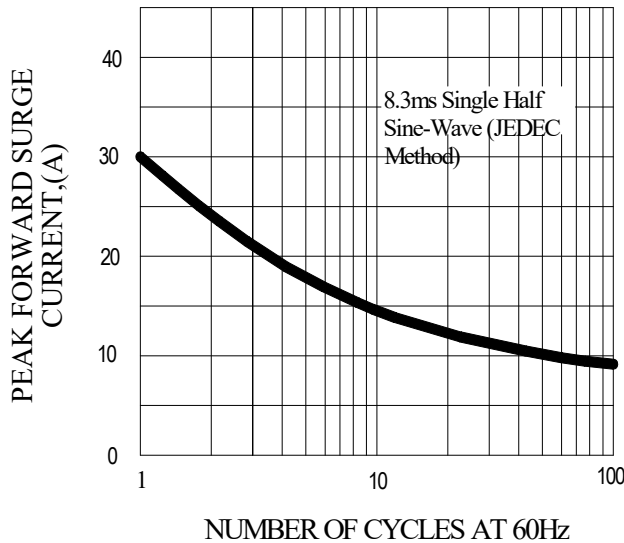


FIG.4-TYPICAL REVERSE CHARACTERISTICS

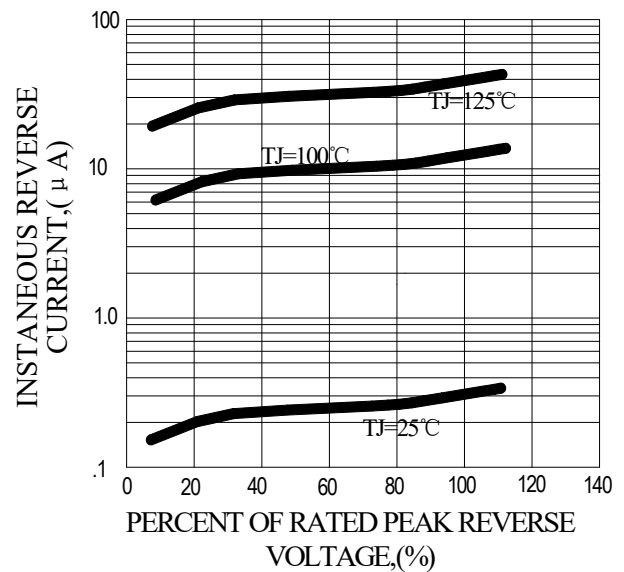
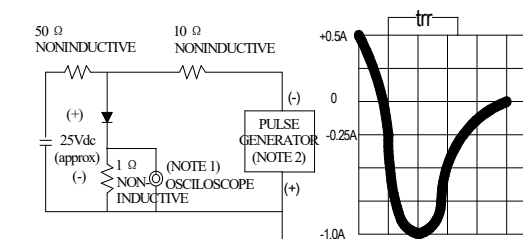


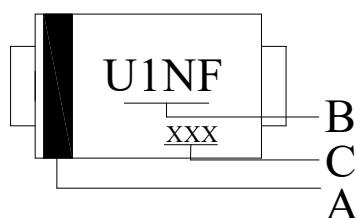
FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

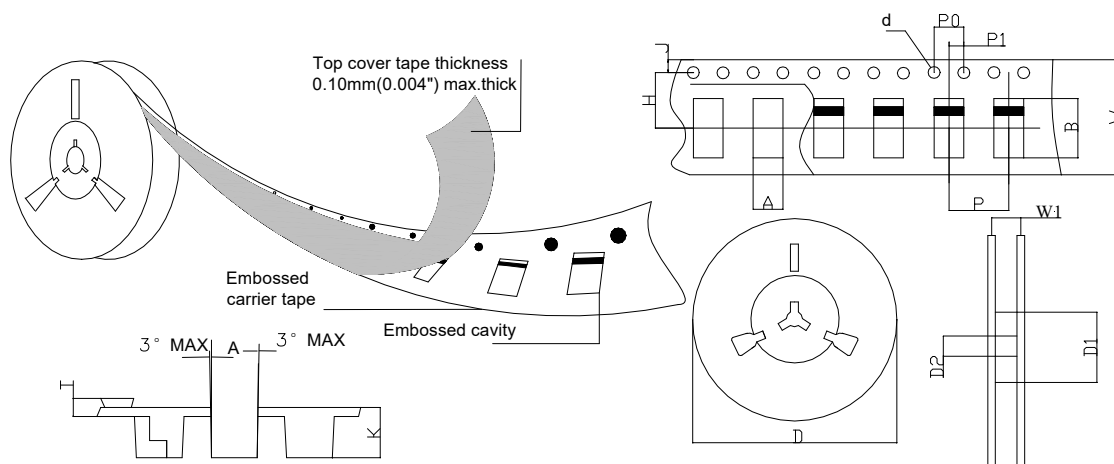
Marking and packaging illustration

1、Marking



SYMBOL	Explanation
A	Color Band Denotes Cathode
B	Product Name
C	Date Code

2、Packaging



SPECIFICATIONS mm(inch)		PACKAGE			
SYMBOL		SMF			
ITEM					
Carrier width	A	2.93(0.115)Max	Carrier depth	K	1.42(0.056)Typ
Carrier length	B	4.85(0.191)Max	Punch hole pitch	P	4.00(0.157)Typ
Sprocket hole	d	ø1.55(0.061)Typ	Sprocket hole pitch	P0	4.00(0.157)Typ
Reel outer diameter	D	330.0(13.0)Typ	Embossment center	P1	2.00(0.079)Typ
Reel inner diameter	D1	50.0(1.969)Min	Overall tape thickness	T	0.25(0.010)Typ
Feed hole diameter	D2	13.0(0.512)Typ	Tape width	W	12.0(0.472)Typ
Sprocket hole position	J	1.75(0.069)Typ	Reel width	W1	12.4(0.488)Min
Punch hole position	H	5.50(0.217)Typ			