

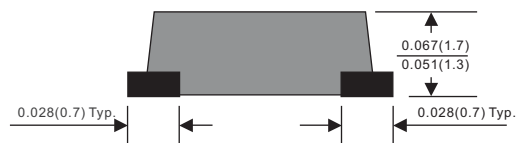
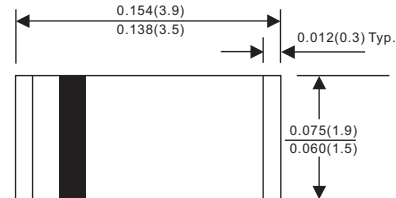


Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Tiny plastic SMD package.
- Trr less than 25ns for high efficiency
- High current & surge capability.
- Low forward dropdown voltage
- Glass passivated chip junction.
- **Moisture Sensitivity Level 1**

Package outline

SOD-123 $\overline{\text{E}}$



Dimensions in inches and (millimeters)

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123 $\overline{\text{E}}$
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.018 gram

Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	I_o			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			25	A
Reverse current	$V_R = V_{RRM} T_J = 25^\circ\text{C}$	I_R			5.0	μA
	$V_R = V_{RRM} T_J = 125^\circ\text{C}$				100	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_j		15		pF
Storage temperature		T_{STG}	-65		+175	$^\circ\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	t_{rr}^{*5} (ns)	Operating temperature $T_J, (^\circ\text{C})$
UFM11-M	50	35	50	0.875	25	-55 to +150
UFM12-M	100	70	100			
UFM1I -M	200	140	200			
UFM1 \hat{I} -M	400	280	400	1.25		
UFM1 \hat{I} -M	600	420	600	1.75		

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@ $I_F=1.0\text{A}$
- *5 Maximum Reverse recovery time, note 1

Note 1. Reverse recovery time test condition, $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123 $\overline{\text{E}}$	7"	2,500	4.0	25,000	183*183*123	178	382*262*387	200,000	9.5

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CHARACTERISTICS

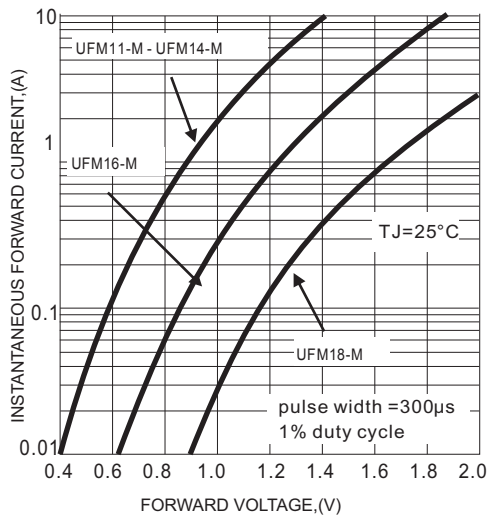


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

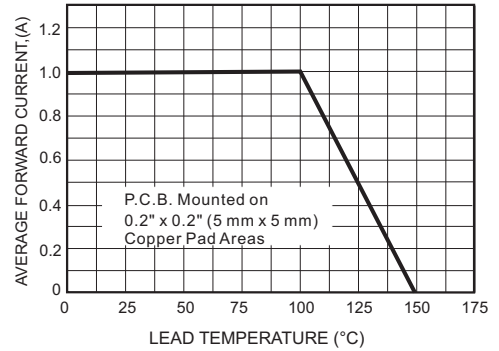
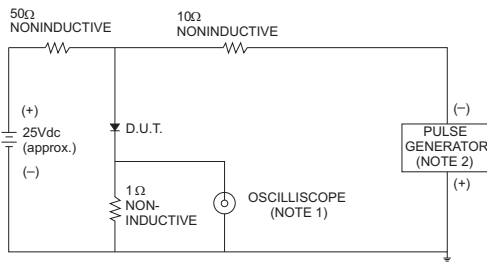


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

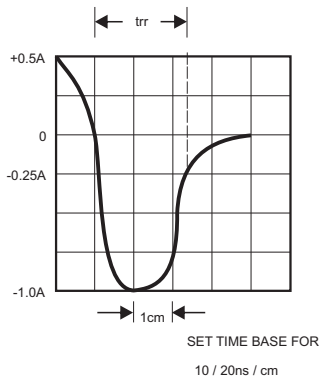


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

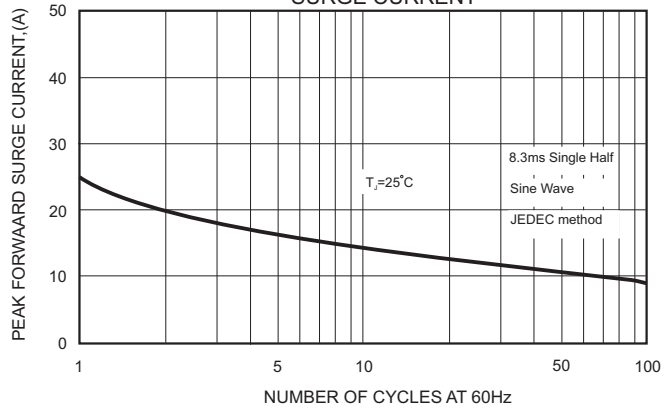
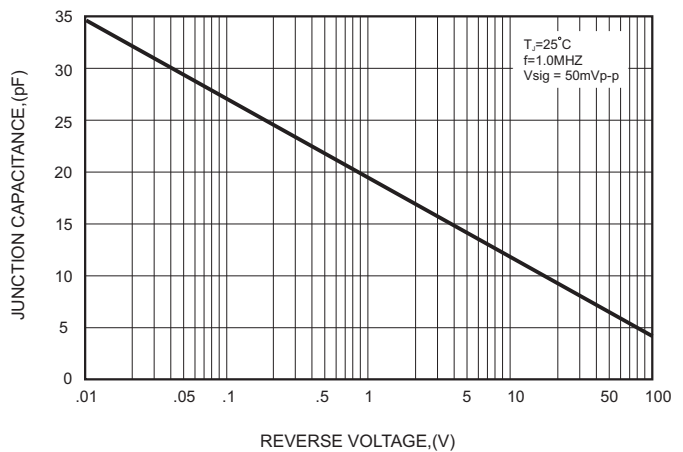


FIG.5-TYPICAL JUNCTION CAPACITANCE





Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Ordering and Marking information

Type number	Marking code
UFM11-M-TH	E1
UFM12-M-TH	E2
UFM14-M-TH	E3
UFM16-M-TH	E4
UFM18-M-TH	E5

Note: -M: Package code, SOD-123-L

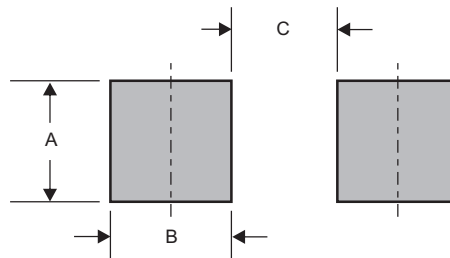
-T: Taping Reel

Pb-Free package is available

RoHS product for packing code suffix "G"

Halogen free product for packing code suffix "H"

Suggested solder pad layout

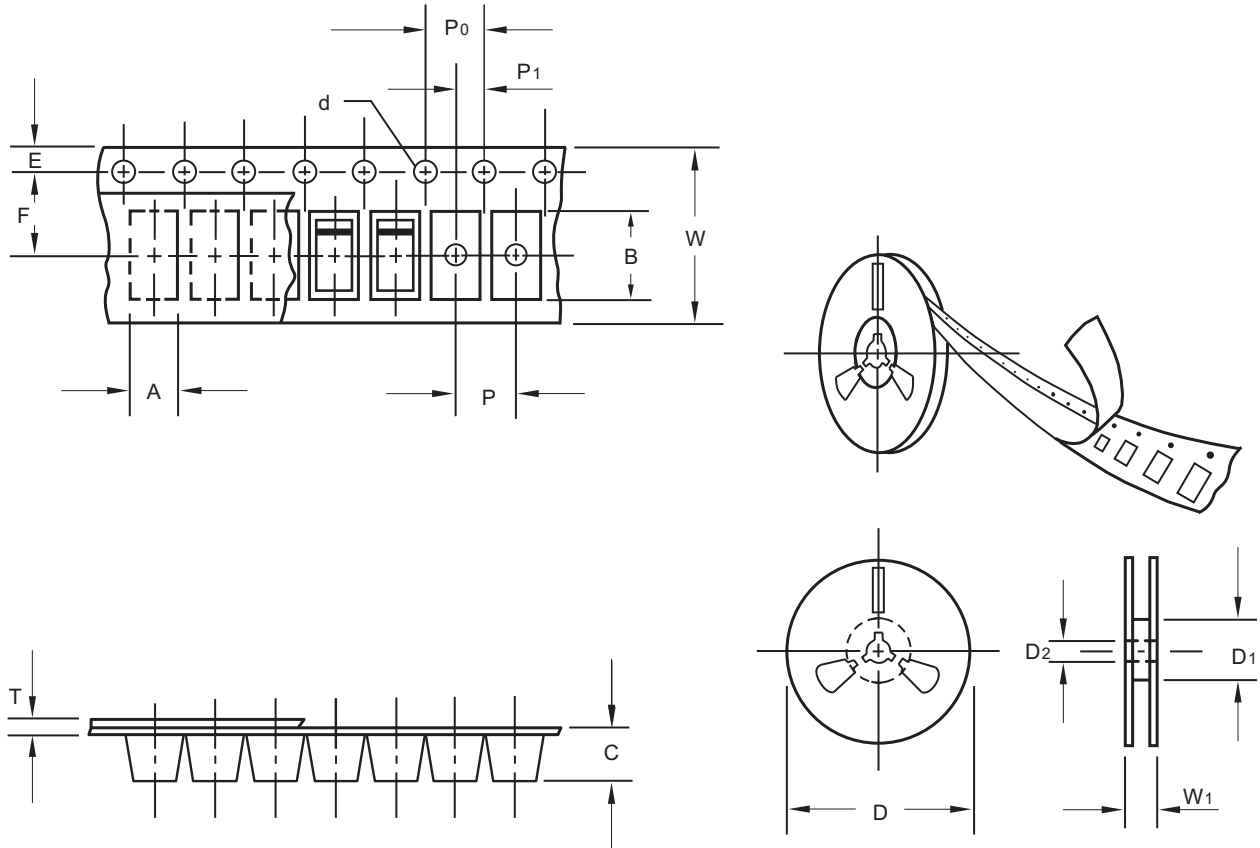


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123-L	0.075 (1.90)	0.055 (1.40)	0.075 (1.90)



Packing information



unit:mm

Item	Symbol	Tolerance	SOD-123-L
Carrier width	A	0.1	1.90
Carrier length	B	0.1	3.90
Carrier depth	C	0.1	1.68
Sprocket hole	d	0.1	1.50
13" Reel outside diameter	D	2.0	-
13" Reel inner diameter	D1	min	-
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	62.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.23
Tape width	W	0.3	8.00
Reel width	W1	1.0	11.40

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.