

Features

- Ultra Fast Switching for High Efficiency
- Glass Passivated Junction
- Lead Free Finish/RoHS Compliant (Note 1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 2)
- Moisture Sensitivity Level 1

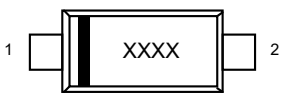

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value							Unit
		UFM 11PL	UFM 12PL	UFM 13PL	UFM 14PL	UFM 15PL	UFM 16PL	UFM 17PL	
Peak Repetitive Reverse Voltage	V_{RRM}								V
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	
DC Blocking Voltage	V_R								
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average Rectified Forward Current @ $T_L=90^\circ\text{C}$	$I_{F(AV)}$	1							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	30							A
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	3.735							A ² s

Marking Code

Part Number	Marking Code
UFM11PL	U1
UFM12PL	U2
UFM13PL	U3
UFM14PL	U4
UFM15PL	U5
UFM16PL	U6
UFM17PL	U7

Internal Structure

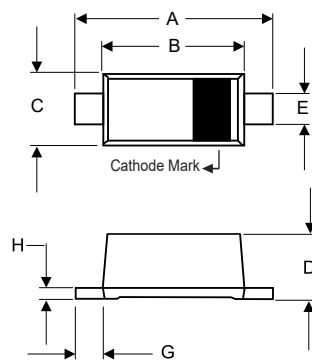
Simplified Outline	Graphic Symbol
 <p>XXXX = Marking code</p>	

Note:

1. High temperature solder exemption applied, see EU directive annex 7a.
2. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

1.0 Amp Ultra Fast Rectifier 50 to 1000 Volts

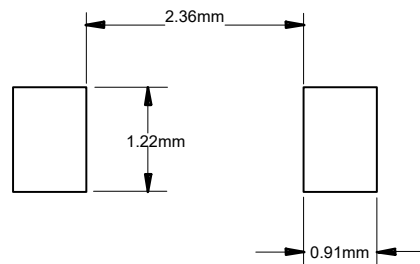
SOD-123FL



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.130	0.152	3.30	3.85	
B	0.100	0.122	2.55	3.10	
C	0.055	0.075	1.40	1.90	
D	0.035	0.053	0.90	1.35	
E	0.020	0.041	0.50	1.05	
G	0.010	----	0.25	----	
H	----	0.010	----	0.25	

Suggested Solder Pad Layout



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$R_{th(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		28		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		95		°C/W

Note:

1. Mounted on P.C.B. with 5mm*5mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage UFM11PL - UFM13PL UFM14PL UFM15PL - UFM17PL	V_F	$I_F=1A; T_J=25^{\circ}C$			1.0 1.3 1.7	V
Reverse Current	I_R	at Rated $V_R; T_J=25^{\circ}C$ at Rated $V_R; T_J=125^{\circ}C$			5 50	μA
Reverse Recovery Time UFM11PL - UFM13PL UFM14PL UFM15PL - UFM17PL	t_{rr}	$I_F=0.5A; I_R=1.0A;$ $I_{rr}=0.25A; T_J=25^{\circ}C$			35 50 75	nS
Junction Capacitance UFM11PL - UFM13PL UFM14PL UFM15PL - UFM17PL	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		20 11 8		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

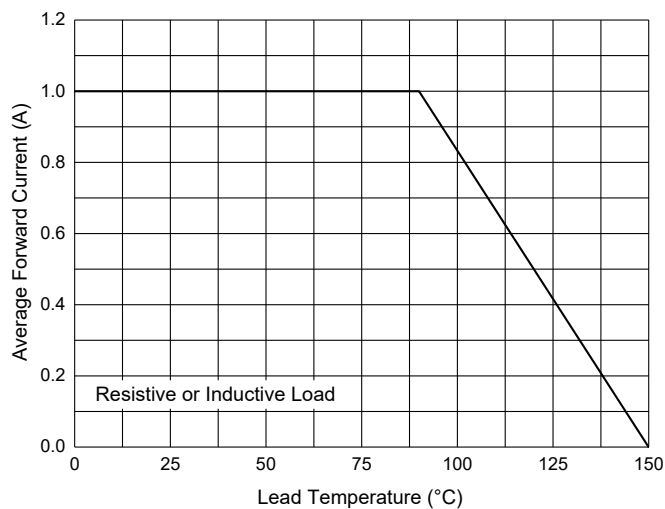


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

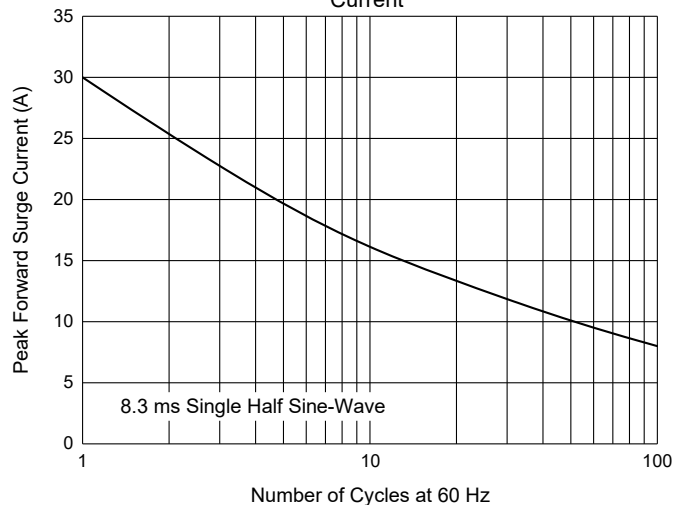


Fig. 3 - Typical Forward Characteristics

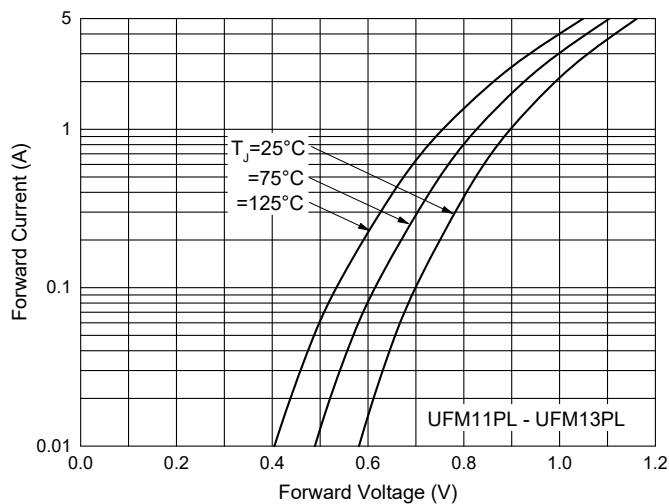


Fig. 4 - Typical Forward Characteristics

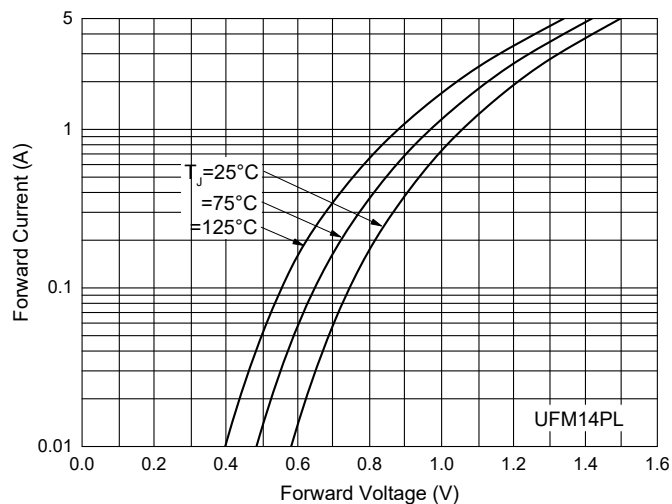


Fig. 5 - Typical Forward Characteristics

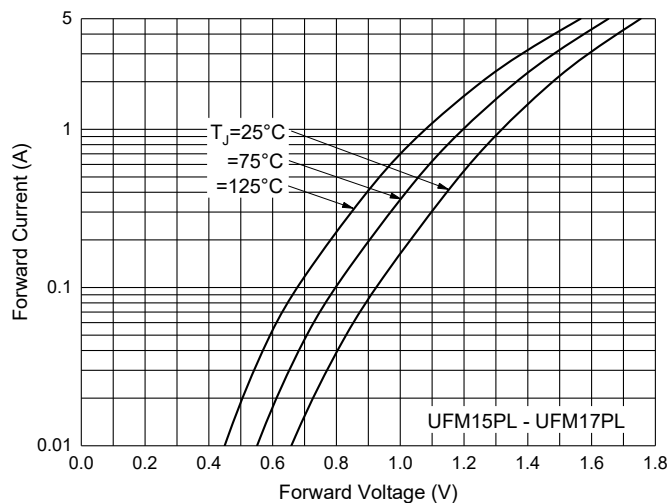
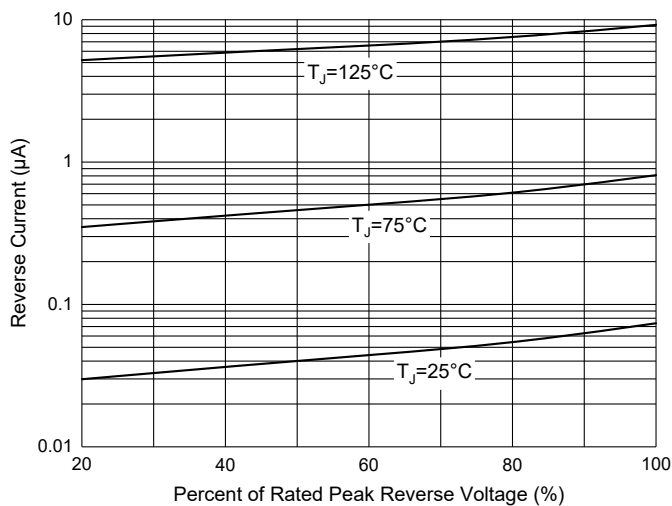
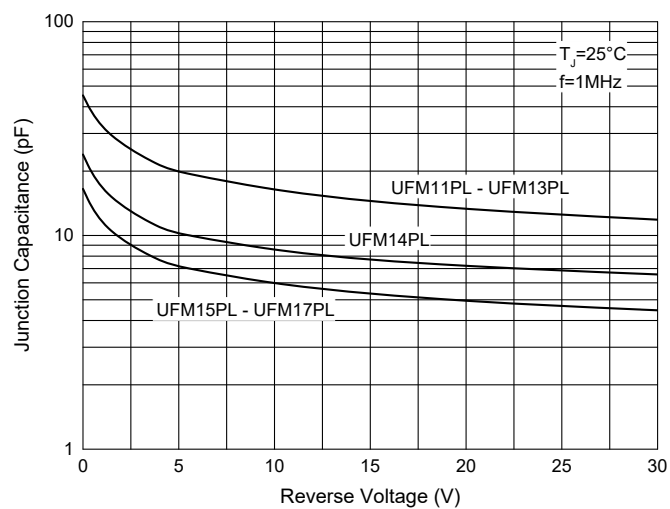


Fig. 6 - Typical Reverse Leakage Characteristics



Curve Characteristics

Fig. 7 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:2.5Kpcs/Reel

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