

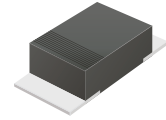
## CURMT101-HF Thru. CURMT107-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

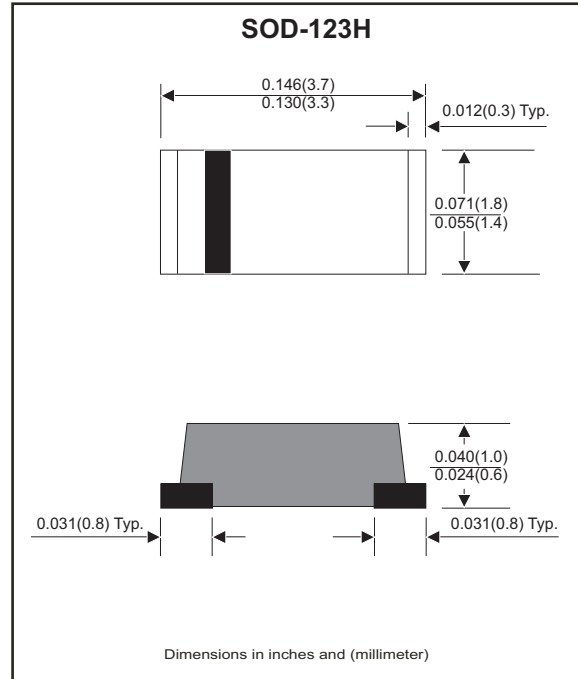


### Features

- Excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile package is 40% thinner than standards SOD-123.
- Tiny plastic SMD package.
- High current capability.
- Ultrafast recovery time for high efficiency.
- High surge current capability.
- Glass passivated chip junction.
- Lead-free part meets RoHS requirements.

### Mechanical data

- Epoxy: UL94-V0 rated flame retardant.
- Case: Molded plastic, SOD-123H/MINI SMA
- Terminals: Solderable per MIL-STD-750, Method 2026.
- Polarity: Indicated by cathode band.
- Mounting Position: any
- Weight: 0.011 grams approx.



### Maximum Ratings (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	CURMT 101-HF	CURMT 102-HF	CURMT 103-HF	CURMT 104-HF	CURMT 105-HF	CURMT 106-F	CURMT 107-HF	Unit
Max. Repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Max. Continuous reverse voltage	$V_R$	50	100	200	400	600	800	1000	V
Max. RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Max. Forward rectified current Ambient temperature= $50^\circ\text{C}$	$I_O$	1.0							A
Max. Forward voltage @ $I_F=1.0\text{A}$	$V_F$	1.00		1.30		1.70			V
Max. Reverse recovery time (note 1)	$T_{RR}$	50				75			ns
Max. Forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	25							A
Max. Reverse current	$V_R=V_{RRM}$ $T_J=25^\circ\text{C}$	5.0							$\mu\text{A}$
	$V_R=V_{RRM}$ $T_J=100^\circ\text{C}$	150							
Typ. Thermal resistance Junction to ambient air	$R_{\theta JA}$	42							$^\circ\text{C/W}$
Typ. Diode Junction capacitance $f=1\text{MHz}$ and applied 4V DC reverse voltage	$C_J$	70							pF
Operating junction temperature	$T_J$	-55 to +150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-65 to +175							$^\circ\text{C}$

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

## Rating and Characteristic Curves (CURMT101-HF Thru. CURMT107-HF)

Fig.1- Typical Forward Current Derating Curve

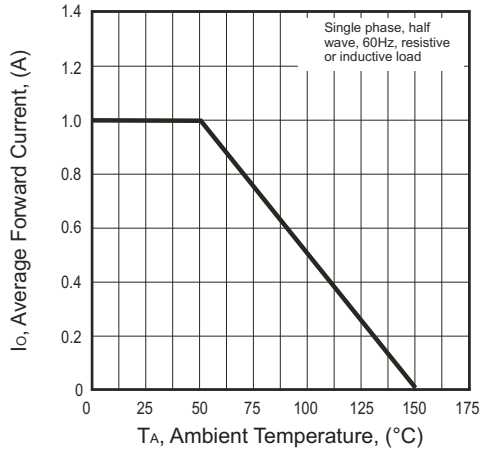


Fig.2- Typical Forward Characteristics

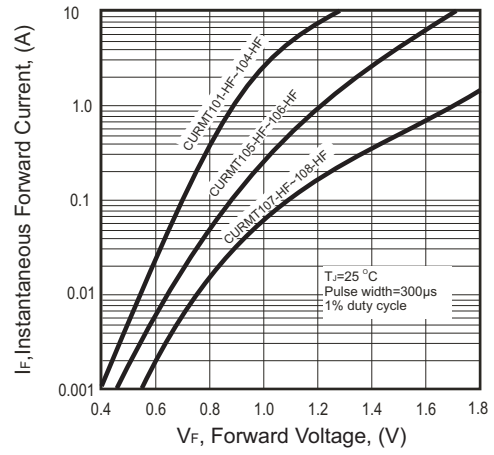
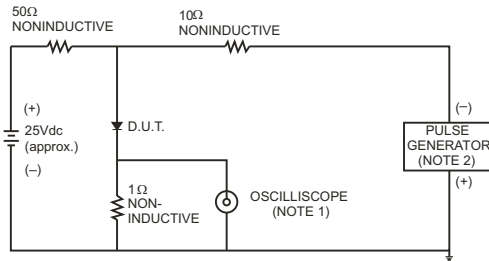


Fig.3- Test Circuit Diagram and Reverse Recovery Time Characteristics



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

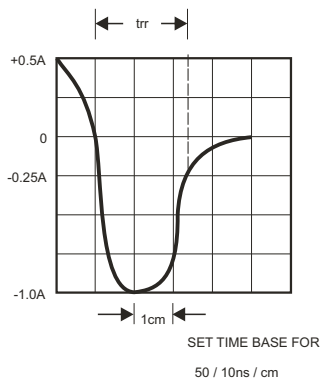


Fig.4- Maximum Non-repetitive Forward Surge Current

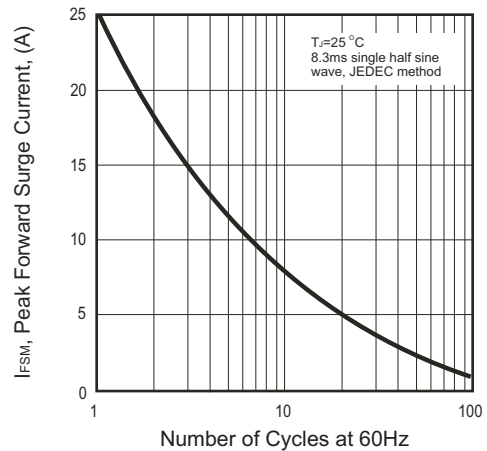
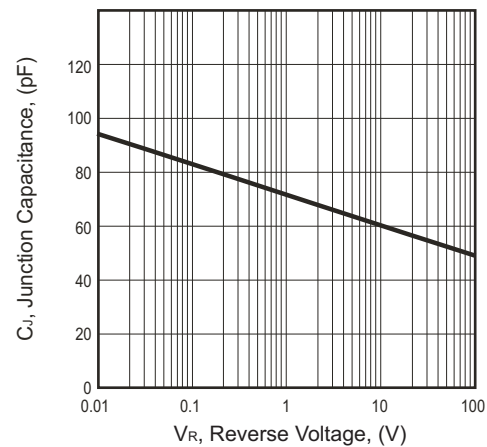
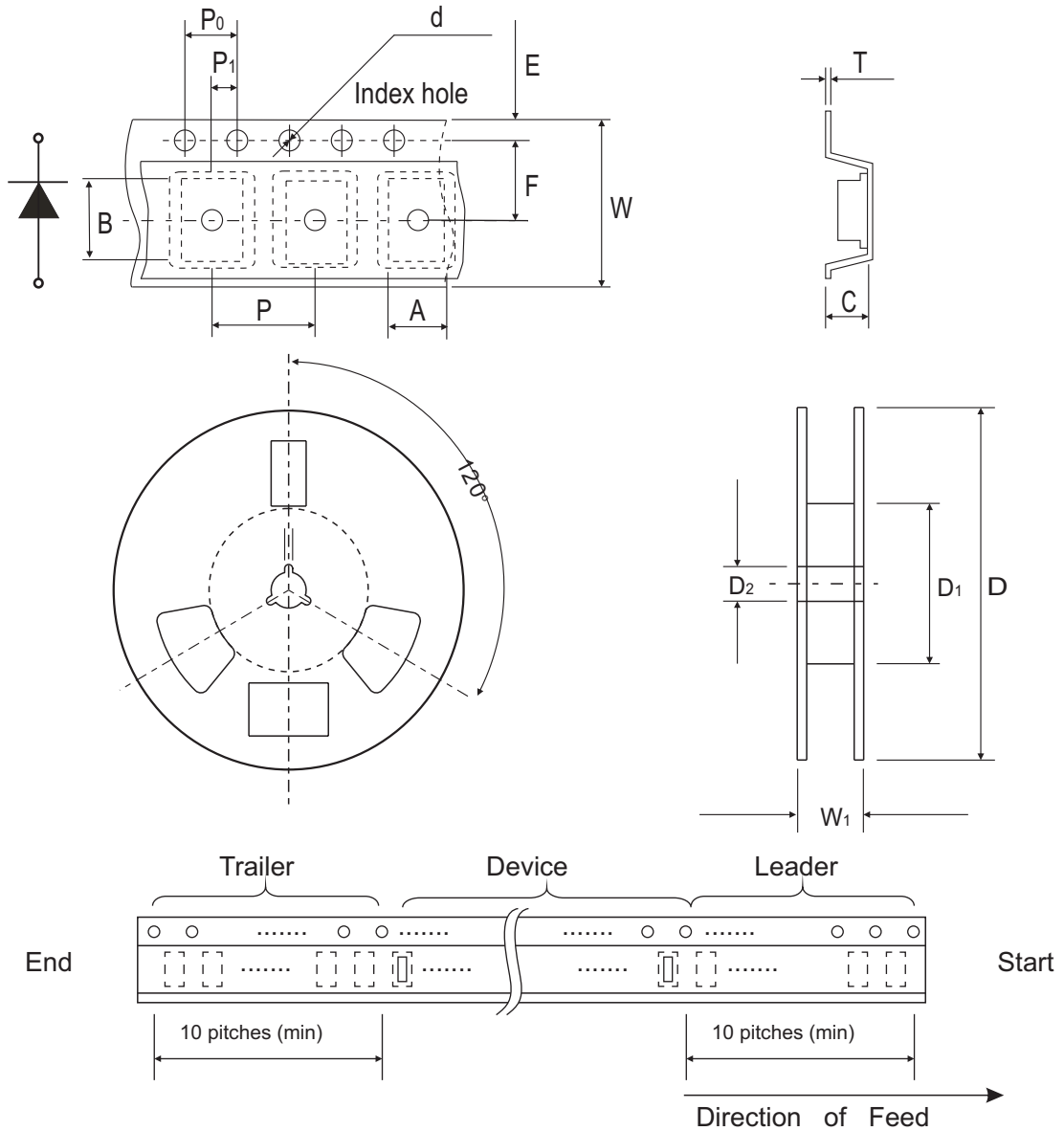


Fig.5- Typical Junction Capacitance





## Reel Taping Specification



SOD-123H	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.00 ± 0.10	3.85 ± 0.10	1.10 ± 0.10	1.50 ± 0.10	178 ± 2.00	62.0 MIN.	13.0 ± 0.50
	(inch)	0.079 ± 0.004	0.152 ± 0.004	0.043 ± 0.004	0.059 ± 0.004	7.00 ± 0.079	2.440 MIN.	0.512 ± 0.020

SOD-123H	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.23 ± 0.10	8.00 ± 0.30	11.40 ± 1.0
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.004	0.315 ± 0.012	0.449 ± 0.039

## Pinning information

Pin	Simplified outline	Symbol
PIN 1 Cathode PIN 2 Anode		

## Marking Code

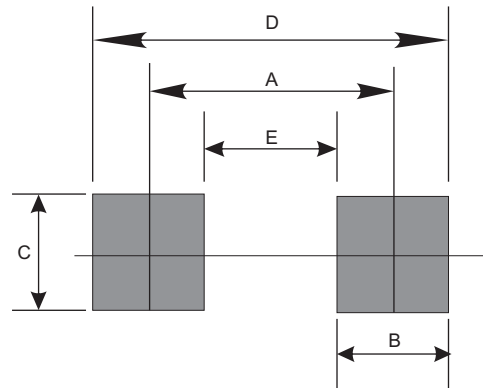
Part Number	Marking Code
CURMT101-HF	H1
CURMT102-HF	H2
CURMT103-HF	H3
CURMT104-HF	H4
CURMT105-HF	H5
CURMT106-HF	H6
CURMT107-HF	H7



xx = Product type marking code

## Suggested PAD Layout

SIZE	SOD-123H	
	(mm)	(inch)
A	3.00	0.118
B	1.30	0.051
C	1.80	0.071
D	4.30	0.169
E	1.70	0.067



## Standard Package

Case Type	REEL PACK (T/R)				
	REEL (EA)	BOX (EA)	CARTON (EA)	Reel Size (inch)	Type Mat'l
SOD-123H	3000	30000	240000	7	Plastic

# Mouser Electronics

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