

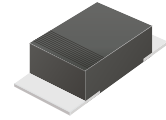
## CSFMT101-HF Thru. CSFMT108-HF

Reverse Voltage: 50 to 600 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

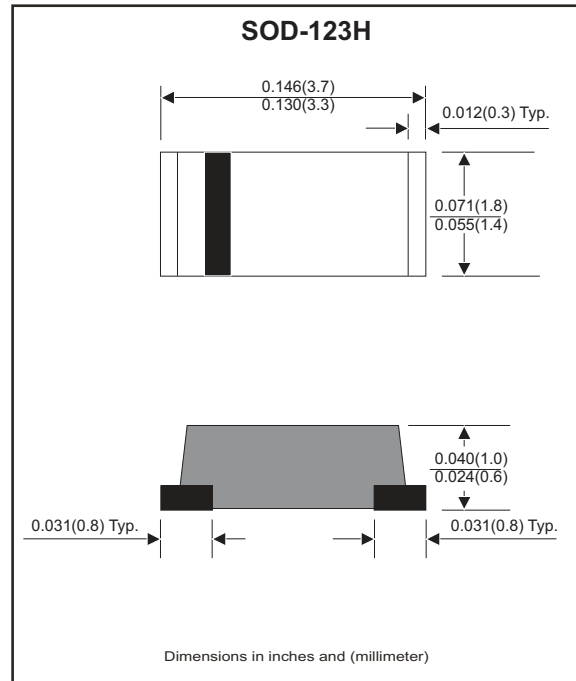


### Features

- 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.
- Super fast recovery time for switching mode application.
- High surge current capability.
- Glass passivated chip junction.
- Lead-free parts meet RoHS requirement.

### 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	CSFMT 101-HF	CSFMT 102-HF	CSFMT 103-HF	CSFMT 104-HF	CSFMT 105-HF	CSFMT 106-HF	CSFMT 107-HF	CSFMT 108-HF	Unit
Max. repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	V
Max. Continuous rever voltage	$V_R$	50	100	150	200	300	400	500	600	V
Max. RMS voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	V
Max. averaged forward current	$I_o$	1.0								A
Max. Forward voltage @ $I_F=1.0A$	$V_F$	0.95			1.25		1.70			V
Reverse recovery time (Note 1)	$T_{RR}$	35								ns
Max. Forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	25								A
Max. Reverse current	$I_R$	$V_R=V_{RRM} T_J=25^\circ\text{C}$								$\mu\text{A}$
		$V_R=V_{RRM} T_J=100^\circ\text{C}$								
Typ. Thermal resistance Junction to ambient air	$R_{\theta JA}$	42								$^\circ\text{C/W}$
Typ. Junction capacitance $f=1\text{MHz}$ and applied 4V DC reverse voltage	$C_J$	10								pF
Operating junction temperature	$T_J$	-55 to +150								$^\circ\text{C}$
Storage temperature	$T_{STG}$	-65 to +175								$^\circ\text{C}$

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

REV: A

## Rating and Characteristic Curves (CSFMT101-HF Thru. CSFMT108-HF)

Fig.2- Typical Forward Current Derating Curve

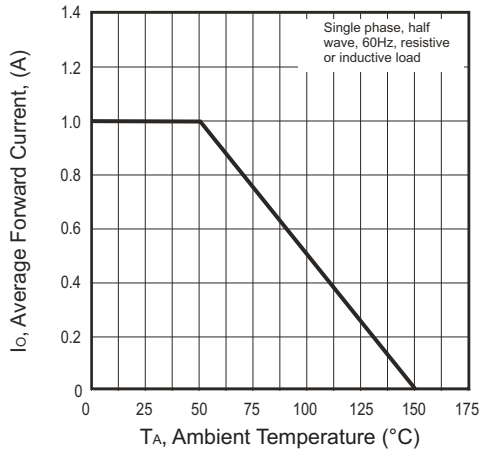


Fig.1- Typical Forward Characteristics

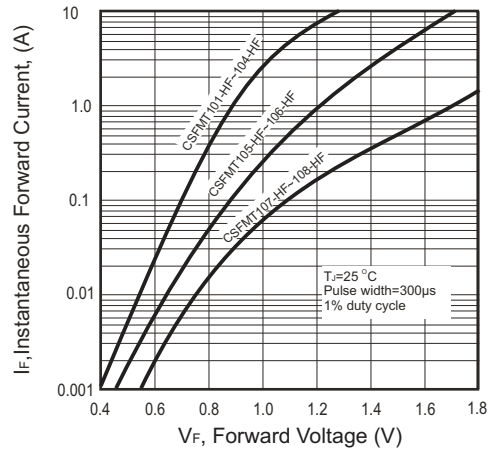
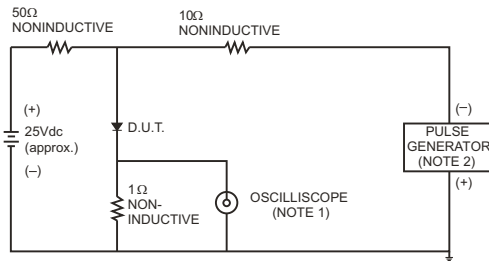


Fig.3- Test Circuit Diagram and Reverse Recovery Time Characteristics



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

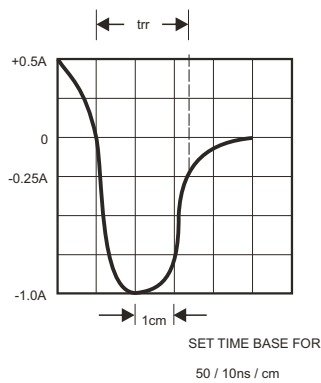


Fig.4- Maximum Non-repetitive Forward Surge Current

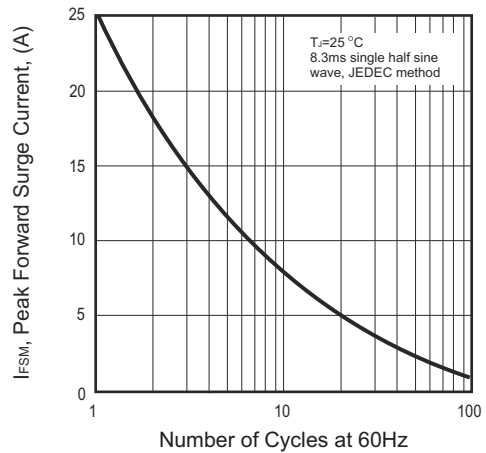
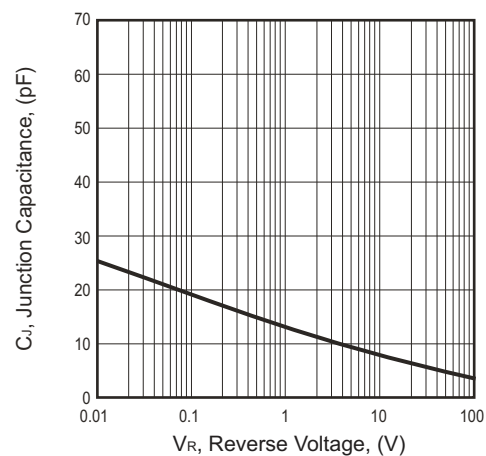
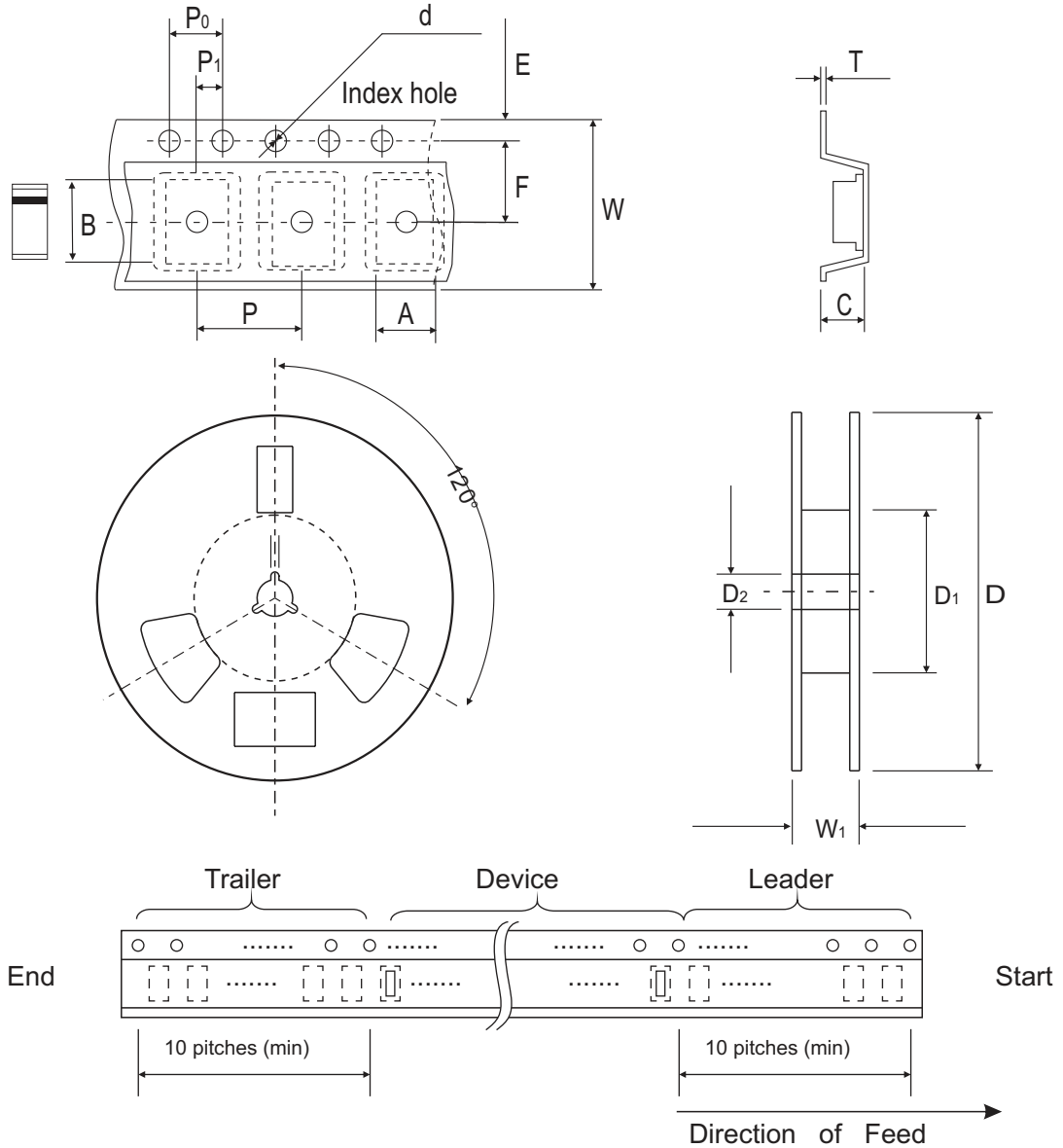


Fig.5- Typical Junction Capacitance





## Reel Taping Specification



SOD-123H	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(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	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(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

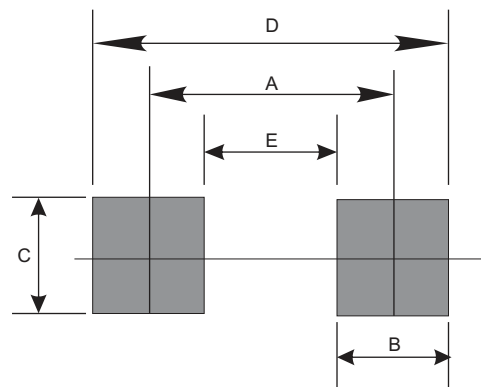
Part Number	Marking Code
CSFMT101-G	S1
CSFMT102-G	S2
CSFMT103-G	S3
CSFMT104-G	S4
CSFMT105-G	S5
CSFMT106-G	S6
CSFMT107-G	S7
CSFMT108-G	S8



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	3,000	30,000	240,000	7	Plastic