

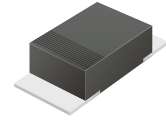
CSFM101-HF Thru. CSFM105-HF

Reverse Voltage: 50 to 600 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

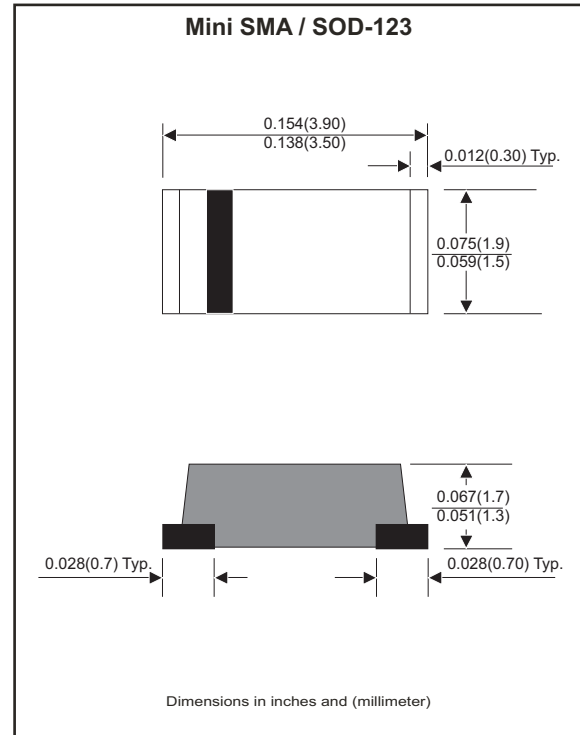


Features

- 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.
- Super fast recovery time for switching mode application.
- High current capability.
- High surge current capability.
- Glass passivated chip junction.

Mechanical data

- Epoxy: UL 94-V0 rated flame retardant.
- Case: Molded plastic, SOD-123/Mini SMA.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.018 grams approx.



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

Parameter	Conditions	Symbol	CSFM 101-HF	CSFM 102-HF	CSFM 103-HF	CSFM 104-HF	CSFM 105-HF	Unit	
Repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	V	
Continuous reverse voltage		V_{DC}	50	100	200	400	600	V	
RMS voltage		V_{RMS}	35	70	140	280	420	V	
Max. forward rectified current	Ambient temperature= 50°C	I_o	1.0					A	
Maximum Instantaneous forward voltage at $I_F=1.0\text{A}$		V_F	0.95		1.25	1.70		V	
Forward surge current	8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25					A	
Max. Reverse recovery time	$I_F=0.5\text{A}$, $I_R=1.0\text{A}$ $I_{RR}=0.25\text{A}$	T_{rr}				35			nS
Max.Reverse current	$V_R=V_{RRM}$ $T_J=@25^{\circ}\text{C}$ $V_R=V_{RRM}$ $T_J=@100^{\circ}\text{C}$	I_R				5.0 100			μA
Typ. Thermal resistance	Junction to ambient	$R_{\theta JA}$				42			$^{\circ}\text{C/W}$
Diode 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 range		T_{STG}	-65 to +175					$^{\circ}\text{C}$	

Rating and Characteristic Curves (CSFM101-HF Thru. CSFM105-HF)

Fig.1- Typical Forward Characteristics

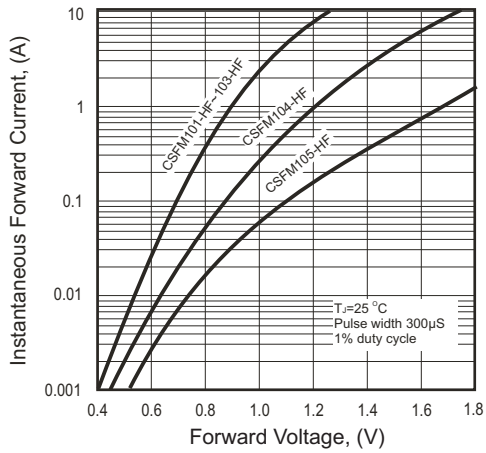


Fig.2-Typical Forward Current Derating Curve

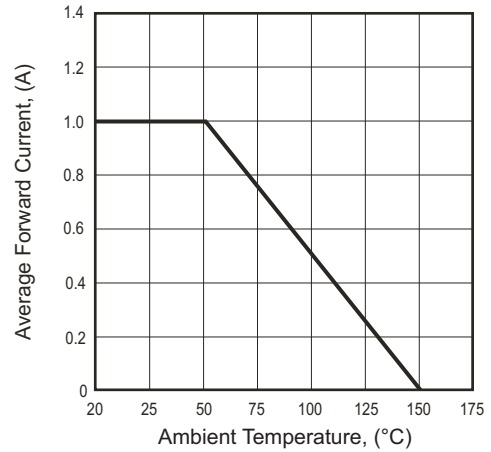
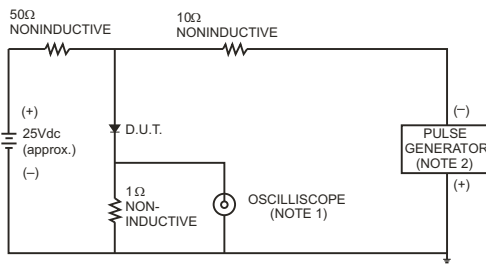


Fig.3- Test Circuit Diagram and Reverse Recovery Time Characteristics



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

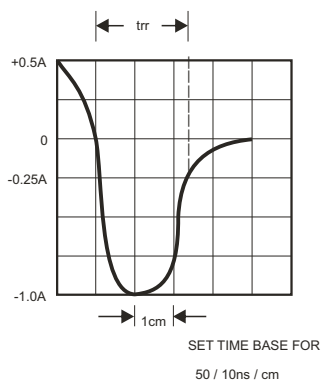


Fig.4- Non-repetitive Forward Surge Current

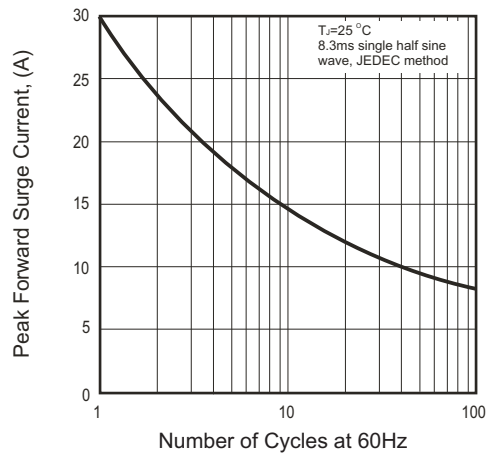
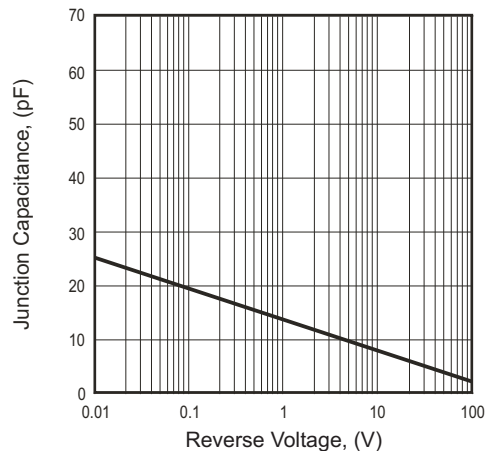
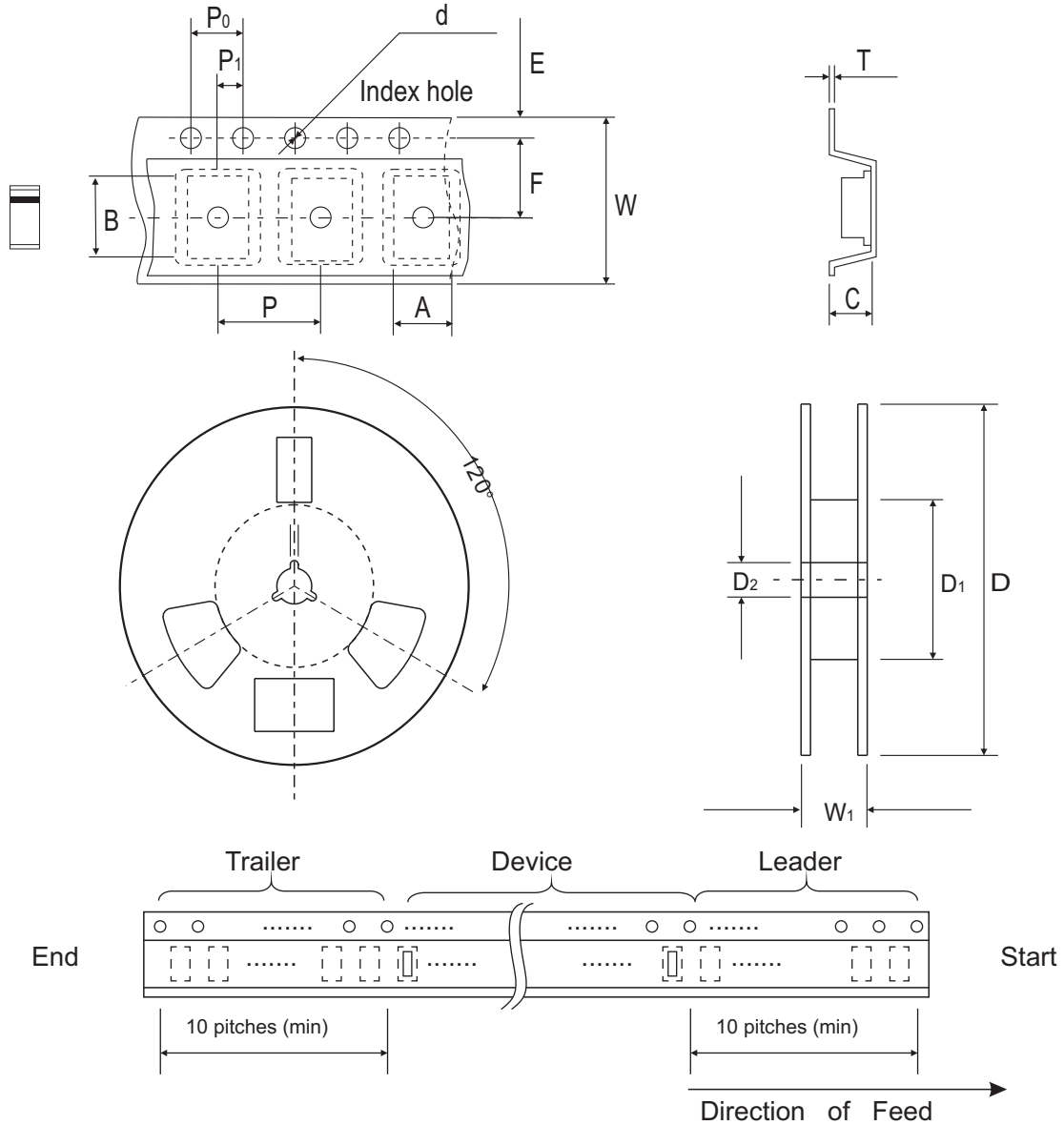


Fig.5- Typical Junction Capacitance



Reel Taping Specification



Mini-SMA/SOD-123	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.90 ± 0.10	3.90 ± 0.10	1.68 ± 0.10	1.50 ± 0.10	178 ± 2.00	62.0 MIN.	13.0 ± 0.50
	(inch)	0.075 ± 0.04	0.154 ± 0.04	0.066 ± 0.04	0.059 ± 0.004	7.00 ± 0.079	2.440 MIN.	0.512 ± 0.020

Mini-SMA/SOD-123	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(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 ± 0.004

Marking Code

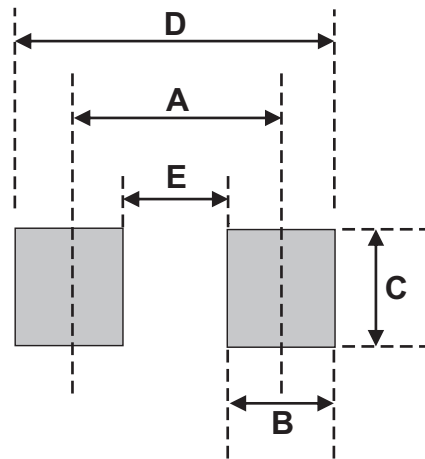
Part Number	Marking Code
CSFM101-HF	S1
CSFM102-HF	S2
CSFM103-HF	S3
CSFM104-HF	S6
CSFM105-HF	S8



XX = Product type marking code

Suggested PAD Layout

SIZE	Mini-SMA/SOD-123	
	(mm)	(inch)
A	3.30	0.130
B	1.40	0.055
C	1.90	0.075
D	4.70	0.185
E	1.90	0.075



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
Mini-SMA/SOD-123	2500	7