

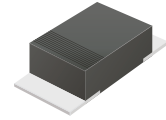
## CSFM103-HF Thru. CSFM105-HF

Reverse Voltage: 200 to 600 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

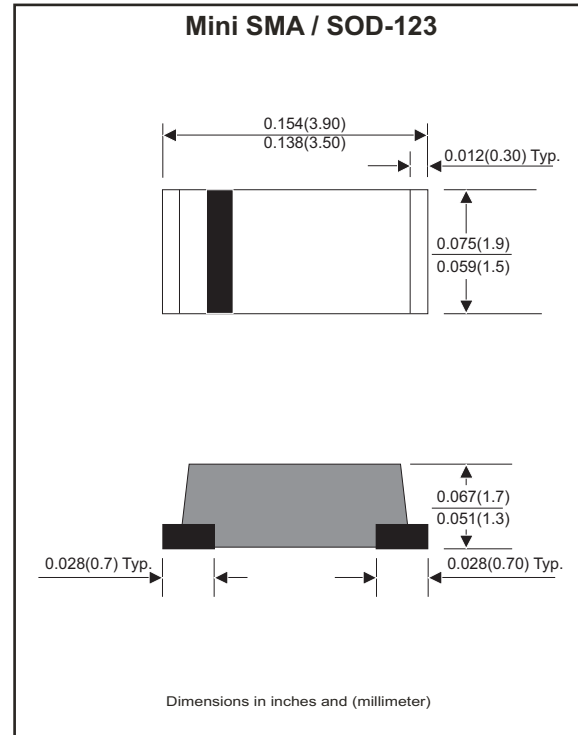


### Features

- Batch process design,excellent power dissipation offers better reverse leakage current and thermal resistance.
- 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.
- Mounting position: Any
- Weight: 0.018 grams approx.



### Maximum Ratings (at T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Conditions	Symbol	CSFM 103-HF	CSFM 104-HF	CSFM 105-HF	Unit
Repetitive peak reverse voltage		V <sub>RRM</sub>	200	400	600	V
Continuous reverse voltage		V <sub>DC</sub>	200	400	600	V
RMS voltage		V <sub>RMS</sub>	140	280	420	V
Max. forward rectified current	Ambient temperature=50°C	I <sub>o</sub>	1.0			A
Maximum Instantaneous forward voltage at I <sub>F</sub> =1.0A		V <sub>F</sub>	0.95	1.25	1.70	V
Forward surge current	8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	25			A
Max. Reverse recovery time	I <sub>F</sub> =0.5A , I <sub>R</sub> =1.0A I <sub>RR</sub> =0.25A	T <sub>rr</sub>	35			nS
Max.Reverse current	V <sub>R</sub> =V <sub>RRM</sub> T <sub>J</sub> =@25°C V <sub>R</sub> =V <sub>RRM</sub> T <sub>J</sub> =@125°C	I <sub>R</sub>	5.0 100			μA
Typ. Thermal resistance	Junction to ambient	R <sub>θJA</sub>	42			°C/W
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C <sub>J</sub>	10			pF
Operating junction temperature		T <sub>J</sub>	-55 to +150			°C
Storage temperature range		T <sub>STG</sub>	-65 to +175			°C

## Rating and Characteristic Curves (CSFM103-HF Thru. CSFM105-HF)

Fig.1- Typical Forward Characteristics

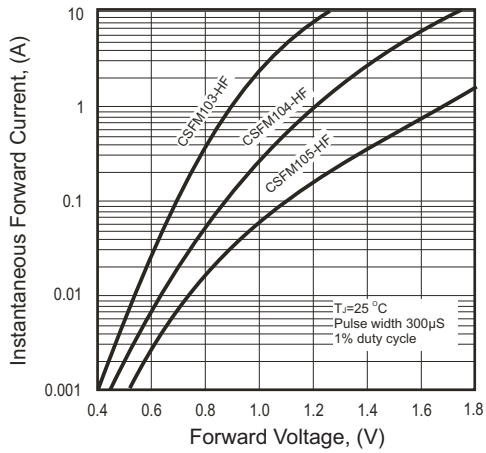


Fig.2-Typical Forward Current Derating Curve

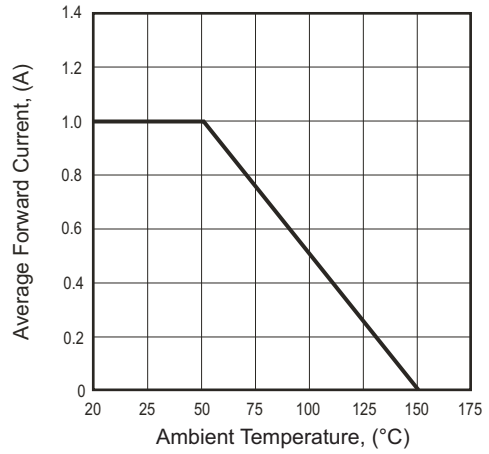
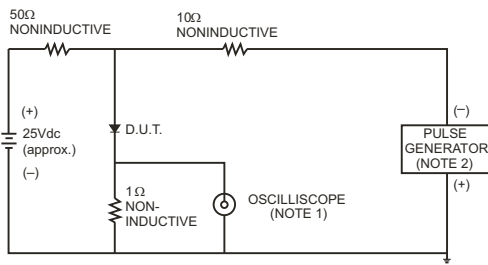


Fig.3- Test Circuit Diagram and Reverse Recovery Time Characteristics



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

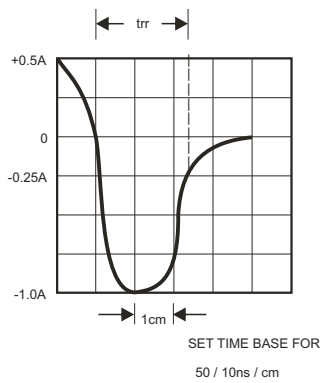


Fig.4 - Non-repetitive Forward Surge Current

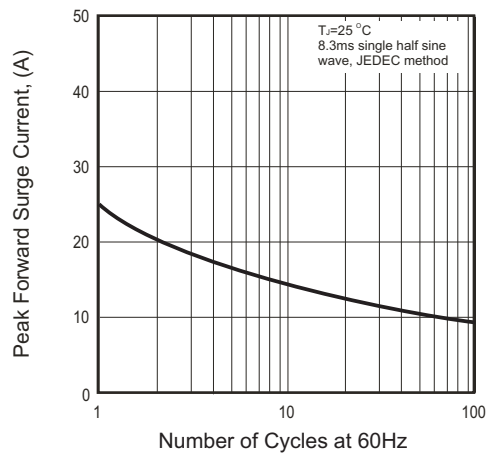
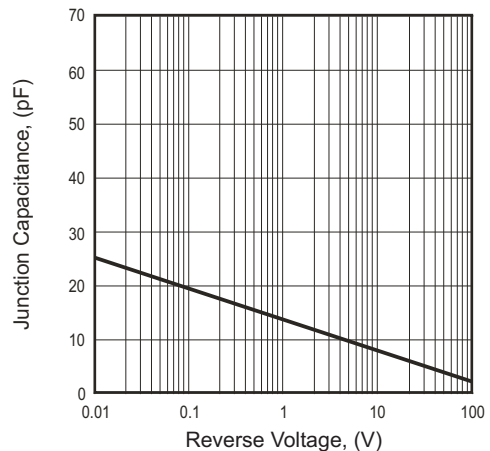
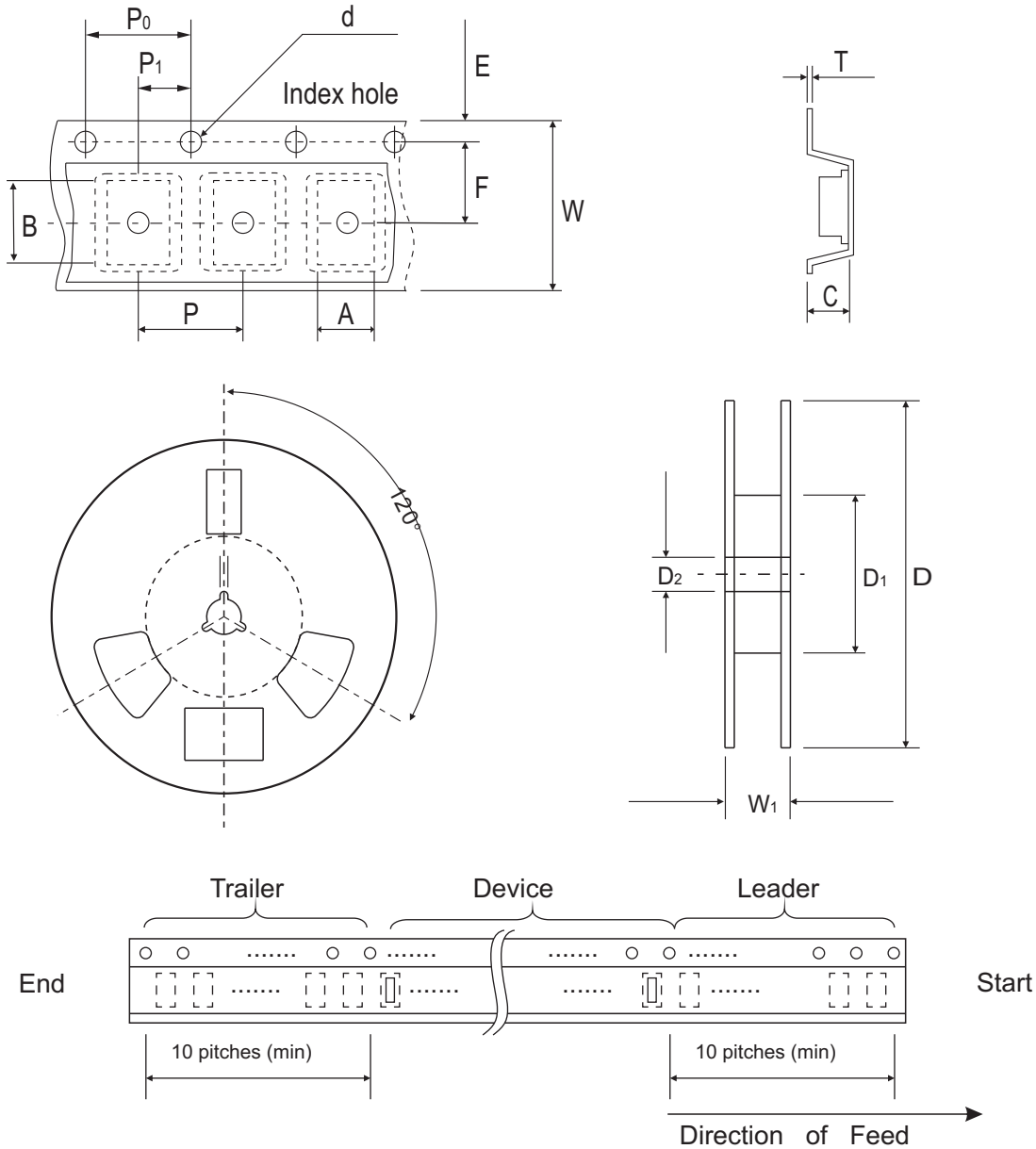


Fig.5- Typical Junction Capacitance



## Reel Taping Specification



Mini-SMA/SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(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	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 ± 0.004

## Marking Code

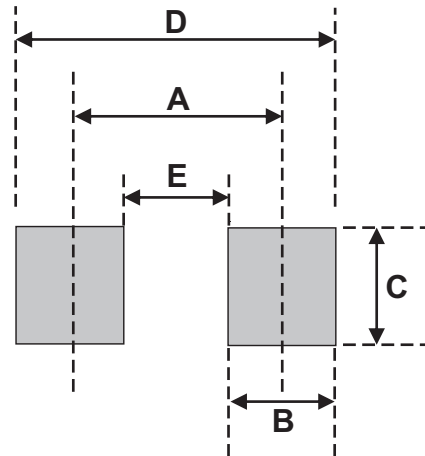
Part Number	Marking Code
CSFM103-HF	S4
CSFM104-HF	S6
CSFM105-HF	S8



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 Packaging

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
Mini-SMA/SOD-123	2,500	7