



# THE DATASHEET OF CGRM4004-HF

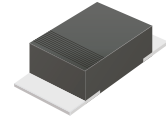


## CGRM4004-HF Thru. CGRM4007-HF

Reverse Voltage: 400 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device  
Halogen Free

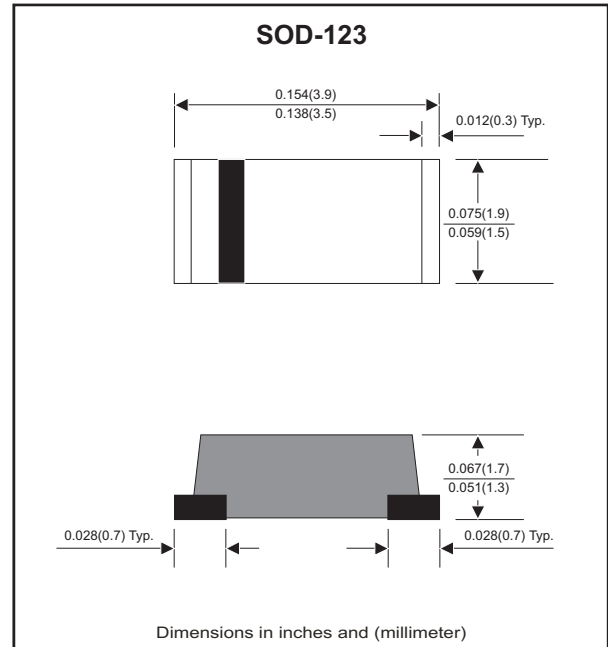


### Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Exceeds environmental standards of MIL-STD-19500/228.
- Low leakage current.

### Mechanical data

- Case: Molded plastic, JEDEC SOD-123/Mini SMA.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.018 grams approx.



### Circuit diagram



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

Parameter	Symbol	CGRM 4004-HF	CGRM 4005-HF	CGRM 4007-HF	Unit
Max. repetitive peak reverse voltage	$V_{RRM}$	400	600	1000	V
Max. DC blocking voltage	$V_{DC}$	400	600	1000	V
Max. RMS voltage	$V_{RMS}$	280	420	700	V
Max. averaged forward current	$I_o$	1.0			A
Maximum Instantaneous forward voltage at $I_F=1.0A$	$V_F$	1.1	1.0	1.1	V
Forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30			A
Reverse current at rated @ $T_A=25^\circ\text{C}$ DC blocking voltage @ $T_A=125^\circ\text{C}$	$I_R$		5 50		$\mu\text{A}$
Thermal resistance, junction to ambient air	$R_{\theta JA}$	60			$^\circ\text{C/W}$
Operating junction temperature	$T_J$	-55 to +150			$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-65 to +175			$^\circ\text{C}$
Junction capacitance $f=1\text{MHz}$ and applied 4V DC reverse voltage	$C_J$	15			pF

## Rating and Characteristic Curves (CGRM4004-HF Thru. CGRM4007-HF)

Fig.1- Reverse Characteristics

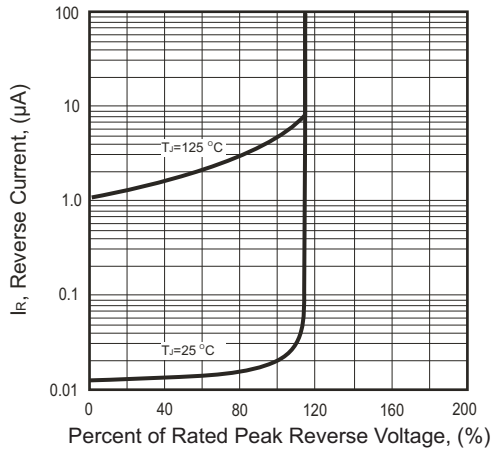


Fig.2- Forward Characteristics

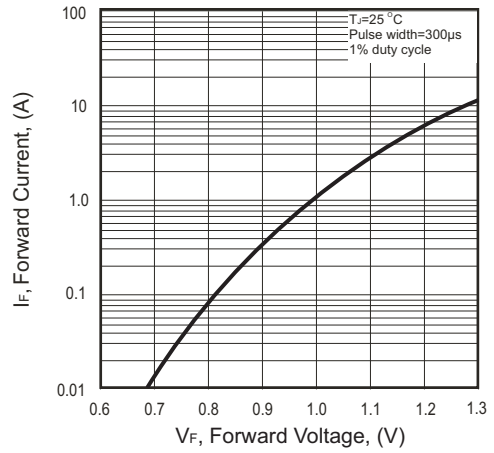


Fig.3 Junction Capacitance

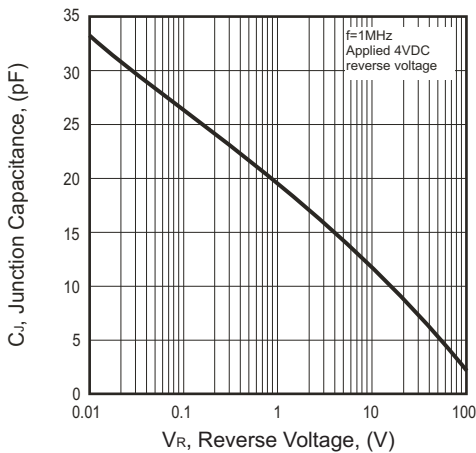


Fig.4 Current Derating Curve

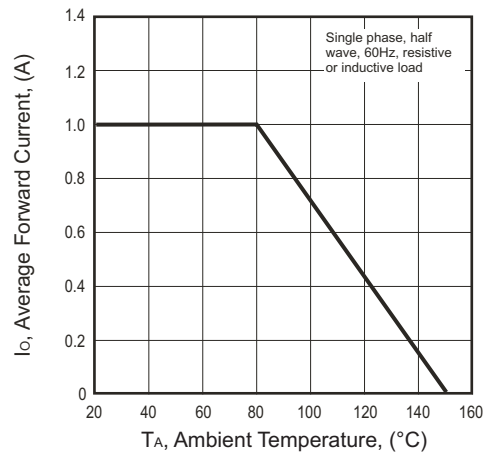
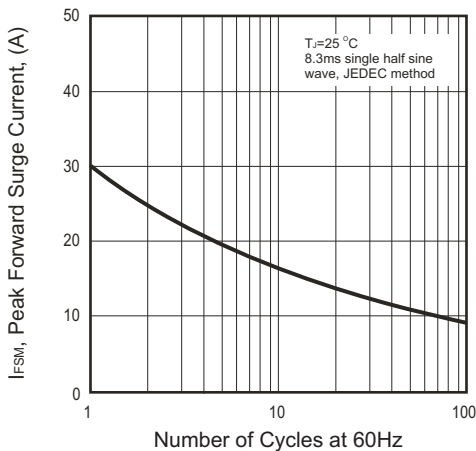
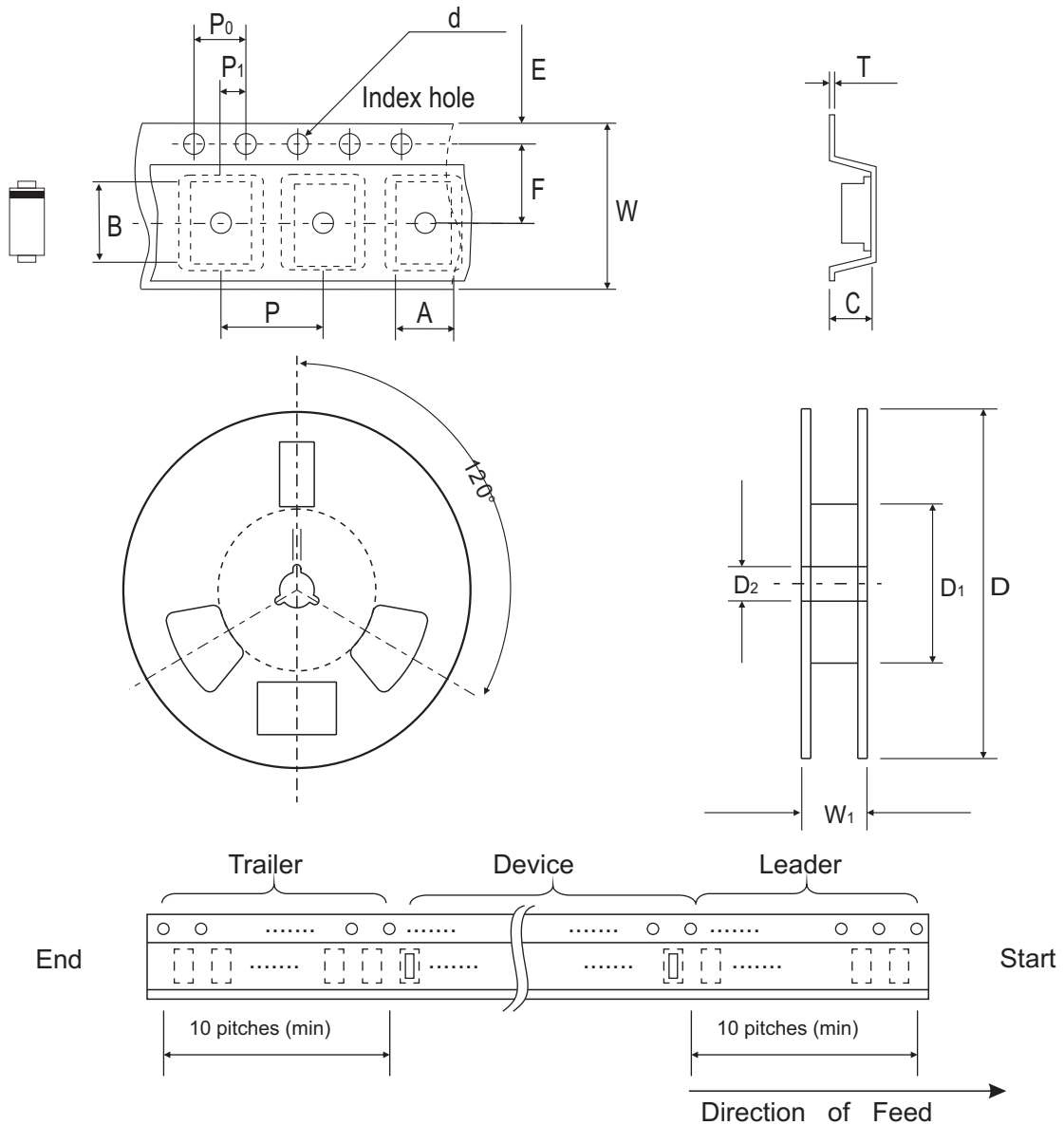


Fig.5 Non-repetitive Forward Surge Current



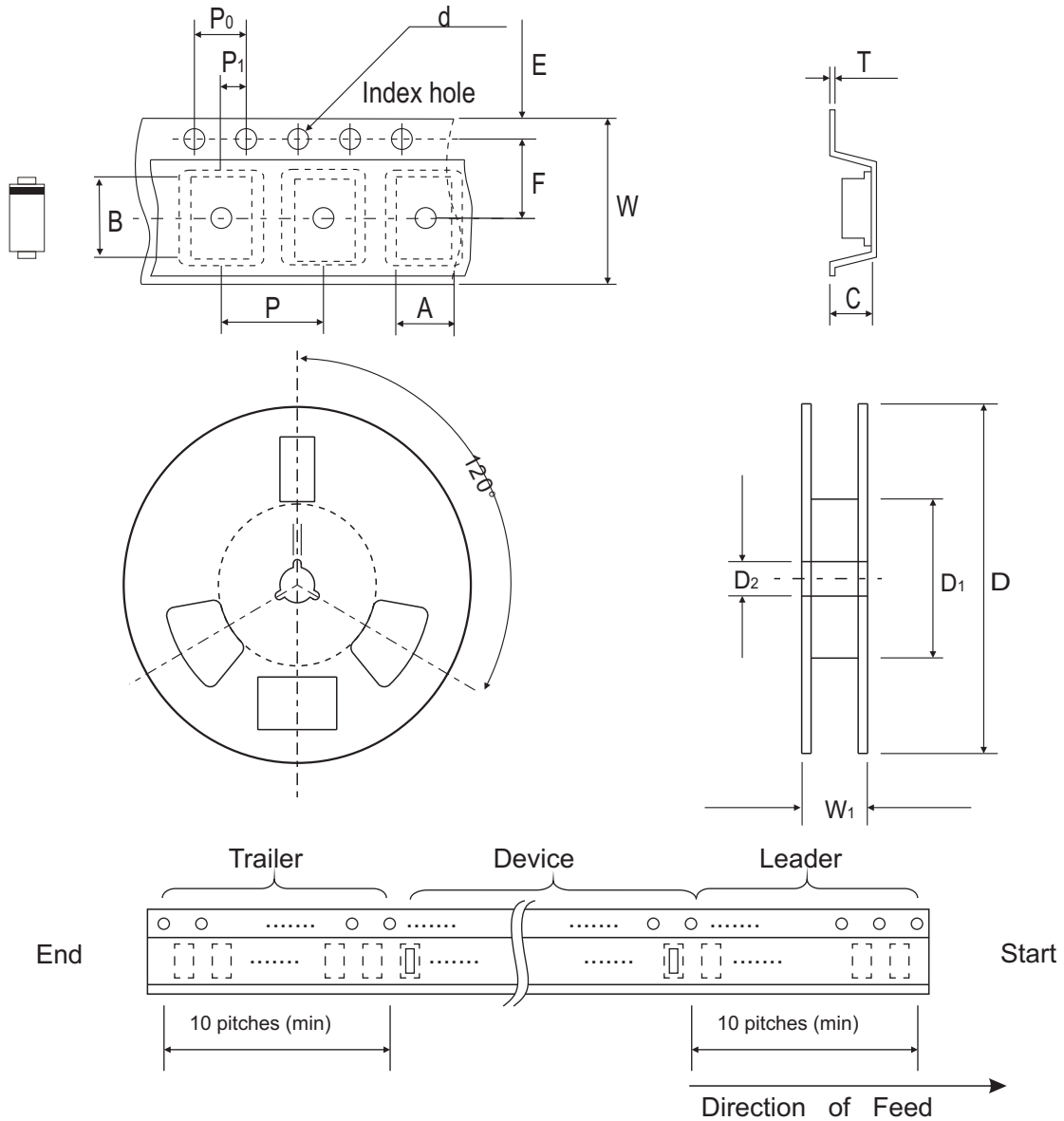
## Reel Taping Specification ( 7" Reel )



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	0.153 ± 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	11.4 ± 1.00
	(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 ± 0.040

## Reel Taping Specification ( 13" Reel )



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	330 ± 2.00	62.0 MIN.	13.0 ± 0.50
	(inch)	0.075 ± 0.04	0.153 ± 0.04	0.066 ± 0.04	0.059 ± 0.004	12.99 ± 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	11.4 ± 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 ± 0.040

## Marking Code

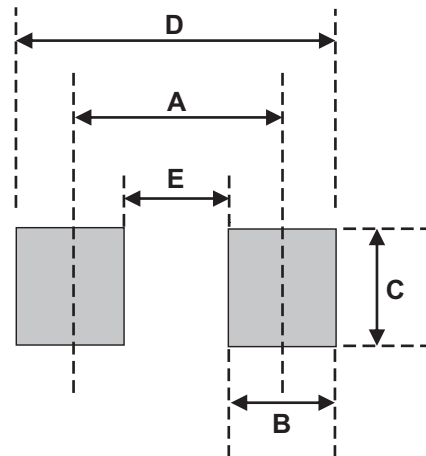
Part Number	Marking Code
CGRM4004-HF	A4
CGRM4005-HF	A5
CGRM4007-HF	A7



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
	10,000	13

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