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## SMD General Purpose Rectifiers



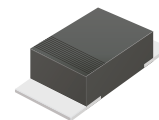
# CGRM4001-HF Thru. CGRM4007-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

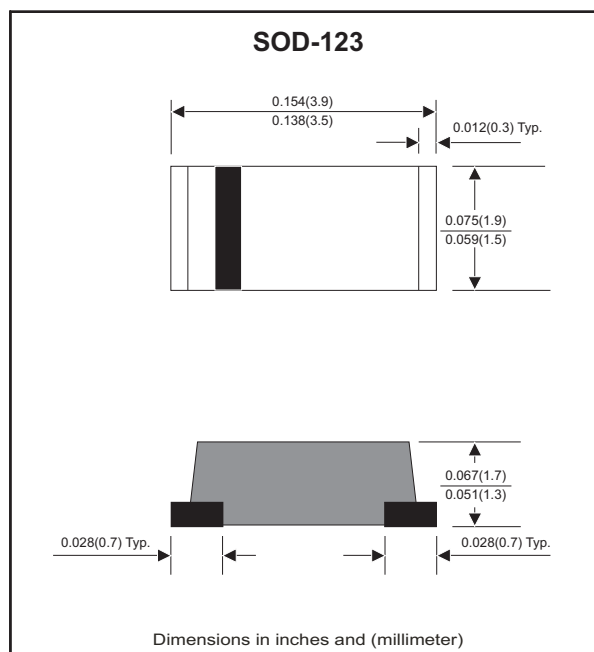


### Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Exceeds environmental standard MIL-S-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 4001-HF	CGRM 4002-HF	CGRM 4003-HF	CGRM 4004-HF	CGRM 4005-HF	CGRM 4006-HF	CGRM 4007-HF	Unit
Max. repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Max. DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Max. RMS voltage	$V_{RMS}$	35	70	140	280	420	560	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

# SMD General Purpose Rectifiers



## Rating and Characteristic Curves (CGRM4001-HF Thru. CGRM4007-HF)

Fig.1- Reverse Characteristics

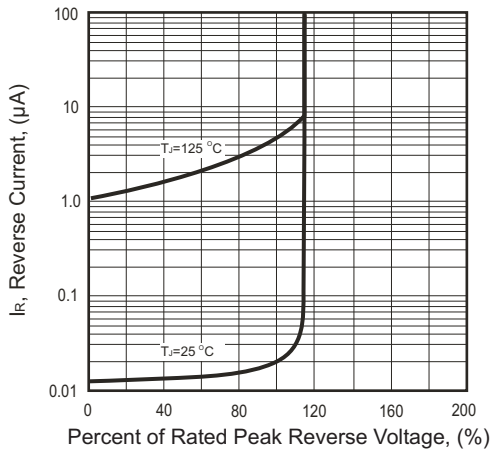


Fig.2- Forward Characteristics

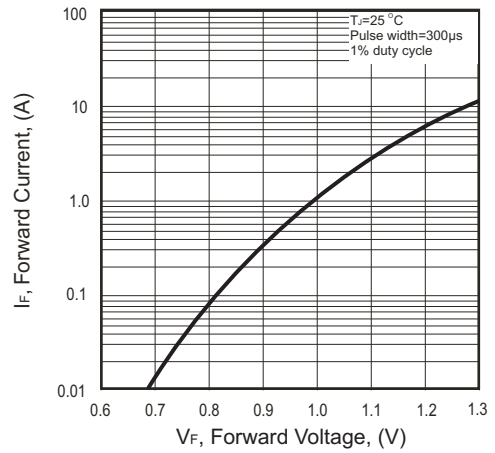


Fig.3 Junction Capacitance

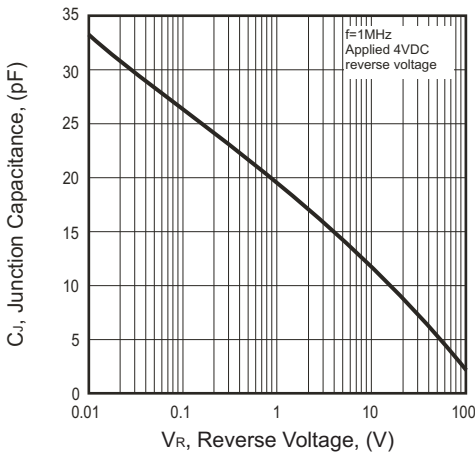


Fig.4 Current Derating Curve

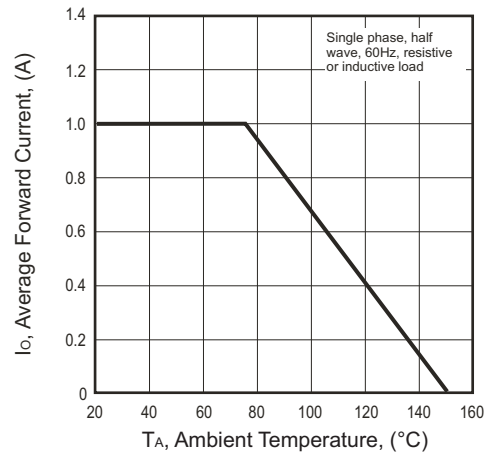
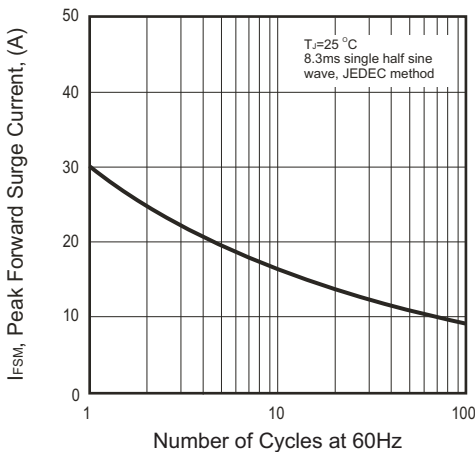


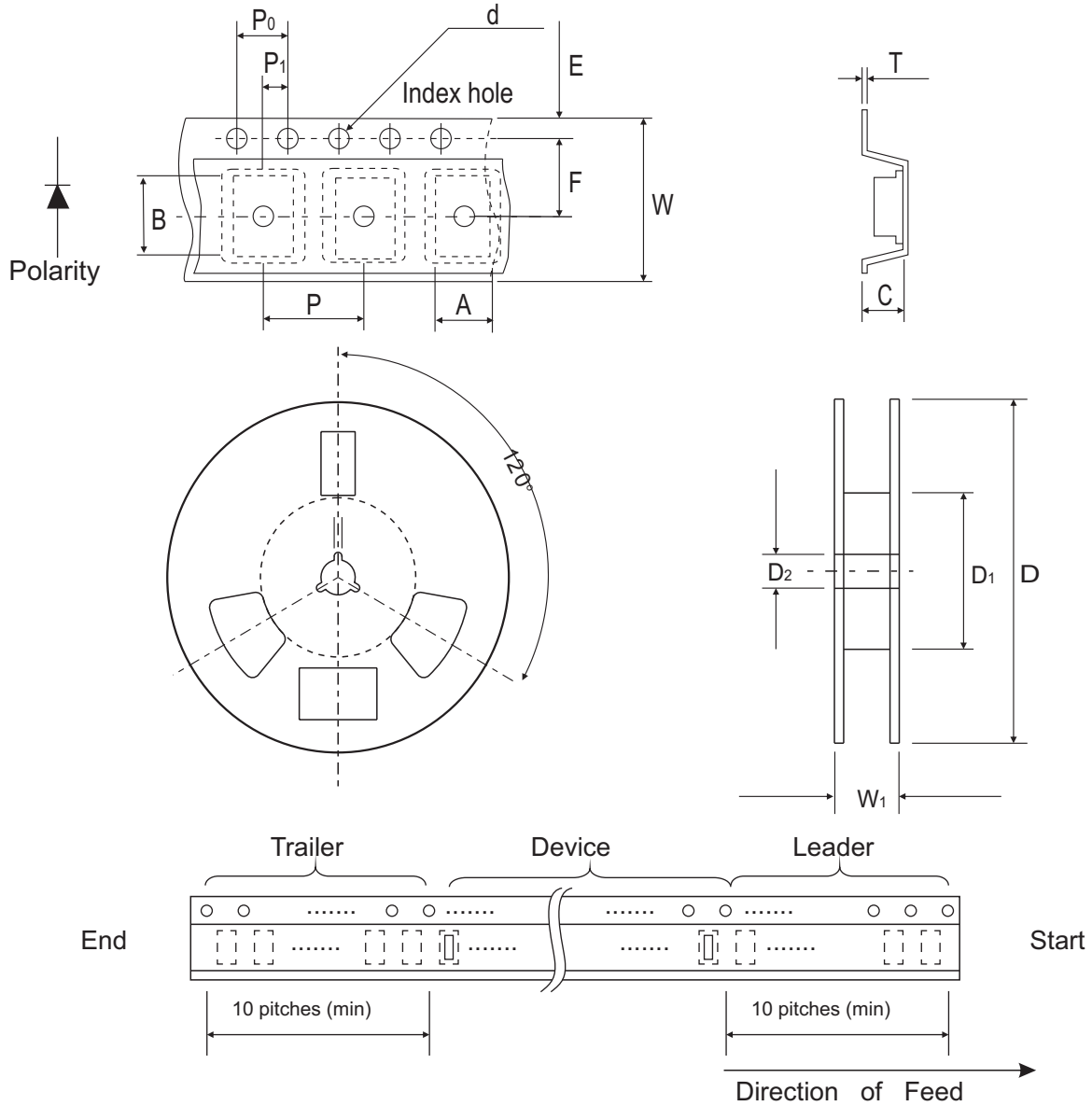
Fig.5 Non-repetitive Forward Surge Current



# SMD General Purpose Rectifiers



## Reel Taping Specification ( 7" Reel )



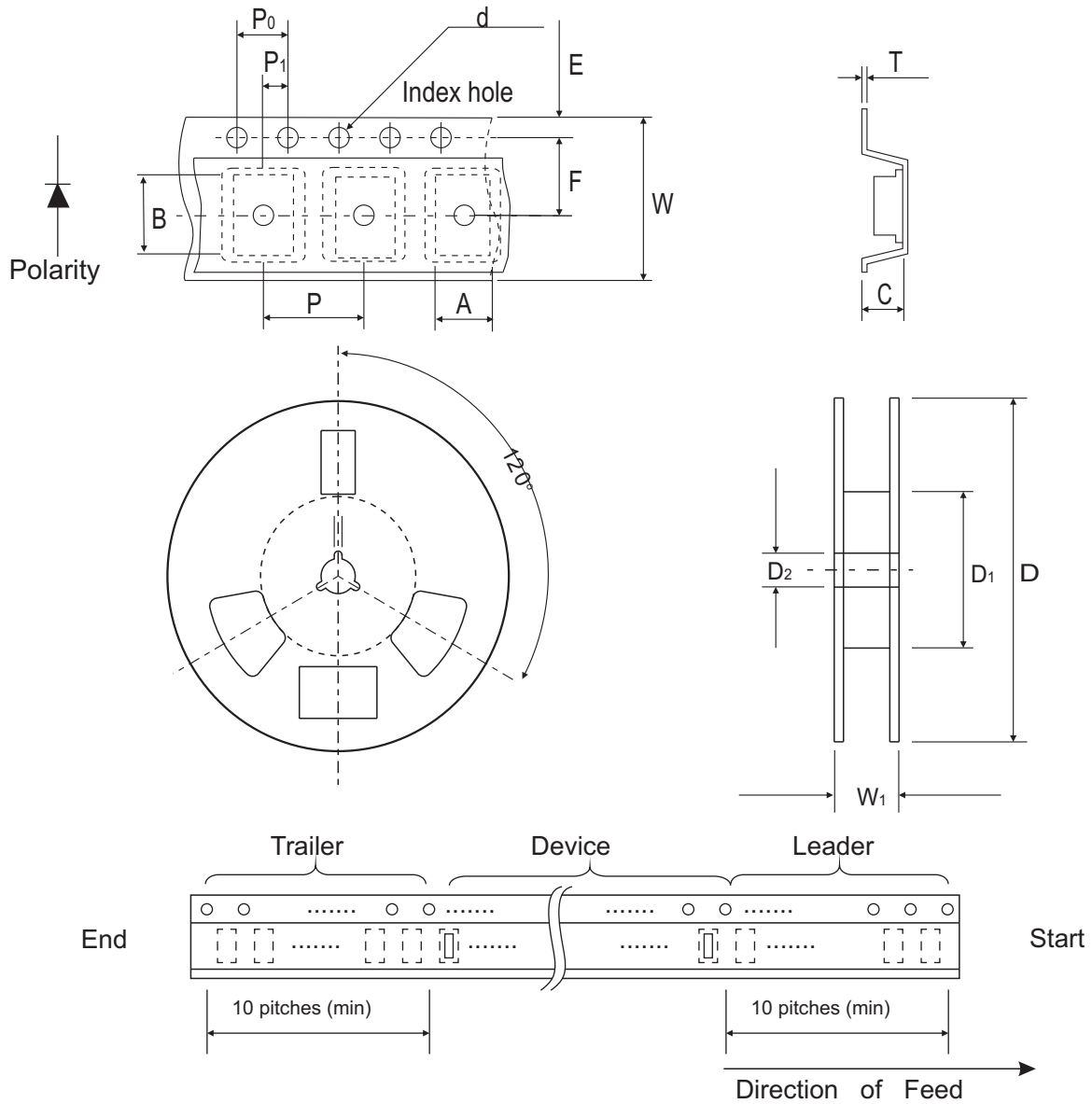
	SYMBOL	A	B	C	d	D	D1	D2
Mini-SMA/SOD-123	(mm)	1.90 ± 0.10	3.90 ± 0.10	1.68 ± 0.10	1.50 ± 0.10	178 ± 2.00	62.0 MIN.	13.0 ± 0.50
	(inch)	0.075 ± 0.04	0.153 ± 0.04	0.066 ± 0.04	0.059 ± 0.004	7.00 ± 0.079	2.440 MIN.	0.512 ± 0.020

	SYMBOL	E	F	P	P0	P1	T	W	W1
Mini-SMA/SOD-123	(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

# SMD General Purpose Rectifiers



## Reel Taping Specification ( 13" Reel )



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

	SYMBOL	E	F	P	P0	P1	T	W	W1
Mini-SMA/SOD-123	(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

## SMD General Purpose Rectifiers

### Marking Code

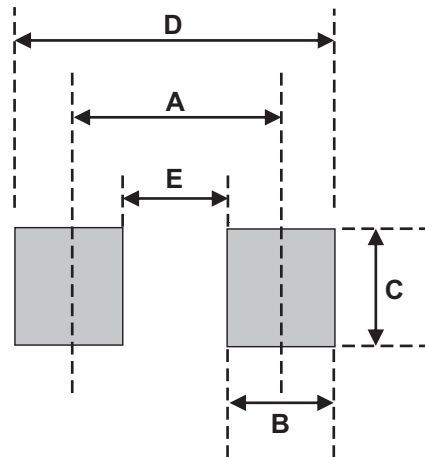
Part Number	Marking Code
CGRM4001-HF	A1
CGRM4002-HF	A2
CGRM4003-HF	A3
CGRM4004-HF	A4
CGRM4005-HF	A5
CGRM4006-HF	A6
CGRM4007-HF	A7



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