

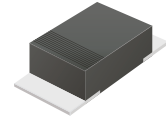
## CGRMT4001-HF Thru. CGRMT4007-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

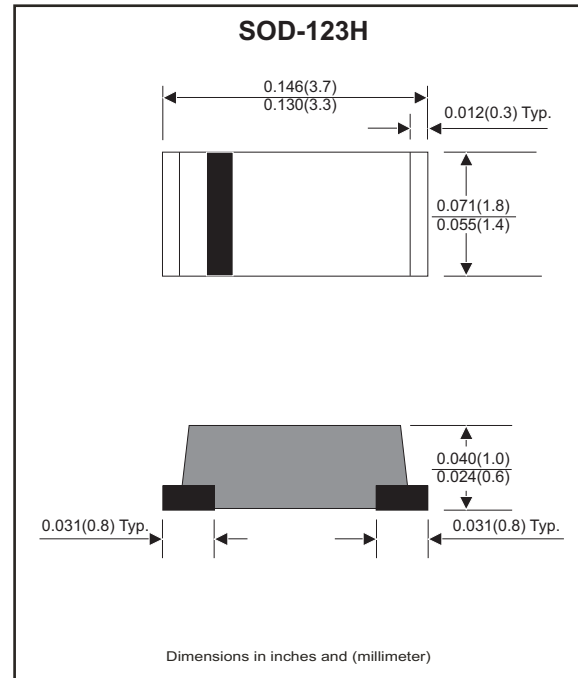


### Features

- 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.
- High surge capability.
- Glass passivated chip junction.
- Lead-free parts meet environmental standards of MIL-STD-19500/228

### 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<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	CGRMT 4001-HF	CGRMT 4002-HF	CGRMT 4003-HF	CGRMT 4004-HF	CGRMT 4005-HF	CGRMT 4006-HF	CGRMT 4007-HF	Unit
Max. repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Max. Continuous reverse voltage	V <sub>R</sub>	50	100	200	400	600	800	1000	V
Max. RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Max. averaged forward current	I <sub>o</sub>	1.0							A
Max. Forward voltage @ I <sub>F</sub> =1.0A	V <sub>F</sub>	1.1							V
Max. Forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	25							A
Max. Reverse current	V <sub>R</sub> =V <sub>RRM</sub> T <sub>J</sub> =25°C	5.0							μA
	V <sub>R</sub> =V <sub>RRM</sub> T <sub>J</sub> =100°C	50							
Typ. Thermal resistance, junction to ambient air	R <sub>θJA</sub>	60							°C/W
Typ. Junction capacitance f=1MHz and applied 4V DC reverse voltage	C <sub>J</sub>	15							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 (CGRMT4001-HF Thru. CGRMT4007-HF)

Fig.1- Typical Forward Current Derating Curve

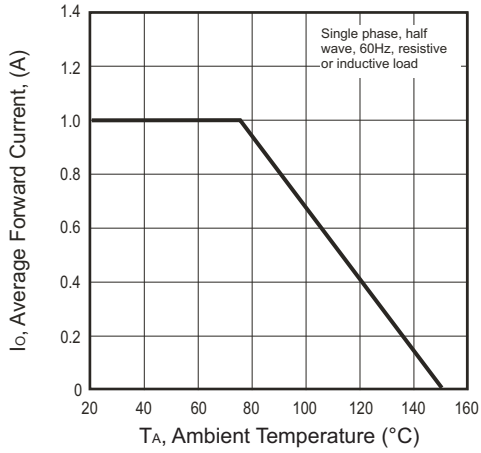


Fig.1- Typical Forward Characteristics

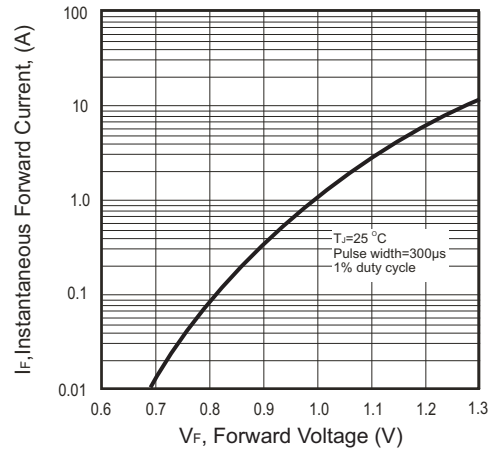


Fig.3- Typical Reverse Characteristics Forward Surge Current

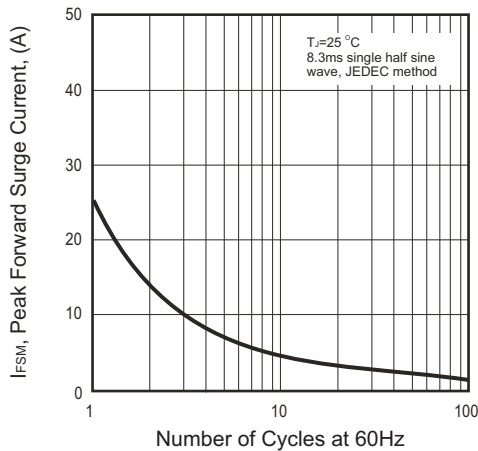


Fig.4- Typical Junction Capacitance

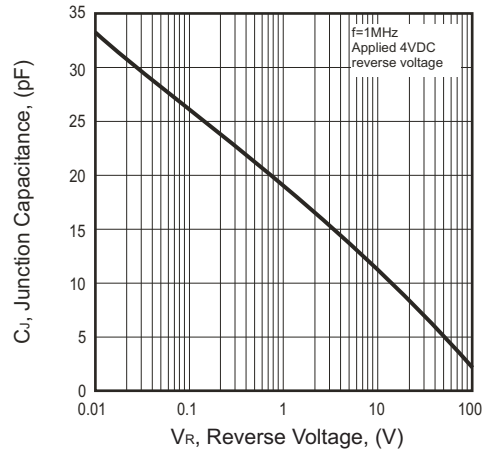
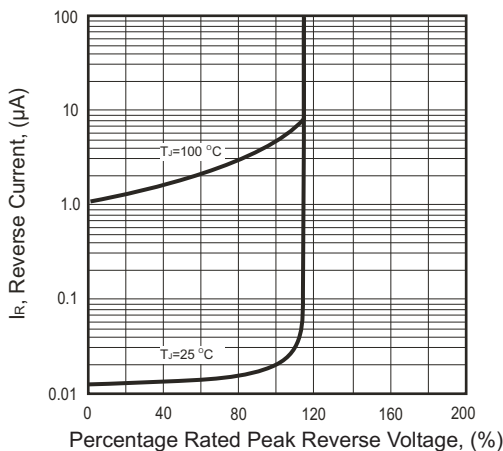
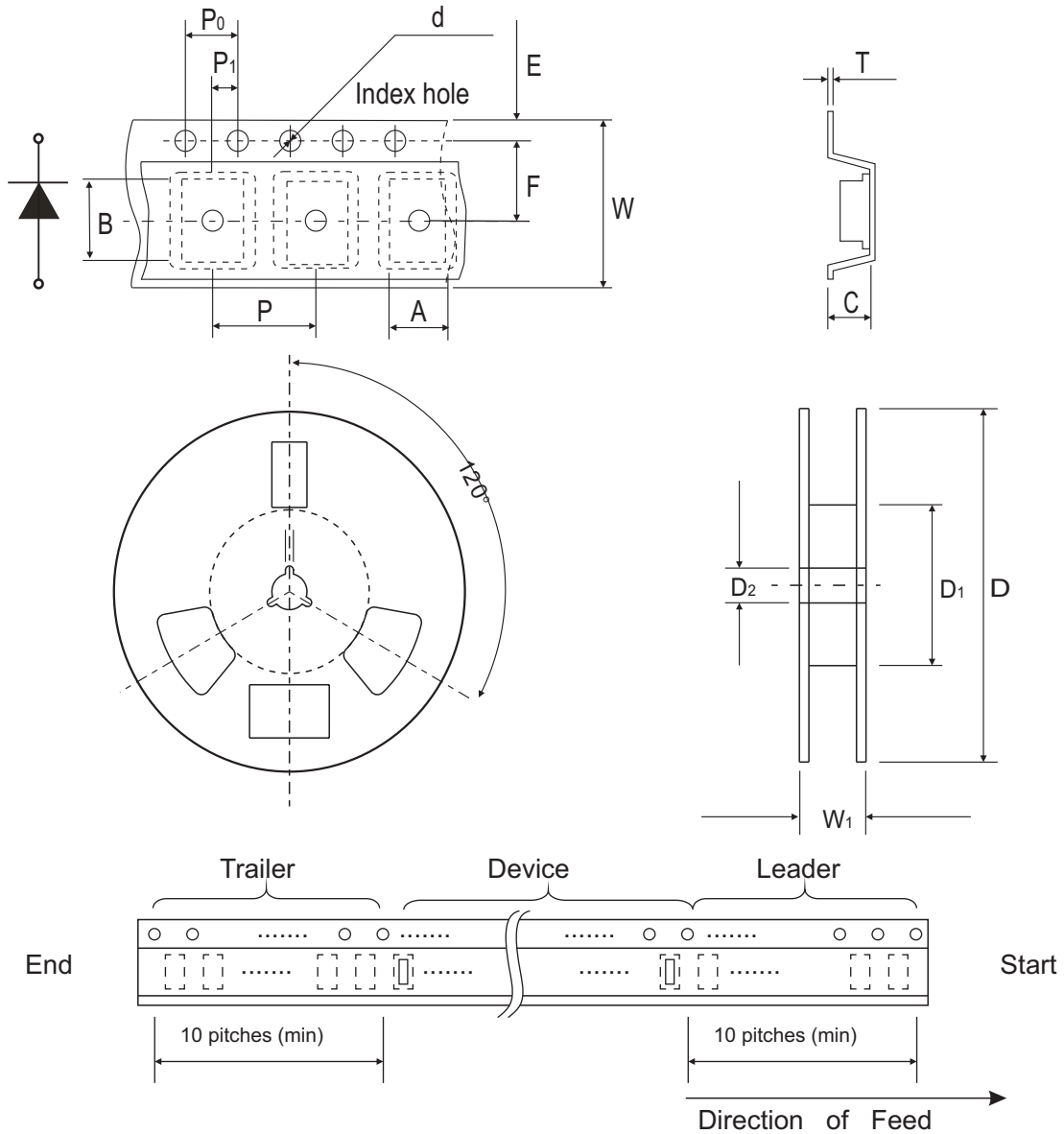


Fig.5- Maximum Non-repetitive





## 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

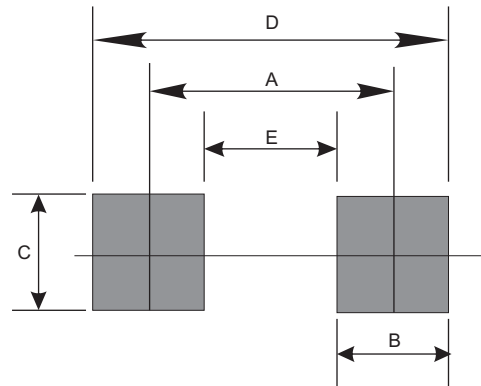
Part Number	Marking Code
CGRMT4001-HF	A1
CGRMT4002-HF	A2
CGRMT4003-HF	A3
CGRMT4004-HF	A4
CGRMT4005-HF	A5
CGRMT4006-HF	A6
CGRMT4007-HF	A7



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	3000	30000	240000	7	Plastic