### Low Profile SMD General Purpose Rectifiers Comchip



### CGRMT4004-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 surface mounted application in order to optimize board space.
- -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



-Epoxy: UL94V-0 rated flame retardant.

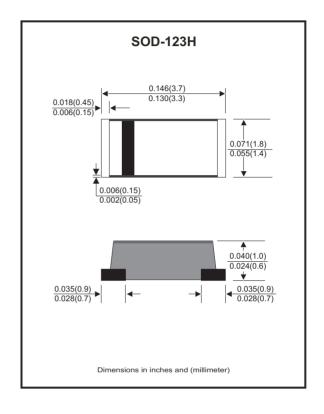
-Case: Molded plastic, SOD-123H/MINI SMA

-Terminals: Solderable per MIL-STD-750, Method 2026.

-Polarity: Indicated by cathode band.

-Mounting Position: any

-Weight: 0.011 grams approx.



#### Maximum Ratings and Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter		Symbol	CGRMT 4004-HF	CGRMT 4005-HF	CGRMT 4007-HF	Unit
Max. Repetitive peak reverse voltage		VRRM	400	600	1000	V
Max. Continuous reverse voltage		VR	400	600	1000	V
Max. RMS voltage		V <sub>RMS</sub>	280	420	700	V
Max. Averaged forward	Max. Averaged forward current		1.0			А
Max. Forward voltage @ I=1.0A		VF	1.1			V
Max. Forward surge current 8.3ms singe half sine-wave superimposed on rated load (JEDEC method)		Ігэм	25			А
Max. Reverse current		l <sub>R</sub>	5.0			
Max. Neverse current	VR=VRRM TJ=125°C		50			μA
Typ. Thermal resistance, junction to ambient air		Røja	60			°C/W
Typ. Junction capacitance f=1MHz and applied 4V DC reverse voltage		C³	15			pF
Operating junction temperature		TJ	-55 to +150			°C
Storage temperature range		Тѕтс	-65 to +175			°C

Company reserves the right to improve product design, functions and reliability without notice.

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Rating and Characteristic Curves (CGRMT4004-HF Thru. CGRMT4007-HF)

Fig.1 - Typical Forward Current **Derating Curve** 1.4 P.C.B. Mounted on 0.2" \* 0.2"(5mm\*5mm) Copper Pad Areas 1.2 Average Forward Current, (A) 1.0 0.8 0.6 0.4 0.2 0 0 25 100 150

Fig.3 - Maximum Non-repetitive Forward Surge Current

Lead Temperature (°C)

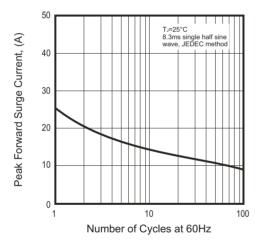


Fig.5 - Typical Revrse Characteristics

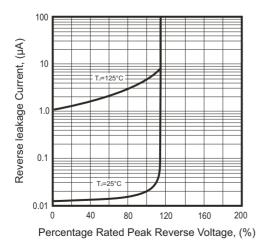


Fig.2 - Typical Forward Characteristics

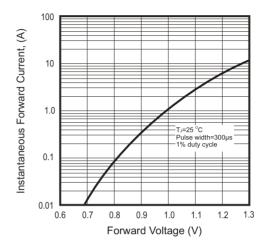
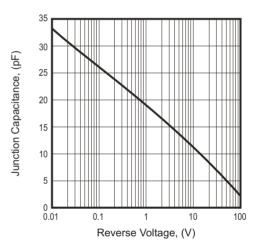


Fig.4 - Typical Junction Capacitance

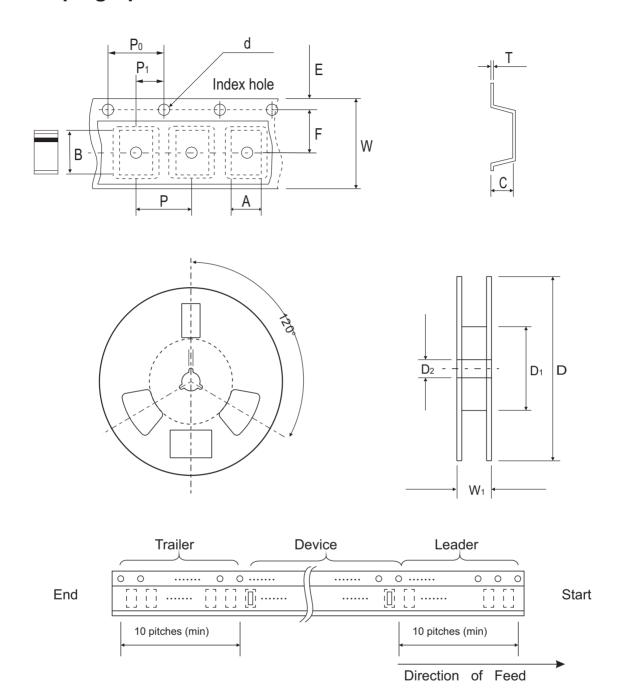


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### **Reel Taping Specification**



	SYMBOL	Α	В	С	d	D	D1	D2
SOD-123H	(mm)	2.00 ± 0.10	3.85 ± 0.10	1.10 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	62.00 (min)	13.00 ± 0.50
	(inch)	0.079 ± 0.004	0.152 ± 0.004	0.043 ± 0.004	0.059 ± 0.004	7.007 ± 0.079	2.441 (min)	0.512 ± 0.020

	SYMBOL	E	F	Р	Po	P1	T	W	<b>W</b> 1
SOD-123H	(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 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	$0.079 \pm 0.004$	0.009 ± 0.04	$0.315 \pm 0.012$	0.449 ± 0.039

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### **Pinning information**

Pin	Simplified outline	Symbol	
PIN 1 Cathode PIN 2 Anode	1 2	1 2	

### **Marking Code**

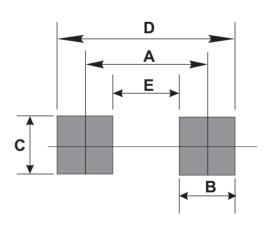
Part Number	Marking Code
CGRMT4004-HF	A4
CGRMT4005-HF	A5
CGRMT4007-HF	A7



xx = Product type marking code

### **Suggested PAD Layout**

SIZE	SOD-123H			
SIZL	(mm)	(inch)		
Α	3.00	0.118		
В	1.30	0.051		
С	1.80	0.071		
D	4.30	0.169		
E	1.70	0.067		



### **Standard Packaging**

	REEL PACK			
Case Type	REEL (pcs)	Reel Size (inch)		
SOD-123H	3,000	7		

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