

Low Profile SMD Fast Recovery Rectifiers

**Package: SOD-123H / MINI SMA
(Molded Plastic)**

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

Excellent power dissipation offers better reverse leakage current and thermal resistance

Low profile package is 40% thinner than standard SOD-123 package

Low power loss, high efficiency

High current capability, low forward voltage drop.

High surge capability

Guarding for over voltage protection

Ultra high-speed switching

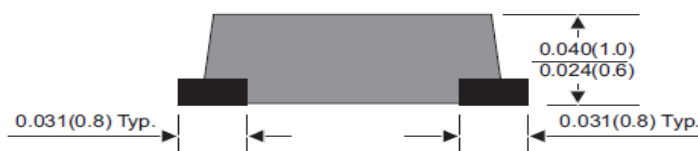
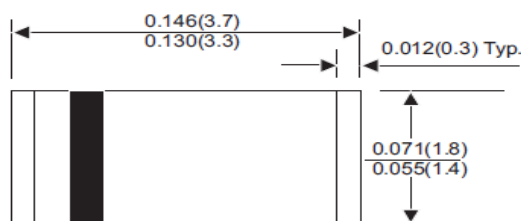
Silicon epitaxial planar chip, metal silicon junction.

Lead-free part meets environmental standards of MIL-STD-19500/228

Comchip's CFRMT fast recovery rectifier series utilizes the low profile flat chip SOD-123H (MINI SMA) package. The SOD-123H measures just: 1.6mm(w) x 3.5mm(l) x 0.8mm(h). The slim package design makes the CFRMT series ideal for components of DC power supplies and high-voltage direct current power transmission systems. With today's market demanding smaller and thinner products, Comchip is striving to exceed market demands with quality products at a conveniently low price. With a forward current of 1 amp, reverse voltage applications range from 50 to 1000 volts.



SOD-123H



Dimensions in inches and (millimeter)

Epoxy: UL94-V0 rated flame retardant

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

Polarity: Indicated by cathode band

Mounting Position: Any

Weight: 0.011 grams

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Maximum Ratings (at T_A=25°C unless otherwise noted)

Parameter		Symbol	CFRMT 101-HF	CFRMT 102-HF	CFRMT 103-HF	CFRMT 104-HF	CFRMT 105-HF	CFRMT 106-F	CFRMT 107-HF	Unit
Max. Repetitive peak reverse voltage		V _{RRM}	50	100	200	400	600	800	1000	V
Max. Continuous reverse voltage		V _R	50	100	200	400	600	800	1000	V
Max. RMS voltage		V _{RMS}	35	70	140	280	420	560	700	V
Max. Forward rectified current Ambient temperature=55°C		I _O	1.0							A
Max. Forward voltage @ I _F =1.0A		V _F	1.3							V
Max. Reverse recovery time (note 1)		T _{RR}	150			250	500			ns
Max. Forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		I _{FSM}	25							A
Max. Reverse current	V _R =V _{RRM} T _J =25°C	I _R	5.0							μA
	V _R =V _{RRM} T _J =100°C		100							
Typ. Thermal resistance Junction to ambient air		R _{θJA}	42							°C/W
Typ. Diode Junction capacitance f=1MHz and applied 4V DC reverse voltage		C _J	15							pF
Operating junction temperature		T _J	-55 to +150							°C
Storage temperature range		T _{STG}	-65 to +175							°C

Note 1. Reverse recovery time test condition, I_F=0.5A, I_R=1.0A, I_{RR}=0.25A