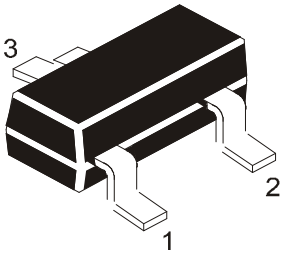
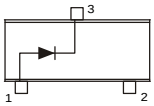
SILICON PLANAR SWITCHING DIODE

CMBD4148





Pin Configuration
1 = ANODE
2 = NC
3 = CATHODE

SOT-23
Formed SMD Package

Marking
CMBD4148 = 5H

High Speed Switching Diode

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Continuous Reverse Voltage	V_R	75	V
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Repetitive Peak Forward Voltage	I_{FRM}	500	mA
Forward Current	I_F	215	mA
Non Repetitive Peak Forward Current (per crystal)			
t=1ms	I_{FSM}	4.0	A
t=1ms	I_{FSM}	1.0	A
t=1s	I_{FSM}	0.5	A
Storage Temperature Range	T_{stg}	- 55 to + 150	^oC
Operating Junction Temperature	T_j	150	^oC

THERMAL RESISTANCE

Junction to Ambient in free air	$R_{th\ (j-a)}$	500	K/W

ELECTRICAL CHARACTERISTICS (T_a=25ºC unless specified otherwise) per diode

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Forward Voltage	V_F	I_F=10mA		1.0	V
Reverse Voltage Leakage Current	I_R	V_R=20V		25	nA
		V_R=75V		5.0	µA
		V_R=25V, T_J=150ºC		30	µA
Forward Recovery Voltage	V_{fr}	I_F=10mA, t_p=20ns		1.75	V
Recovery Charge	Q_S	I_F=10mA, to V_R=5V, R_L=100Ω		45	pC
Diode Capacitance	C_d	V_R=0V, f=1MHz		2.0	pF
Reverse Recovery Time	t_{rr}	I_F=10mA to I_R=60mA R_L=100Ω, measured at 1mA		4.0	ns

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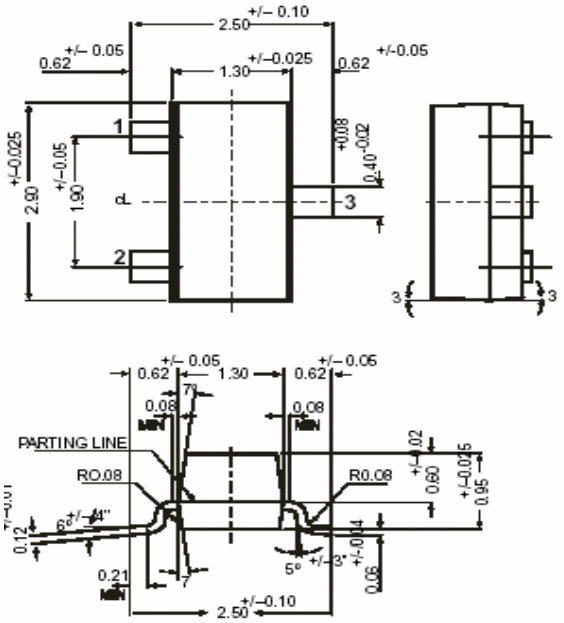
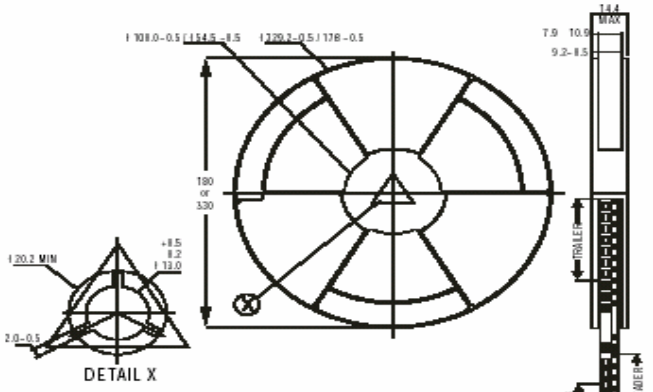
SOT-23 Formed SMD Package



SOT-23 Package Reel Information
Reel specifications for Packing (13"/7" reels)

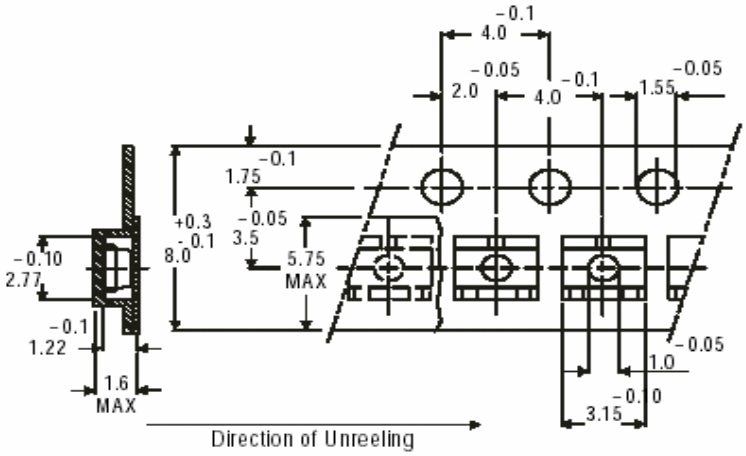


All dimensions in mm
330 / 180 mm Antistatic Coated Plastic Reel

NOTES:	8mm Tape Size of Reel 330 mm (13")	8mm Tape Size of Reel 180 mm (7")
No. of Devices	10,000 Pcs	3,000 Pcs

1. The bandolier of 330 mm reel contains at least 10,000 devices.
2. The bandolier of 180 mm reel contains at least 3,000 devices.
3. No more than 0.5% missing devices / reel. 50 empty compartments for 330 mm reel. 15 empty compartments for 180 mm reel.
4. Three consecutive empty places might be found provided this gap is followed by 6 consecutive devices.
5. The carrier tape (leader) starts with at least 75 empty positions (equivalent to 330 mm). In order to fix the carrier tape a self adhesive tape of 20 to 50 mm is applied. At the end of the bandolier at least 40 empty positions (equivalent to 160 mm) are there.

Tape Specification for SOT-23 Surface Mount Device



All dimensions in mm

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	**Net Weight/Qty**	**Size**	**Qty**	**Size**	**Qty**	**Gr Wt**
SOT-23 T&R	**3K/reel**	**136 gm/3K pcs**	**3" x 7.5" x 7.5"**	**12 K**	**17" x 15" x 13.5"**	**192 K**	**12 kgs**
			9" x 9" x 9"	**51 K**	**19" x 19" x 19"**	**408 K**	**28 kgs**
	10K/reel	**415 gm/10K pcs**	**13" x 13" x 0.5"**	**10 K**	**17" x 15" x 13.5"**	**300 K**	**16 kgs**

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Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.

2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

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