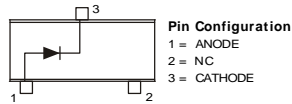
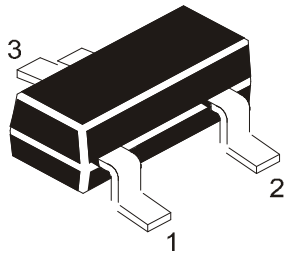


SILICON PLANAR SWITCHING DIODE

CMBD4148



**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=1μs	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	°C
Operating Junction Temperature	T_j	150	°C

THERMAL RESISTANCE

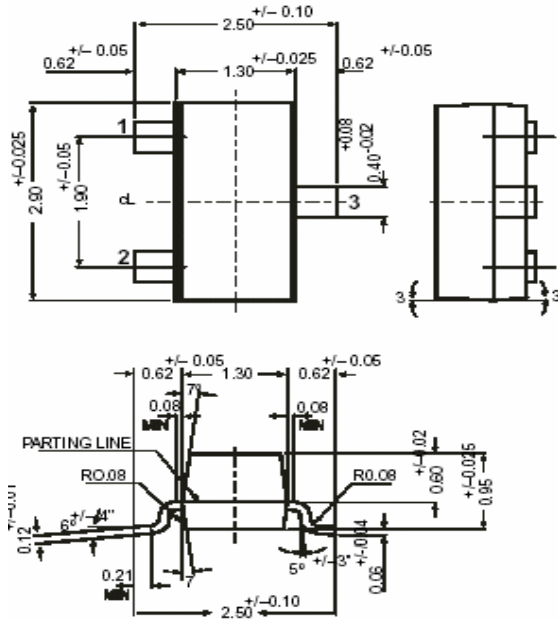
Junction to Ambient in free air	$R_{th(j-a)}$	500	K/W
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ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless specified otherwise) per diode

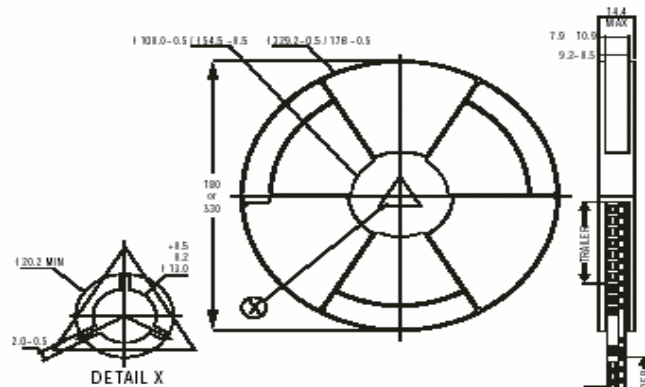
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Forward Voltage	V_F	$I_F=10\text{mA}$		1.0	V
Reverse Voltage Leakage Current	I_R	$V_R=20\text{V}$ $V_R=75\text{V}$ $V_R=25\text{V}, T_J=150^\circ\text{C}$		25 5.0 30	nA μA μA
Forward Recovery Voltage	V_{fr}	$I_F=10\text{mA}, t_p=20\text{ns}$		1.75	V
Recovery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



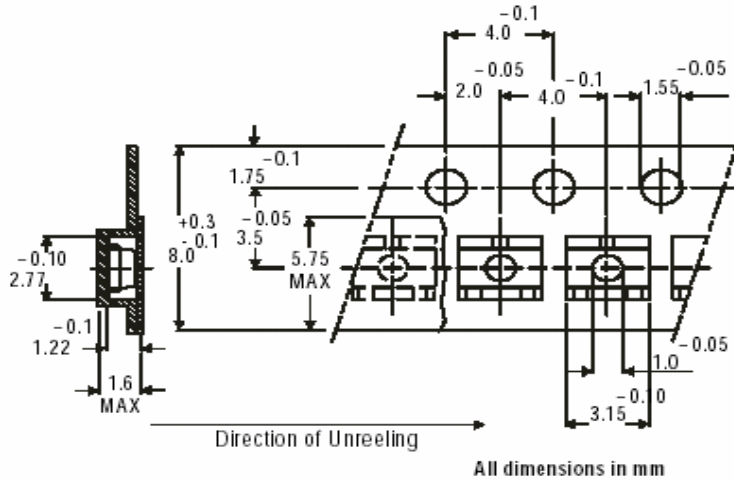
All dimensions in mm
330 / 180 mm Antistatic Coated Plastic Reel

NOTES:

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

1. The bandoler of 330 mm reel contains at least 10,000 devices.
2. The bandoler 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 bandoler at least 40 empty positions (equivalent to 180 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
	10K/reel	415 gm/10K pcs	9" x 9" x 9"	51 K	19" x 19" x 19"	408 K	28 kgs
			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

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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