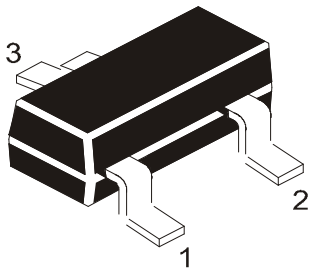
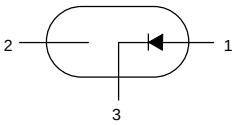
SOT-23 Formed SMD Package **CMBD4150**

SILICON PLANAR EPITAXIAL HIGH SPEED DIODE

Marking
CMBD4150 = D18



Pin configuration
1 = ANODE
2 = NC
3 = CATHODE



ABSOLUTE MAXIMUM RATINGS

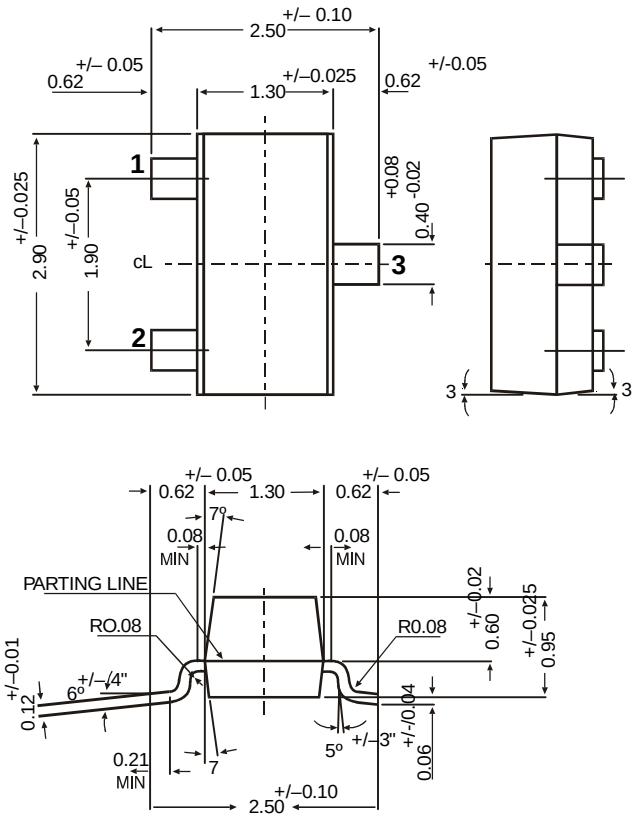
Continuous reverse voltage	V_R		50	V
Repetitive peak reverse voltage	V_{RRM}	max.	75	V
Repetitive peak forward current	I_{FRM}	max.	600	mA
Junction temperature	T_j	max.	150	° C
Peak forward surge current				
T = 1 µsec.	I_{FSM}	max.	4	A
T = 1 sec.	I_{FSM}	max.	0.5	A
Reverse recovery time when switched from				
I_F = 400 mA to I_R = 400 mA; R_L = 100 Ω				
measured at I_R = 4 mA	T_{rr}	max.	6	ns

RATINGS (at T_A = 25 °C, unless otherwise specified)

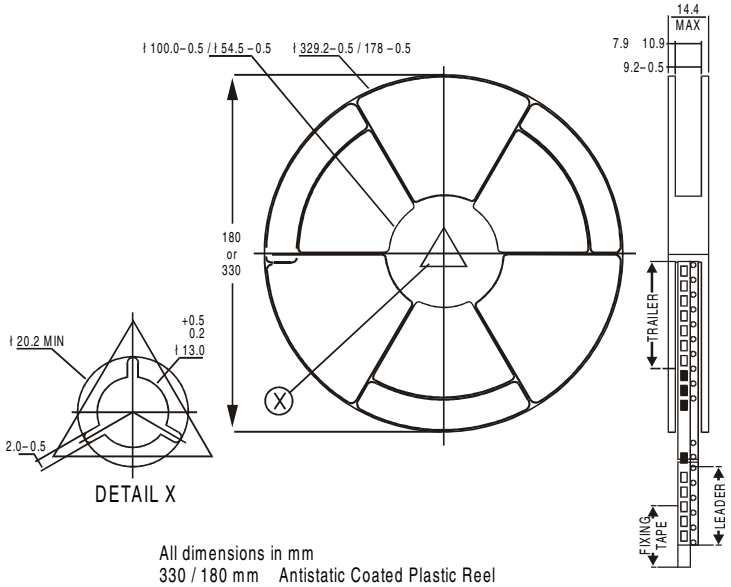
Storage Temperature	T_{stg}	–55 to +150	° C

THERMAL RESISTANCE				
From junction to ambient	$Rth\ j–a$		500	K/W
CHARACTERISTICS (at T_A = 25 °C, unless otherwise specified)				
Continuous reverse voltage	V_R	max.	50	V
Repetitive peak reverse voltage	V_{RRM}	max.	75	V
Forward current (d.c.)	I_F	max.	300	mA
Repetitive peak forward current	I_{FRM}	max.	600	mA
Non–repetitive peak forward current				
T = 1 µsec	I_{FSM}	max.	4	A
T = 1 sec	I_{FSM}	max.	0.5	A
Diode capacitance				
V_R = 0; f = 1 MHz	C_D	max.	2.5	pF
Forward voltage				
I_F = 1 mA	V_F	min.	540	mV
		max.	620	mV
I_F = 10 mA	V_F	min.	660	mV
		max.	740	mV
I_F = 50 mA	V_F	min.	760	mV
		max.	860	mV
I_F = 100 mA	V_F	min.	820	mV
		max.	920	mV
I_F = 200 mA	V_F	min.	870	mV
		max.	1	V
Reverse breakdown voltage				
I_R = 100 mA	V_{BR}	min	75	V
Reverse voltage leakage current				
V_R = 50 V	I_R	max.	100	nA
Reverse current				
V_R = 50 V; T_j = 150 °C	I_R	max.	100	µA
Forward recovery voltage				
when switched to I_F = 10 mA; t_P = 20 nsec.	V_{FR}	max.	1.75	V
Reverse recovery time				
$I_F = I_R$ = 10 – 200 mAdc, R_L = 100 Ω	t_{rr}	max.	4	ns
$I_F = I_R$ = 200 – 400 mAdc, R_L = 100 Ω	t_{rr}	max.	6	ns

SOT-23 Formed SMD Package



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

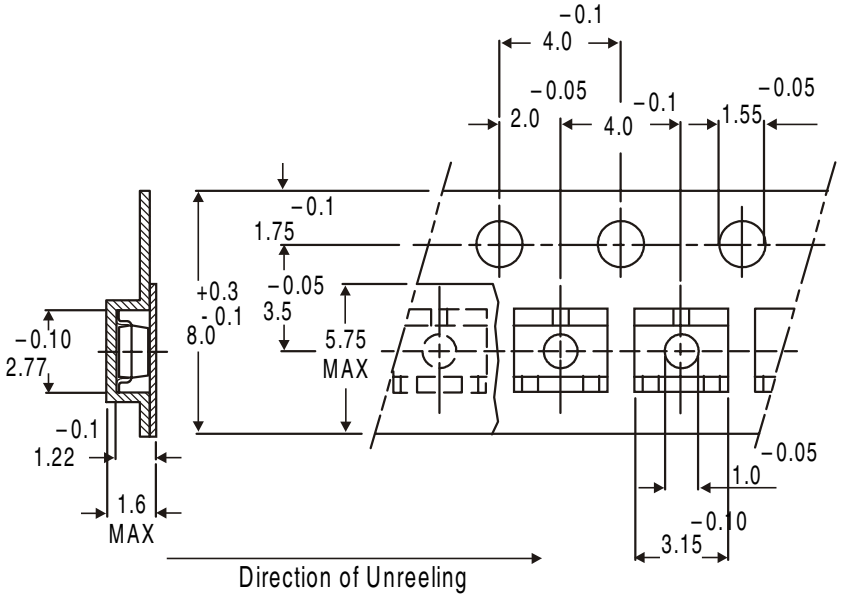


All dimensions in mm
330 / 180 mm Antistatic Coated Plastic Reel

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"	12.0K	17" x 15" x 13.5"	192.0K	12 kgs
			9" x 9" x 9"	51.0K	19" x 19" x 19"	408.0K	28 kgs
	10K/reel	415 gm/10K pcs	13" x 13" x 0.5"	10.0K	17" x 15" x 13.5"	300.0K	16 kgs

Customer Notes

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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