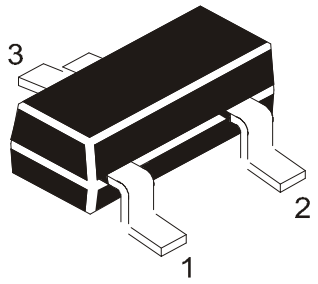
Continental Device India Limited

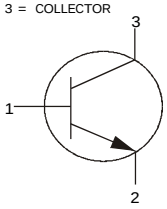
An ISO/TS16949 and ISO 9001 Certified Company

NPN SILICON PLANAR EPITAXIAL TRANSISTOR

CMBTA44



PIN CONFIGURATION (NPN)
1 = BASE
2 = EMITTER
3 = COLLECTOR



SOT-23
Formed SMD Package

Marking Code is =3Z

Designed for Extremely High Voltage Applications

ABSOLUTE MAXIMUM RATINGS (T_a=25ºC)

DESCRIPTION	SYMBOL	VALUE	UNITS
Collector Base Voltage	V_{CBO}	450	V
Collector Emitter Voltage	V_{CEO}	400	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	300	mA
Collector Power Dissipation	P_D	350	mW
Operating And Storage Junction Temperature Range	T_j, T_{stg}	- 65 to+150	ºC

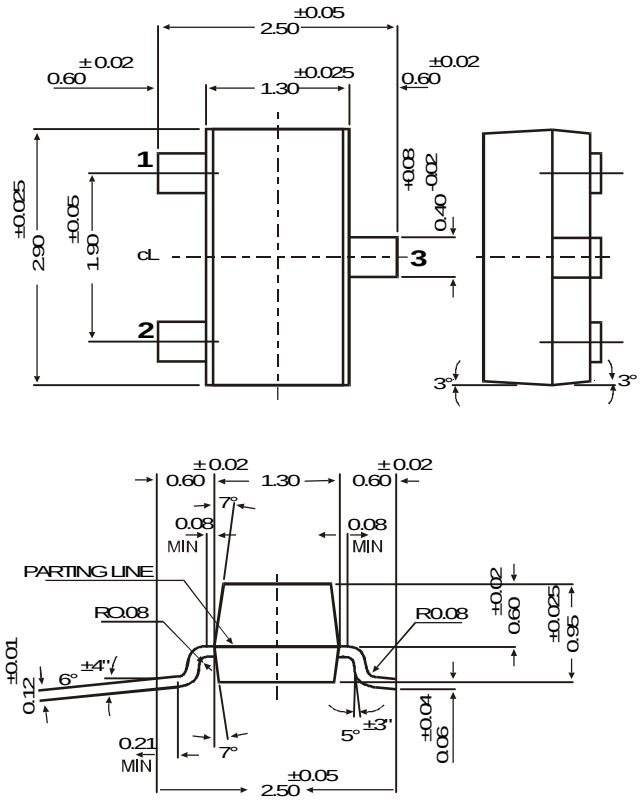
THERMAL RESISTANCE

Junction to Ambient in free air	$R_{th(j-a)}$	357	ºC/W

Electrical Characterstics (T_a=25ºC unless specified otherwise)

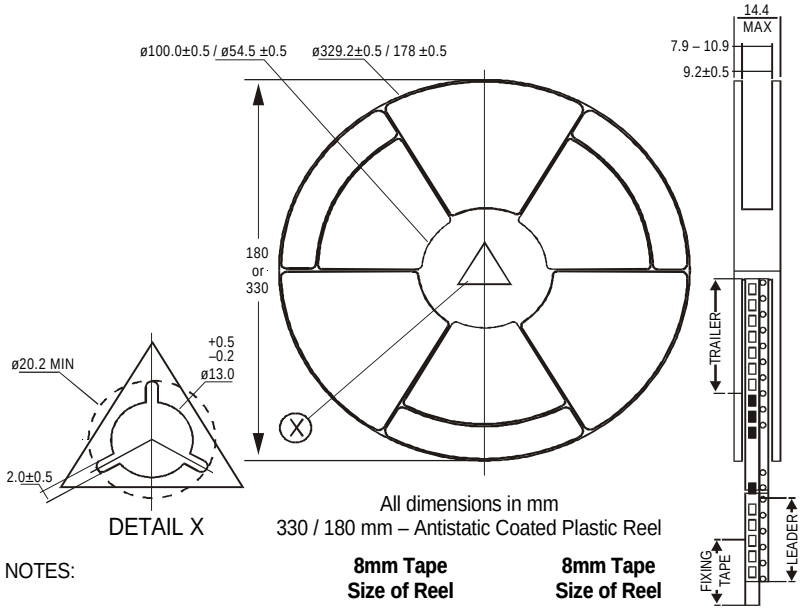
DESCRIPTION	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut Off Current	I_{CBO}	V_{CB}=400V, I_E=0			100	nA
Collector Cut Off Current	I_{CES}	V_{CE}=400V, V_{BE}=0			500	nA
Emitter Cut Off Current	I_{EBO}	V_{EB}=4V, I_C=0			100	nA
Collector Base Voltage	V_{CBO}	I_C=100µA, I_E=0	450			V
Collector Emitter Voltage	V_{CES}	I_C=100µA, V_{BE}=0	450			V
Collector Emitter Voltage	V_{CEO}	I_C=1mA, I_B=0	400			V
Emitter Base Voltage	V_{EBO}	I_E=10µA, I_C=0	6			V
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=1mA, I_B=0.1mA I_C=10mA, I_B=1mA I_C=50mA, I_B=5mA			0.40 0.50 0.75	V V V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=10mA, I_B=1mA			0.75	V
DC Current Gain	h_{FE}	V_{CE} =10V, I_C=1mA V_{CE} =10V, I_C=10mA V_{CE} =10V, I_C=50mA V_{CE} =10V, I_C=100mA	40 50 45 20		200	
Transition Frequency	f_T	V_{CE}=10V, I_C=10mA, f=10MHz	20			MHz
Output Capacitance	C_{ob}	V_{CB}=20V, I_E =0, f=1MHz			7.0	pF
Input Capacitance	C_{ib}	V_{EB} =0.5V, Ic=0, f=1MHz			130	pF

SOT-23 Formed SMD Package



SOT-23 Package Reel Information

Reel Specifications for W Packing (13") and 7"



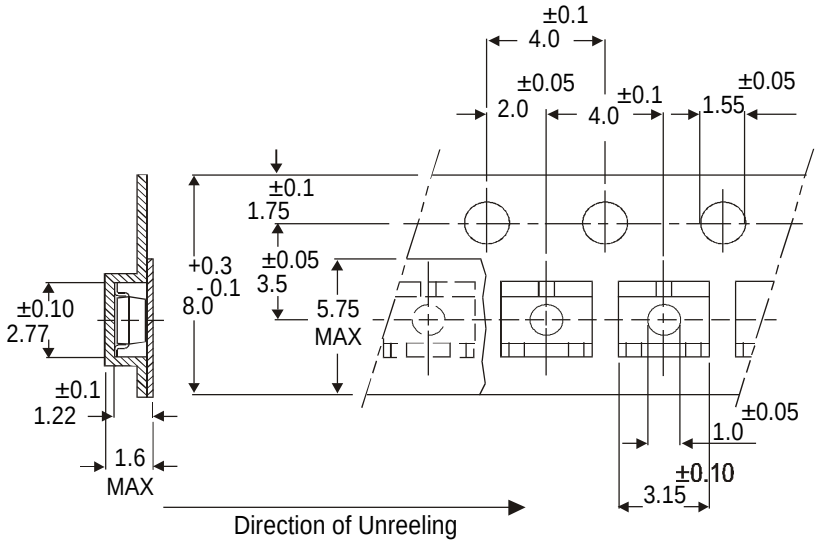
All dimensions in mm
330 / 180 mm – Antistatic Coated Plastic Reel

NOTES:

No. of Devices	8mm Tape Size of Reel	8mm Tape Size of Reel
	330 mm (13")	180 mm (7")
	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**

Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete 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 in the Data Sheet and 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 Discrete 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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