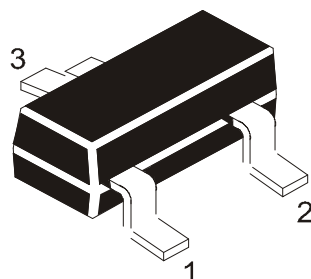
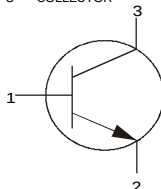


NPN SILICON PLANAR EPITAXIAL TRANSISTORS



PIN CONFIGURATION (NPN)

- 1 = BASE
- 2 = EMITTER
- 3 = COLLECTOR



BC846, BC847, BC848

SOT-23

Formed SMD Package

For Lead Free Parts, Device Part #
will be Prefixed with "T"

Marking

BC846 =1D

BC846A=1A

BC846B=1B

BC847 =1H

BC847A=1E

BC847B=1F

BC847C=1G

BC848 =1M

BC848A=1J

BC848B=1K

BC848C=1L

For use in Driver Stages of Audio Amplifier in Thick and Thin-film Hybrid Circuits

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	BC846	BC847	BC848	UNITS
Collector Base Voltage	V_{CBO}	80	50	30	V
Collector Emitter Voltage	V_{CEO}	65	45	30	V
Emitter Base Voltage	V_{EBO}	6	6	5	V
Collector Current (DC)	I_C	100			mA
Collector Current - Peak	I_{CM}	200			mA
Power Dissipation	P_{tot}	250			mW
Storage Temperature	T_{stg}	- 65 to +150			$^\circ\text{C}$
Junction Temperature	T_j	150			$^\circ\text{C}$

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless specified otherwise)

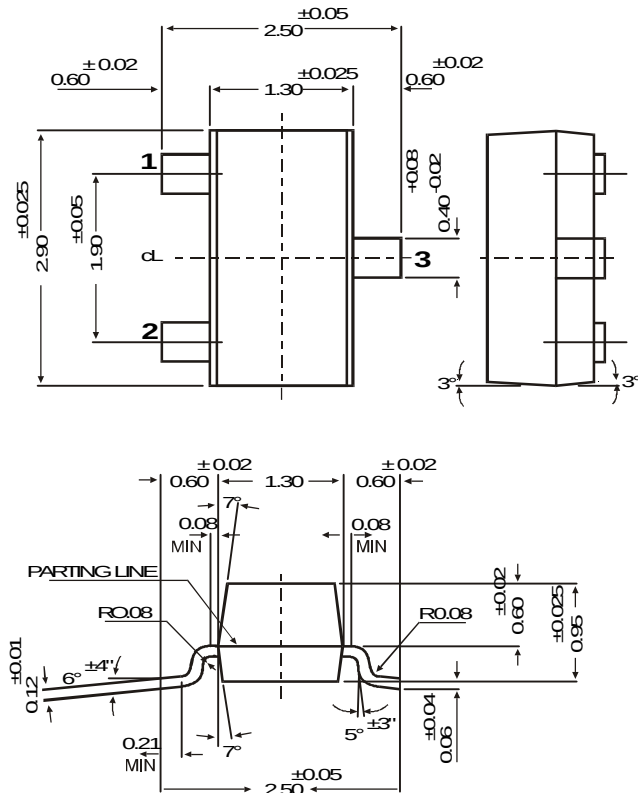
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
DC Current Gain	h_{FE}	$I_C=2\text{mA}$, $V_{CE}=5\text{V}$ A B C	110 200 420		220 450 800	
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$	$I_C=10\text{mA}$, $I_B=0.5\text{mA}$ $I_C=100\text{mA}$, $I_B=5\text{mA}$			0.25 0.60	V V
Base Emitter on Voltage	$V_{BE(on)}$	$I_C=2\text{mA}$, $V_{CE}=5\text{V}$ $I_C=10\text{mA}$, $V_{CE}=5\text{V}$	0.58		0.70 0.72	V V
Collector Cut off Current	I_{CBO}	$V_{CB}=30\text{V}$, $I_E=0$			15	nA
Transition Frequency	f_T	$I_C=10\text{mA}$, $V_{CE}=5\text{V}$, $f=100\text{MHz}$		300		MHz
Output Capacitance	C_{ob}	$V_{CB}=10\text{V}$, $f=1\text{MHz}$			6.0	pF
Input Capacitance	C_{ib}	$V_{EB}=0.5\text{V}$, $f=1\text{MHz}$		9.0		pF
Noise Figure	NF	$I_C=0.2\text{mA}$, $V_{CE}=5\text{V}$ $R_s=2\text{k}\Omega$, $f=1\text{KHz}$			10	dB

SOT-23

Formed SMD Package

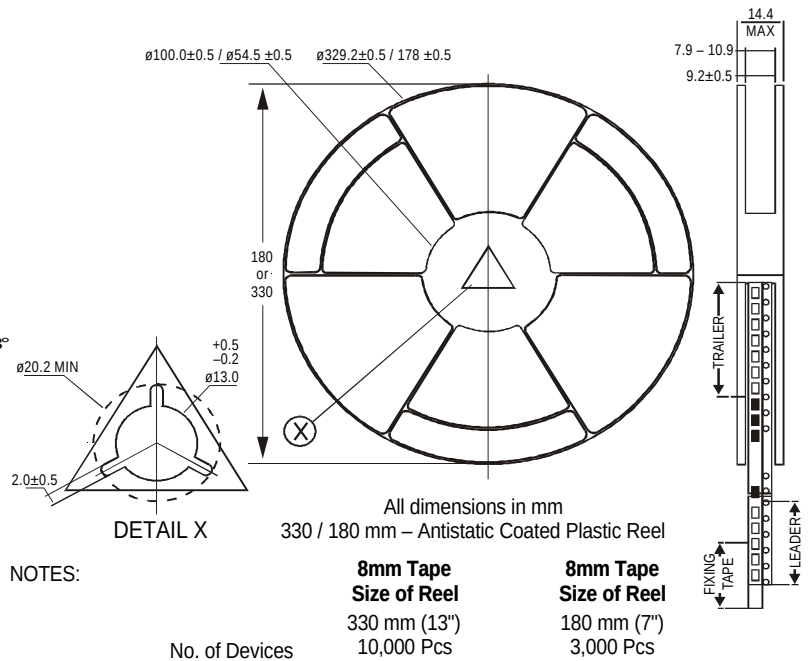
For Lead Free Parts, Device Part #
will be Prefixed with "T"

SOT-23 Formed SMD Package

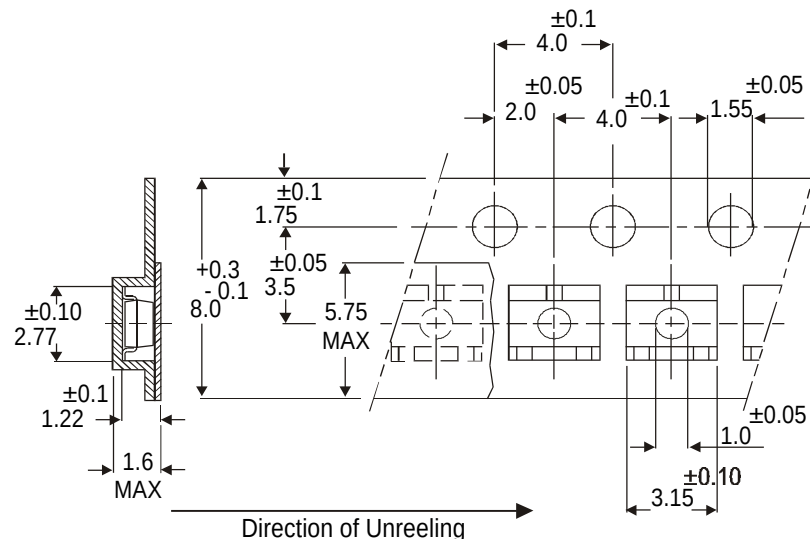


SOT-23 Package Reel Information

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



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
	10K/reel	415 gm/10K pcs	13" x 13" x 0.5"	10 K	17" x 15" x 13.5"	300 K	16 kgs

SOT-23
Formed SMD Package
For Lead Free Parts, Device Part #
will be Prefixed with "T"

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 in the Data Sheet and on the CDIL Web Site/CD is 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).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered Trademark of
Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.
Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119
email@cdil.com www.cdilsemi.com