

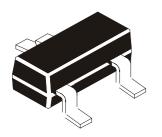
## Continental Device India Limited

An IS/ISO 9002 and IECQ Certified Manufacturer





#### PNP EPITAXIAL PLANAR SILICON TRANSISTOR



PIN CONFIGURATION (PNP)

1 = BASE

2 = EMITTER

3 = COLLECTOR

= COLLECTOR 3

CMBT200 CMBT200A SOT23

**MARKING: AS BELOW** 

**Designed for General Purpose Amplifier Applications.** 

#### ABSOLUTE MAXIMUM RATINGS(Ta=25deg C unless otherwise noted)

DESCRIPTION	SYMBOL		VALUE		UNIT	
Collector -Base Voltage	VCBO			60		V
Collector -Emitter Voltage	VCEO			45		V
Emitter Base Voltage	VEBO			6.0		V
Collector Current - Continuous	IC			500		mA
Power Dissipation	PD			350		mW
Derate Above=25 deg C				2.8		mW/deg C
Operating And Storage Junction	Tj, Tstg			-55 to +150		deg C
Temperature Range						
Thermal Resistance						
Junction to Ambient	(Rth j-a)			357		deg C/W
<b>ELECTRICAL CHARACTERISTICS (T</b>	a=25 deg C	Unless Otherwise No	ted)			
DESCRIPTION	SYMBOL	_ TEST CONDITION		MIN	MAX	UNIT
Collector -Base Voltage	VCBO	IC=10uA, IE=0		60	-	V
Collector -Emitter Voltage	VCEO	IC=1mA, IB=0		45	-	V
Emitter Base Voltage	VEBO	IE=10uA, IC=0		6.0	-	V
Collector Cut off Current	ICBO	VCB=50V, IE=0		-	50	nA
	ICES	VCE=4V, IE=0		-	50	nA
Emitter Cut off Current	IEBO	VEB=4V, IC=0		-	50	nA
DC Current Gain	hFE	IC=100uA,VCE=1V	CMBT200	80	-	

IC=10mA,VCE=1V

IC=100mA,VCE=1V\*

IC=150mA,VCE=5V\*

CMBT200A

CMBT200

CMBT200A

CMBT200A

CMBT200

CMBT200A

240

100

300

100

100

100

450

600

350

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DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter Saturation Voltage	VCE(Sat)	IC=10mA, IB=1mA	-	0.2	V
		IC=200mA, IB=20mA*	-	0.4	V
Base Emitter Saturation Voltage	VBE(Sat)	IC=10mA,VCE=1V	-	0.85	V
		IC=200mA, IB=20mA*	-	1.0	V
<b>Dynamic Characteristics</b>					
Transition Frequency	ft	VCE=20V,IC=20mA,	250	-	MHz

VCB=10V, f=1MHz

IC=100uA, VCE=5V

Rg=2 Kohms, f=1.0

 DEVICE
 CMBT200
 CMBT200A

 MARKING
 N2
 N2A

Cobo

NF

ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Noted)

**Output Capacitance** 

**Noise Figure** 

## **SOT-23 Formed SMD Package**

# 

±0.05 2.50 ←

ΜĪ

0.06

# SOT-23 Package Reel Information Reel specifications for W" Packing (13" reel)

CMBT200

CMBT200A

CMBT200, A

pF

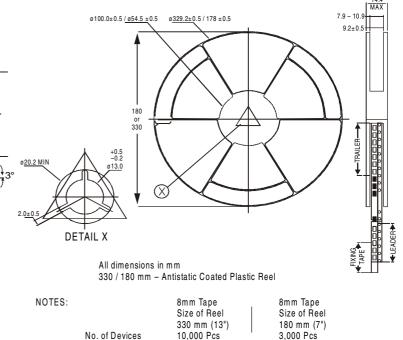
dB

dB

6.0

5.0

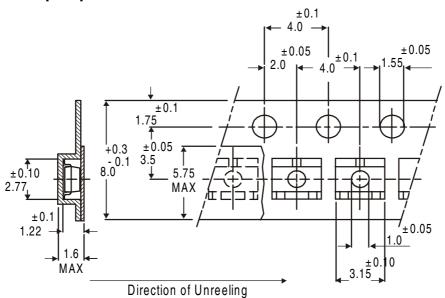
4.0



- 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.
- No more than 0.5% missing devices / reel. 50 empty compartments for 330 mm reel.
   empty compartments for 180 mm reel.
- Three consecutive empty places might be found provided this gap is followed by 6 consecutive devices.
- 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.

<sup>\*</sup>Pulse test: Pulse Width =300us, duty cycle=2%

## **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
S0T-23 T&R	3K/reel		3" x 7.5" x 7.5" 9" x 9" x 9"	12.0K 51.0K	17" x 15" x 13.5" 19" x 19" x 19"	192.0K 408.0K	12 kgs 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

#### **Notes**

#### **Disclaimer**

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Data Sheet