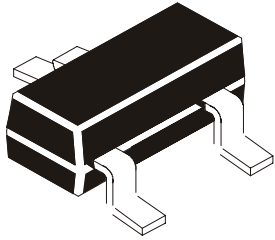


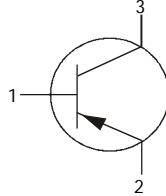
**PNP EPITAXIAL PLANAR SILICON TRANSISTOR**

**CMBT200  
CMBT200A  
SOT23**



PIN CONFIGURATION (PNP)

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



**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 Temperature Range	Tj, Tstg	-55 to +150	deg C
<b>Thermal Resistance</b>			
Junction to Ambient	(Rth j-a)	357	deg C/W

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

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	-
			CMBT200A	240	-
		IC=10mA, VCE=1V	CMBT200	100	450
			CMBT200A	300	600
		IC=100mA, VCE=1V*	CMBT200A	100	-
IC=150mA, VCE=5V*	CMBT200	100	350		
	CMBT200A	100	-		

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

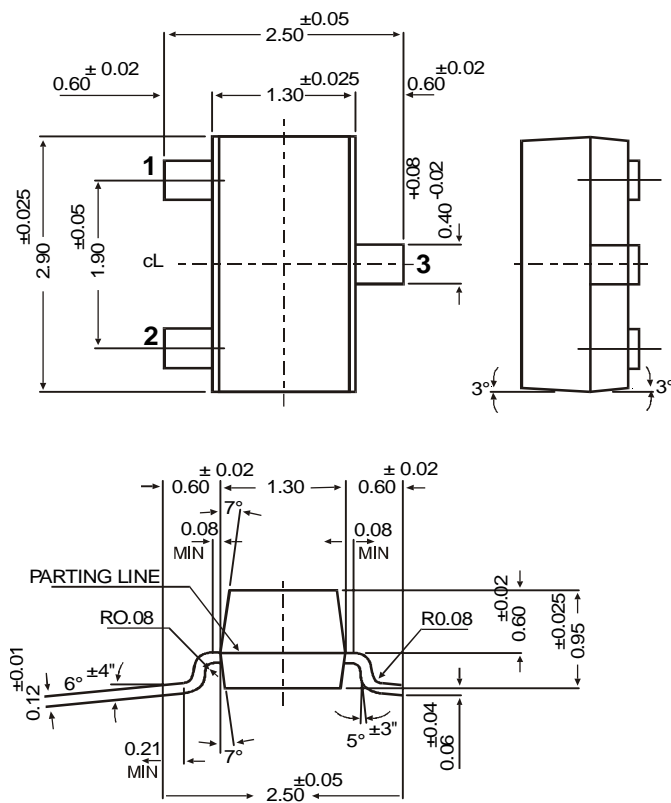
**CMBT200, A**

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	
Output Capacitance	Cobo	VCB=10V, f=1MHz	-	6.0	pF	
Noise Figure	NF	IC=100uA, VCE=5V	CMBT200	-	5.0	dB
		Rg=2 Kohms, f=1.0 kHz	CMBT200A	-	4.0	dB

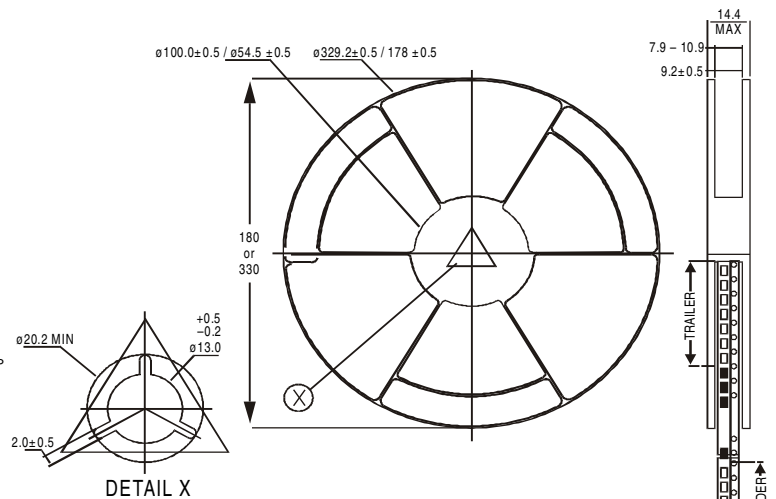
DEVICE MARKING	CMBT200	CMBT200A
	N2	N2A

\*Pulse test : Pulse Width =300us, duty cycle=2%

**SOT-23 Formed SMD Package**



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



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

- The bandolier of 330 mm reel contains at least 10,000 devices.
- 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. 15 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.

