CXT5401

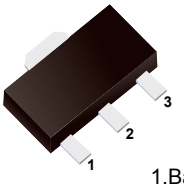
Surface Mount PNP Silicon Transistor

FEATURES

High current (max. 500mA).

Low voltage (max. 150 V).

SOT-89



1.Base
2.Collector
3.Emitter



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

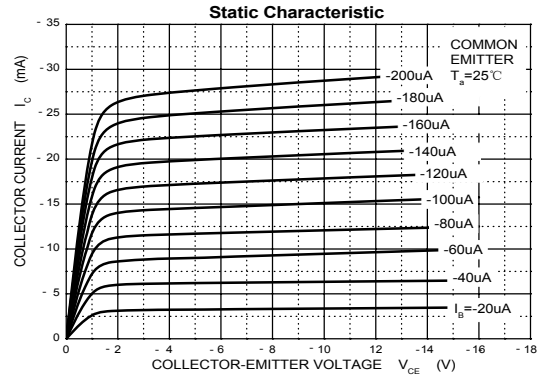
Absolute Maximum Ratings Ta = 25℃

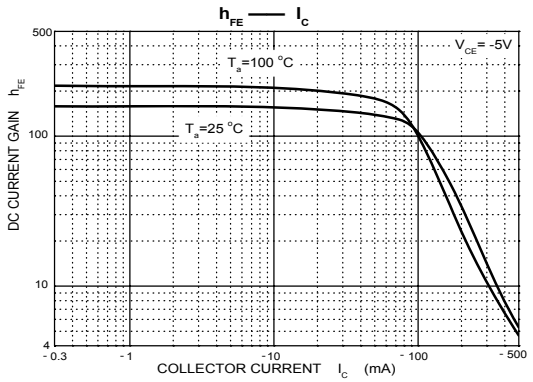
Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-160	V
Collector-emitter voltage	V_{CEO}	-150	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current (DC)	I_C	-500	mA
power dissipation	P_D	1.2	W
thermal resistance Junction- to-ambient	$R_{\theta JA}$	104	℃/W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-65 to +150	℃

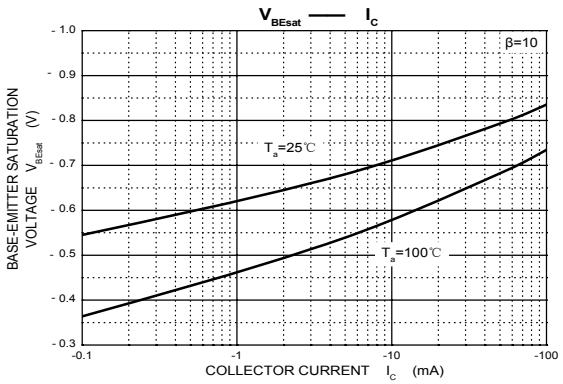
ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

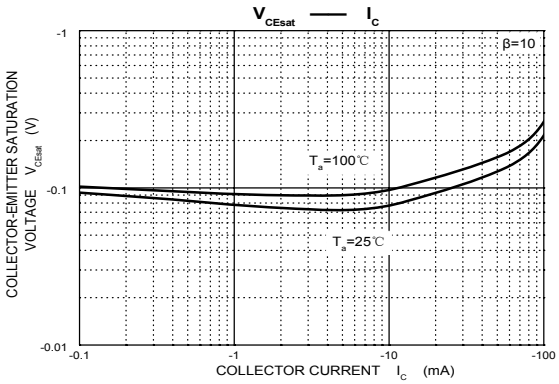
Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector to base breakdown voltage	V_{CBO}	I_C=-100 μ A	-160			V
Collector to emitter breakdown voltage	V_{CEO}	I_C=-1.0mA	-150			V
Emitter to base breakdown voltage	V_{EBO}	I_E=-10 μ A	-5.0			V
Collector cutoff current	I_{CBO}	V_{CB} =- 120 V, I_E = 0			-50	nA
		V_{CB} =- 120 V, T_A=100℃			-50	μ A
DC current gain	h_{FE}	I_C = -1.0 mA; V_{CE} = -5.0 V	50			
		I_C = -10mA; V_{CE} =- 5.0V	60		240	
		I_C = -50 mA; V_{CE} = -5.0V	50			
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C =- 10 mA; I_B = -1.0mA			-0.2	V
		I_C = -50 mA; I_B = -5.0mA			-0.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = -10 mA; I_B = -1.0mA			-1.0	V
		I_C = -50 mA; I_B =- 5.0mA			-1.0	V
Output capacitance	C_{ob}	V_{CB} =-10 V, I_E = 0,f=1.0MHz			6.0	pF
Transition frequency	f_T	I_C = -10 mA; V_{CE} =-10V; f = 100 MHz	100		300	MHz

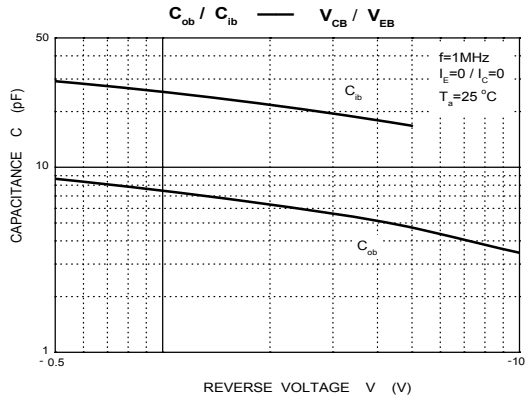
RATING AND CHARACTERISTIC CURVES

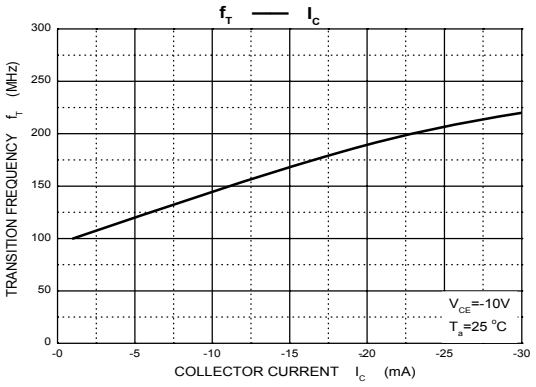


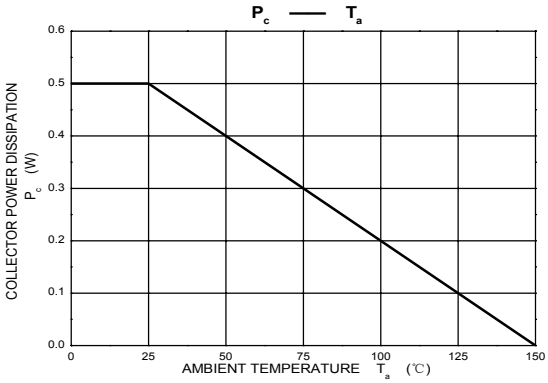








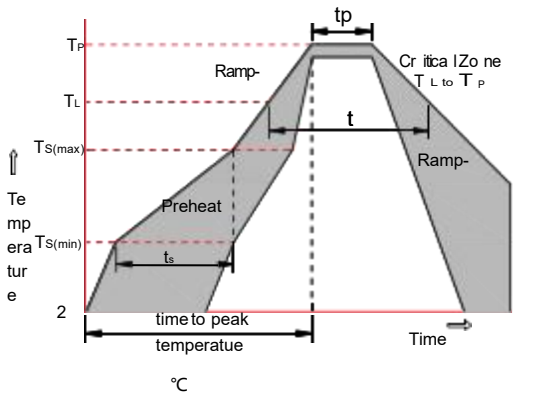




Soldering parameters

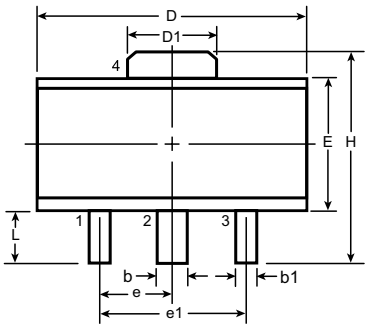
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG5: Reflow condition

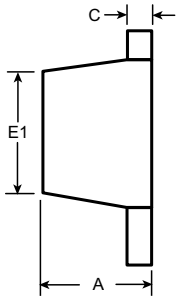


Package Dimensions & Suggested Pad Layout

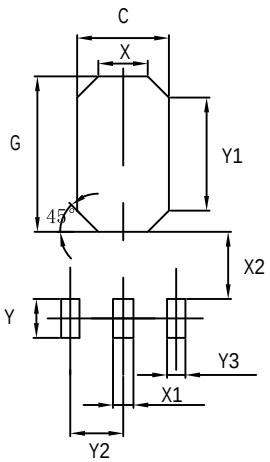
SOT89



Top View



Side View

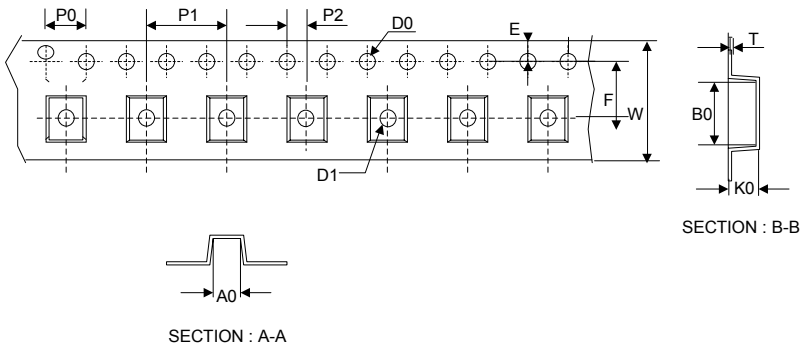


Symbol		A	b	b1	C	D	D1	E	E1	e	e1	H	L
Dimensions (mm)	MIN	1.40	0.44	0.36	0.3	4.40	1.50	2.29	2.00	1.50 BSC	3.00 BSC	3.94	0.89
	NOM	-	-	-	-	-	-	-	-			-	-
	MAX	1.60	0.56	0.48	0.5	4.60	1.75	2.60	2.29			4.25	1.20

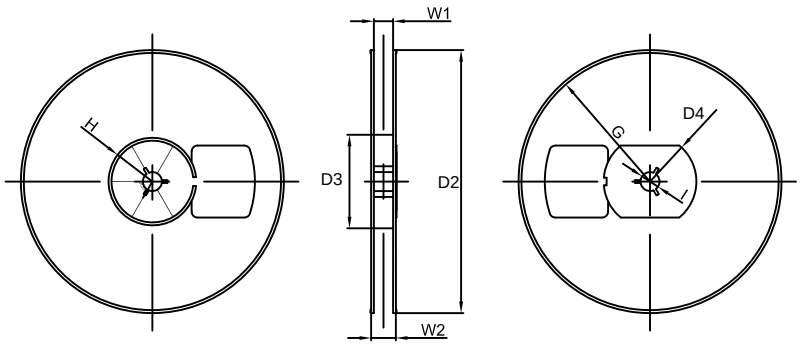
Dimensions	Value (in mm)
C	2.50
G	3.60
X	1.40
X1	0.90
X2	0.90
Y	1.40
Y1	2.60
Y2	1.50
Y3	0.90

Tape & rell specification

Tape



13” Reel



Symbol	Dimension (mm)
P0	4.00±0.20
P1	8.00±0.20
P2	2.00±0.20
D0	1.60±0.20
D1	1.60±0.20
E	1.75±0.20
F	7.50±0.15
W	16.00±0.20
A0	6.30±0.20
B0	8.25±0.20
K0	2.60±0.20
T	0.23±0.10
D2	180.0±5.0
D3	60Min.
D4	R32.0±2.0
G	R86.5±2.0
H	R30.0±2.0
I	13.0±2.0
W1	13.20±2.0
W2	16.50±2.0
Quantity: 1000PCS	