

Low $V_{CE(sat)}$ PNP Epitaxial Planar Transistor

BTB1386N3

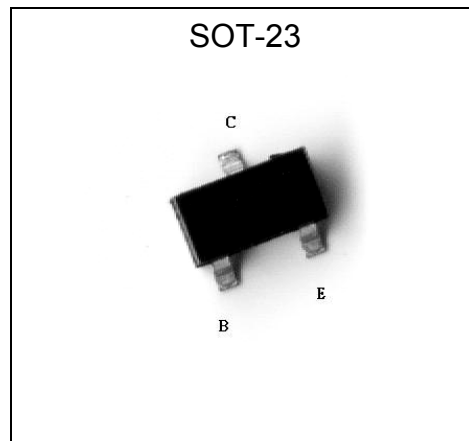
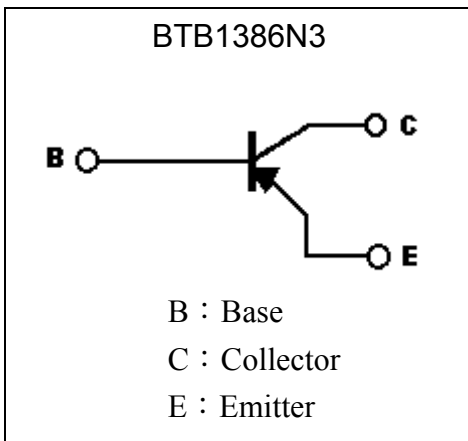
Features

- Excellent DC current gain characteristics
- Low Saturation Voltage, $V_{CE(sat)} = -0.25V$ (typ)

Applications

- Low frequency amplifier
- Driver

Symbol



Absolute Maximum Ratings ($T_a = 25^\circ C$)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CB0}	-15	V
Collector-Emitter Voltage	V_{CEO}	-12	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current(DC)	I_C	-4	A
Collector Current(Pulsed)(Note 1)	I_{CP}	-8	
Power Dissipation	P_d	225	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ C/W$
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55~+150	$^\circ C$

Note 1: Single pulse, $P_w \leq 10ms$, Duty Cycle $\leq 30\%$.



Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-15	-	-	V	$I_C=-50\mu A$
BV_{CEO}	-12	-	-	V	$I_C=-1mA$
BV_{EBO}	-6	-	-	V	$I_E=-50\mu A$
I_{CBO}	-	-	-100	nA	$V_{CB}=-15V$
I_{EBO}	-	-	-100	nA	$V_{EB}=-5V$
$*V_{CE(sat)}$	-	-	-0.25	V	$I_C=-1A, I_B=-50mA$
$*h_{FE1}$	200	-	-	-	$V_{CE}=-2V, I_C=-20mA$
$*h_{FE2}$	180	-	820	-	$V_{CE}=-2V, I_C=-500mA$
$*h_{FE3}$	150	-	-	-	$V_{CE}=-2V, I_C=-2A$
f_T	-	250	-	MHz	$V_{CE}=-2V, I_C=-200mA, f=100MHz$
Cob	-	60	-	pF	$V_{CB}=-10V, I_E=0A, f=1MHz$

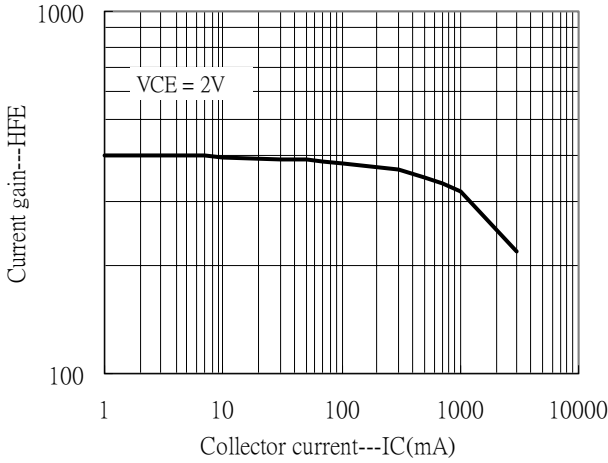
*Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

Classification Of $h_{FE} 2$

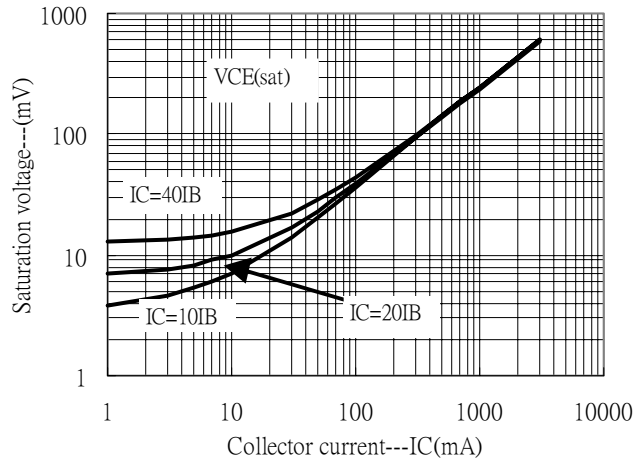
Rank	R	S	T
Range	180~390	270~560	390~820

Characteristic Curves

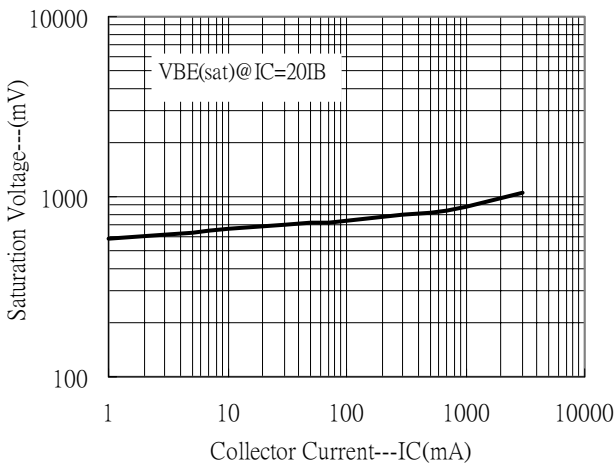
Current gain vs Collector current



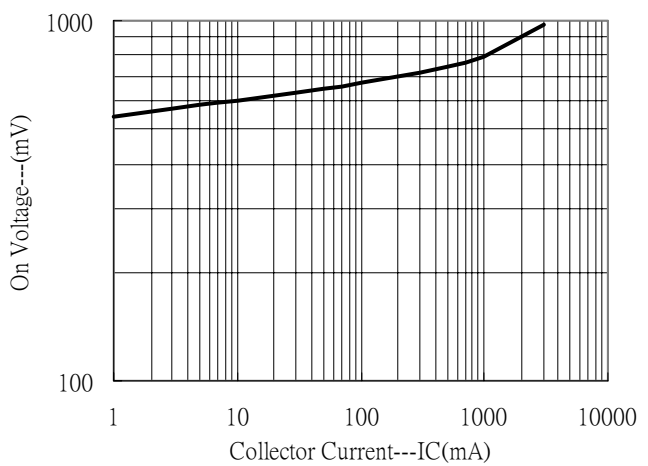
Saturation voltage vs Collector current



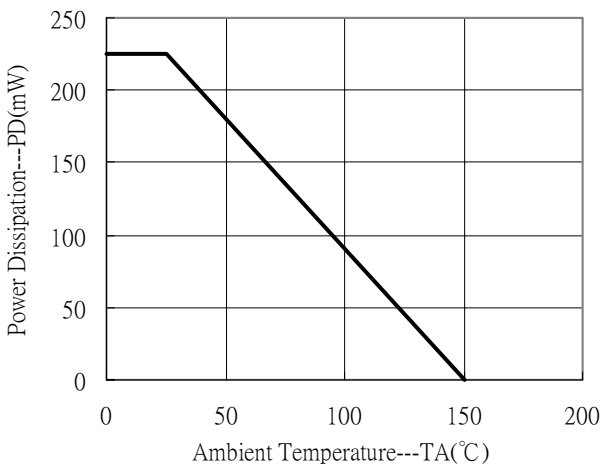
Saturation voltage vs Collector current



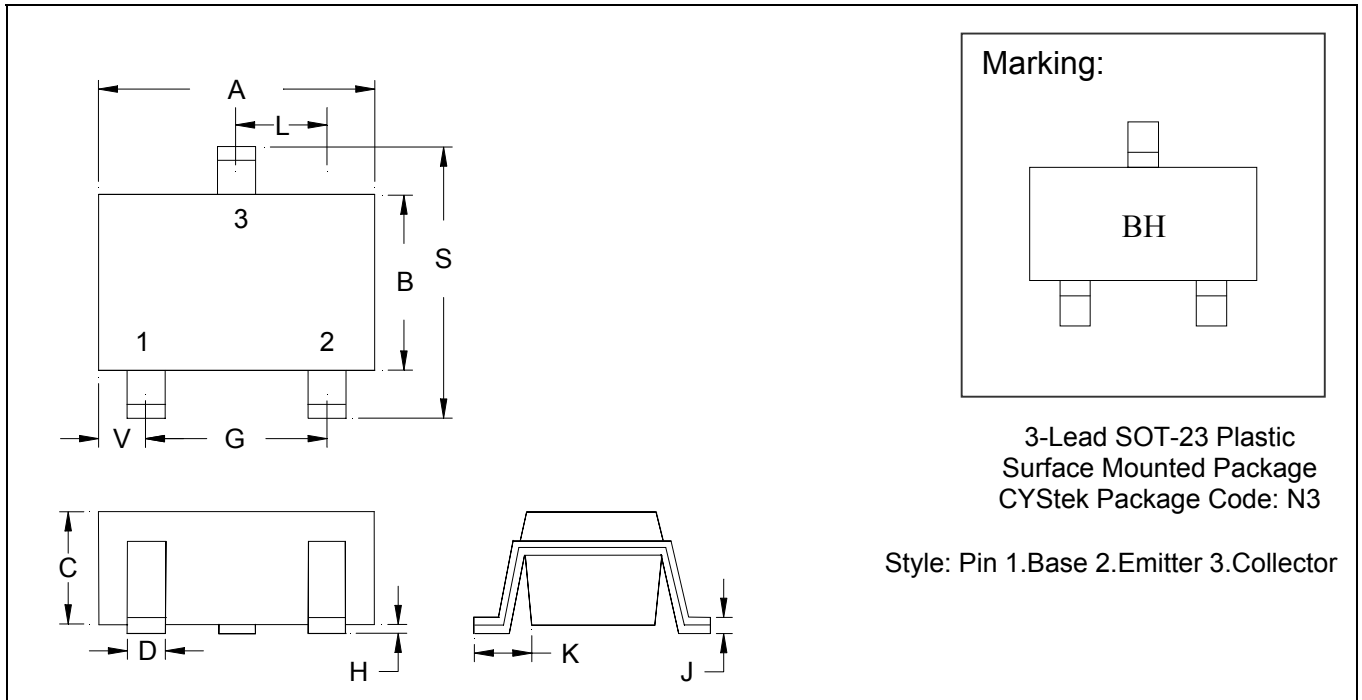
On voltage vs Collector Current



Power Derating Curve



SOT-23 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

Notes: 1.Controlling dimension: millimeters.
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: 42 Alloy ; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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