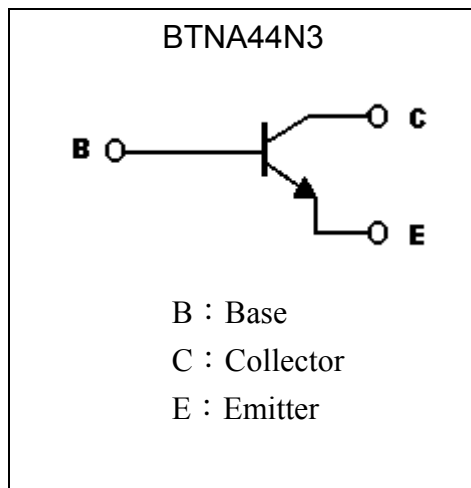
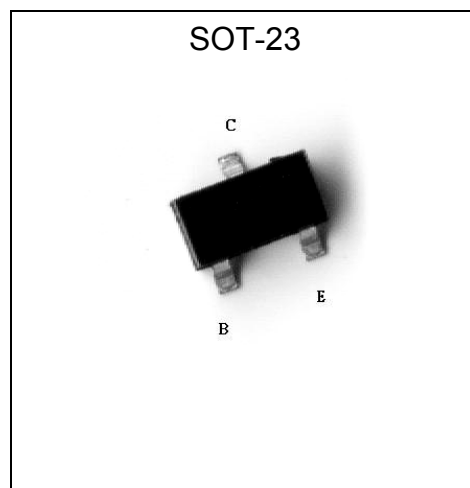


High Voltage NPN Epitaxial Planar Transistor

BTNA44N3

Features

- High breakdown voltage. ($BV_{CEO} = 400V$)
- Low saturation voltage, typically $V_{CE(sat)} = 0.1V$ at $I_C/I_B = 10mA/1mA$.
- Complementary to BTPA94N3

Symbol

Outline

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

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CB0}	400	V
Collector-Emitter Voltage	V_{CE0}	400	V
Emitter-Base Voltage	V_{EB0}	6	V
Collector Current	I_C	300	mA
Power Dissipation	P_d	225 (Note)	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 : When mounted on a FR-5 board with area measuring 1.0×0.75×0.062 in.

**Characteristics** (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	400	-	-	V	I _C =50μA, I _E =0
BV _{CEO}	400	-	-	V	I _C =1mA, I _B =0
BV _{EBO}	6	-	-	V	I _E =50μA, I _C =0
I _{CBO}	-	-	10	μA	V _{CB} =400V, I _E =0
I _{EBO}	-	-	10	μA	V _{EB} =6V, I _C =0
V _{CE(sat)} 1	-	-	0.4	V	I _C =1mA, I _B =0.1mA
*V _{CE(sat)} 2	-	0.1	0.5	V	I _C =10mA, I _B =1mA
*V _{CE(sat)} 3	-	-	0.75	V	I _C =50mA, I _B =5mA
*V _{BE(sat)}	-	-	1.5	V	I _C =10mA, I _B =1mA
h _{FE} 1	40	-	-	-	V _{CE} =10V, I _C =1mA
h _{FE} 2	52	-	270	-	V _{CE} =10V, I _C =10mA
*h _{FE} 3	45	-	-	-	V _{CE} =10V, I _C =50mA
*h _{FE} 4	40	-	-	-	V _{CE} =10V, I _C =100mA
f _T	20	-	-	MHz	V _{CE} =10V, I _C =10mA, f=100MHz
C _{ob}	-	-	7	pF	V _{CB} =20V, f=1MHz

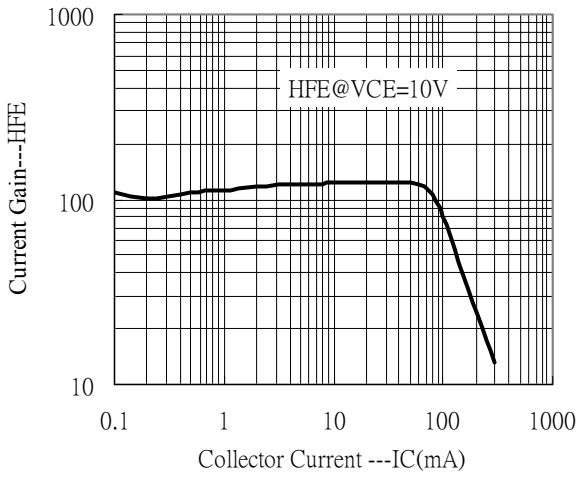
*Pulse Test : Pulse Width ≤380μs, Duty Cycle≤2%

Classification Of hFE2

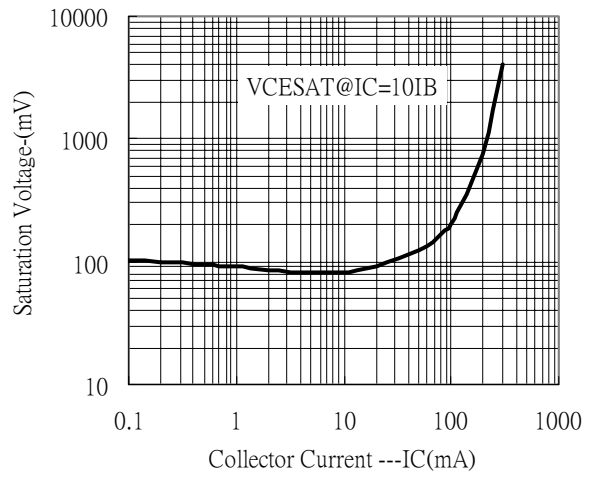
Rank	K	P	Q
Range	52~120	82~180	120~270

Characteristic Curves

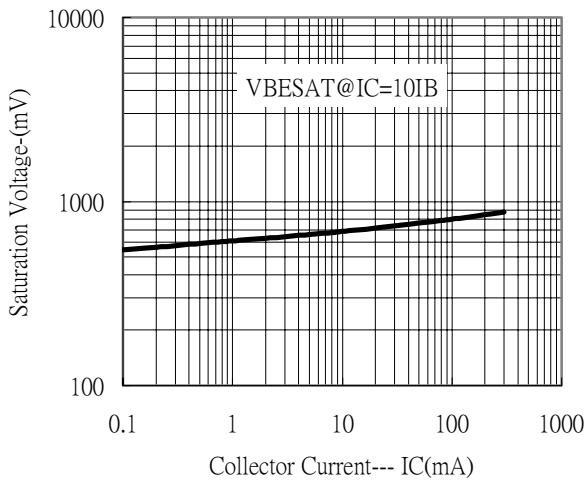
Current Gain vs Collector Current



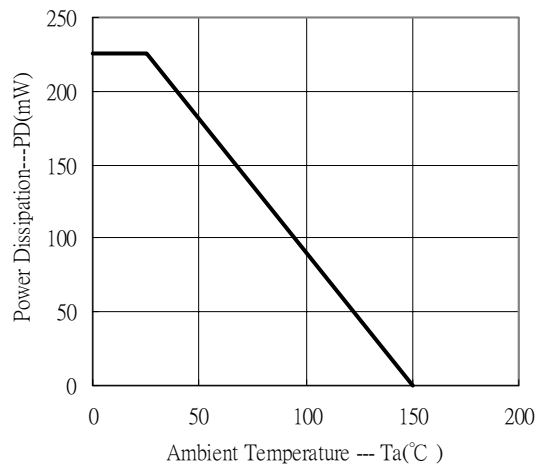
Saturation Voltage vs Collector Current



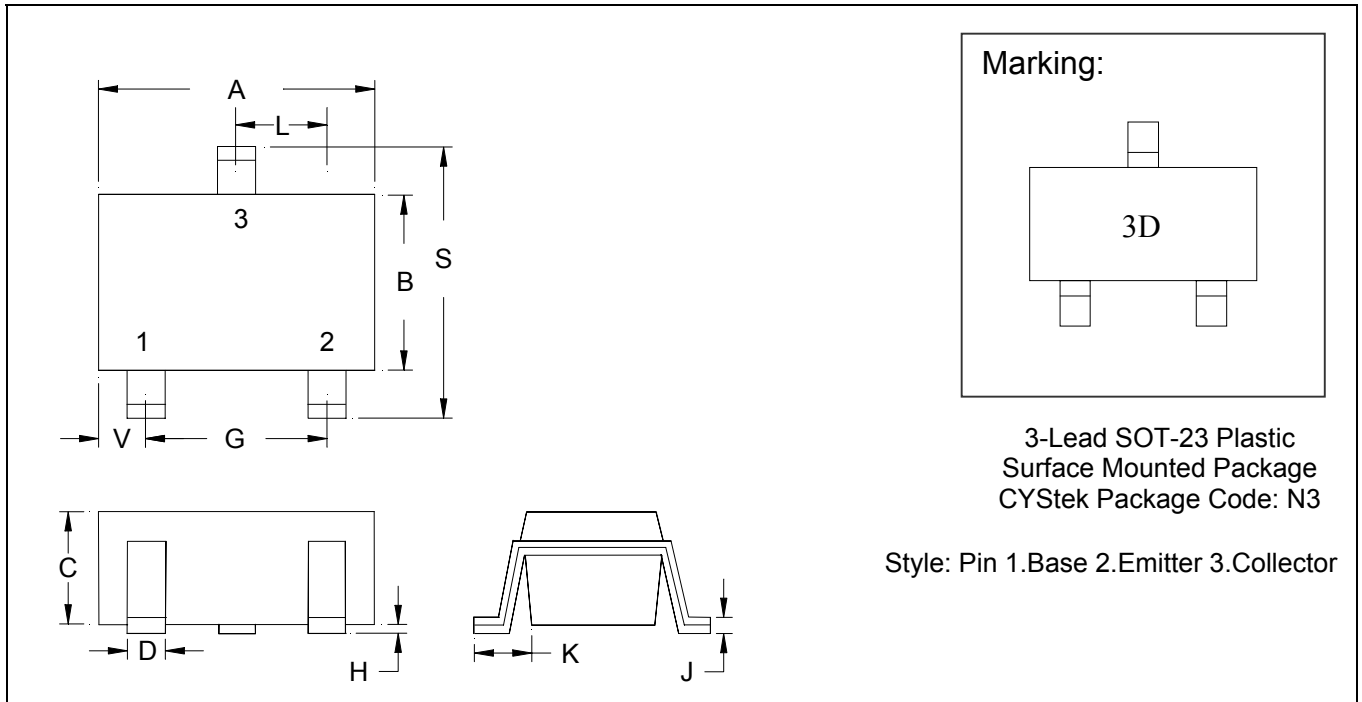
Saturation Voltage vs Collector Current



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:**
- Controlling dimension: millimeters.
 - Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 - 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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