

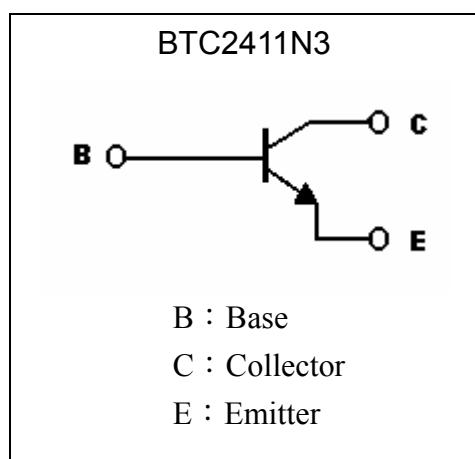
General Purpose NPN Epitaxial Planar Transistor

BTC2411N3

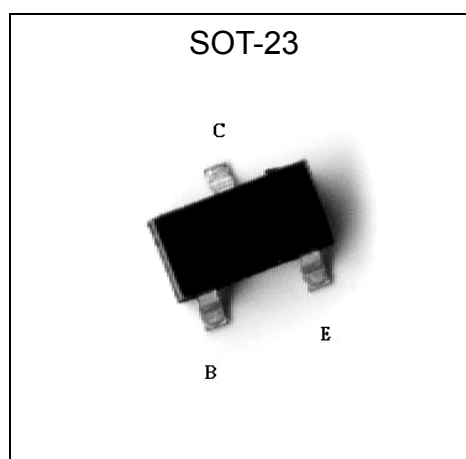
Description

- The BTC2411N3 is designed for using in driver stage of AF amplifier and general purpose switching application.
- High $I_{C(Max)}$, $I_{C(Max)} = 0.6A$.
- Low $V_{CE(sat)}$, Typ. $V_{CE(sat)} = 0.4V$ at $I_C/I_B = 500mA/50mA$.
Optimal for low Voltage operation.
- Complementary to BTA1036N3.
- Pb-free package

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	0.6	A
Power Dissipation (Ta=25°C)	P_D	225 (Note)	mW
Power Dissipation (Tc=25°C)	P_D	560	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556 (Note)	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	223	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

Note : Free air condition

**Characteristics** (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	75	-	-	V	I _C =10μA
BV _{CEO}	40	-	-	V	I _C =10mA
BV _{EBO}	6	-	-	V	I _E =10μA
I _{CBO}	-	-	10	nA	V _{CB} =60V
I _{CEX}	-	-	10	nA	V _{CE} =60V, V _{BE} =-3V
I _{EBO}	-	-	10	nA	V _{EB} =3V
*V _{CE(sat)} 1	-	-	0.5	V	I _C =380mA, I _B =10mA
*V _{CE(sat)} 2	-	-	0.4	V	I _C =150mA, I _B =15mA
*V _{CE(sat)} 3	-	-	0.75	V	I _C =500mA, I _B =50mA
*V _{BE(sat)} 1	0.75	-	0.95	V	I _C =150mA, I _B =15mA
*V _{BE(sat)} 2	-	-	1.2	V	I _C =500mA, I _B =50mA
*h _{FE} 1	35	-	-		V _{CE} =1V, I _C =0.1mA
*h _{FE} 2	50	-	-		V _{CE} =1V, I _C =1mA
*h _{FE} 3	75	-	-		V _{CE} =1V, I _C =10mA
*h _{FE} 4	82	-	390		V _{CE} =1V, I _C =150mA
*h _{FE} 5	40	-	-		V _{CE} =2V, I _C =500mA
f _T	300	-	-	MHz	V _{CE} =5V, I _C =20mA, f=100MHz
Cob	-	6	-	pF	V _{CB} =5V, f=1MHz

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

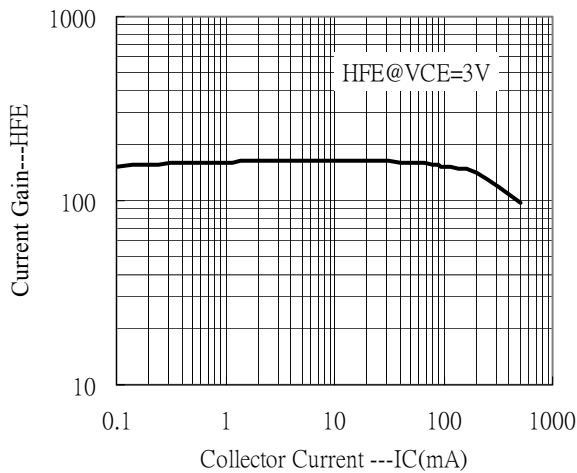
Classification Of h_{FE} 4

Rank	P	Q	R
Range	82~180	120~270	180~390

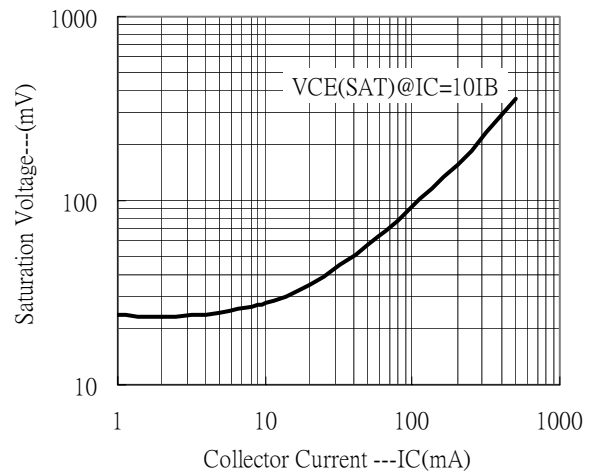


Characteristic Curves

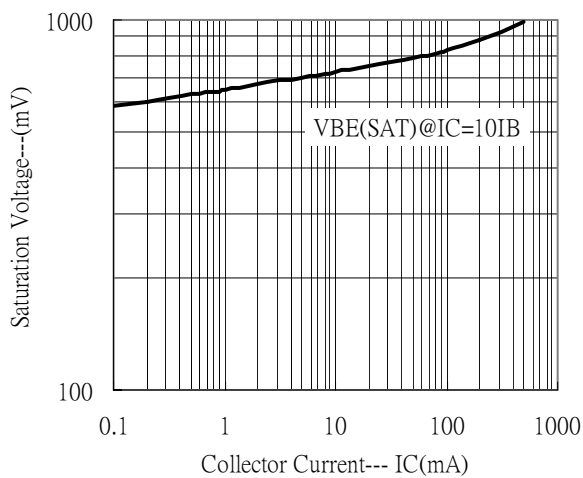
Current Gain vs Collector Current



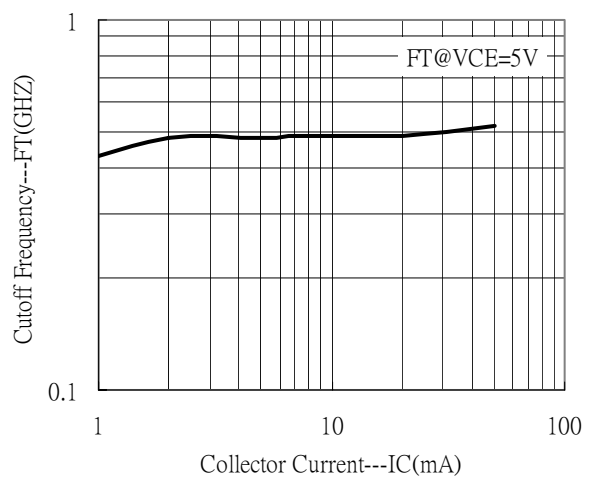
Saturation Voltage vs Collector Current



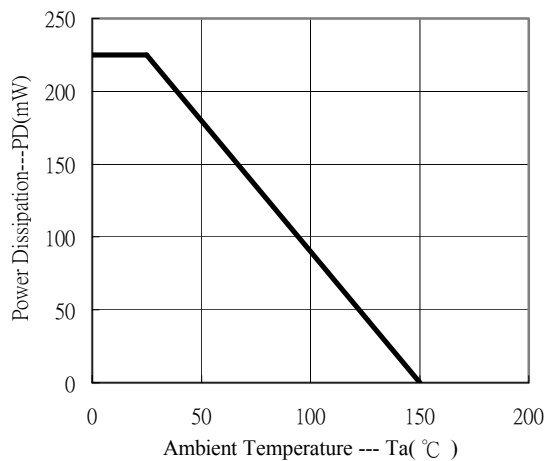
Saturation Voltage vs Collector Current



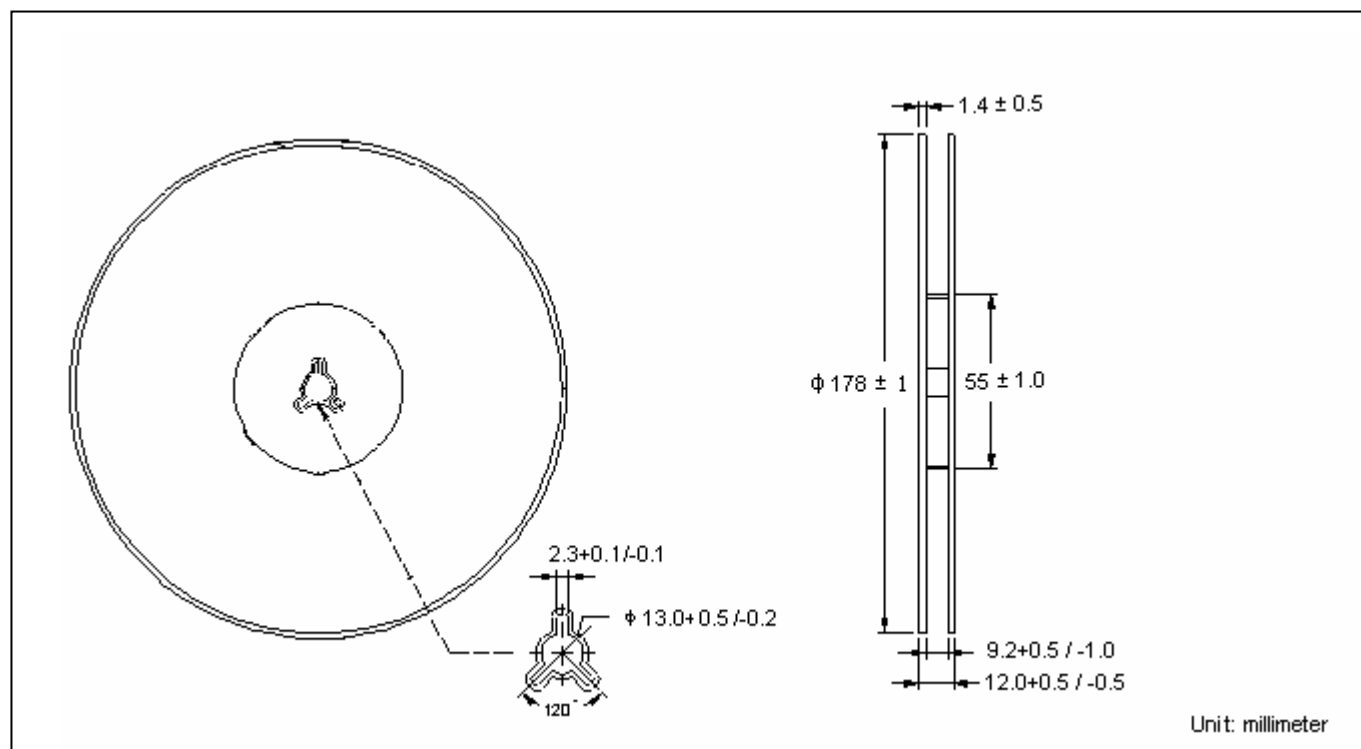
Cutoff Frequency vs Collector Current



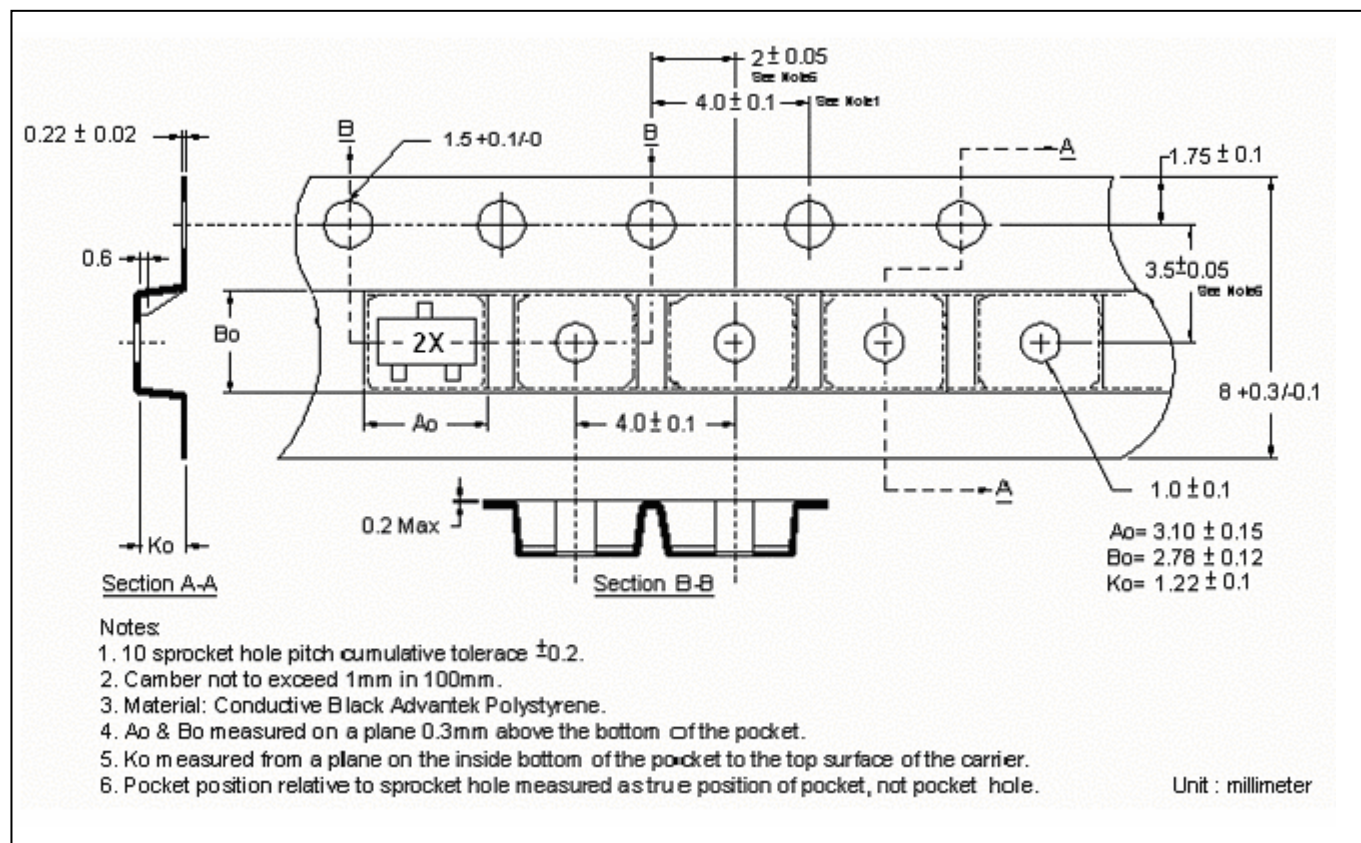
Power Derating Curve



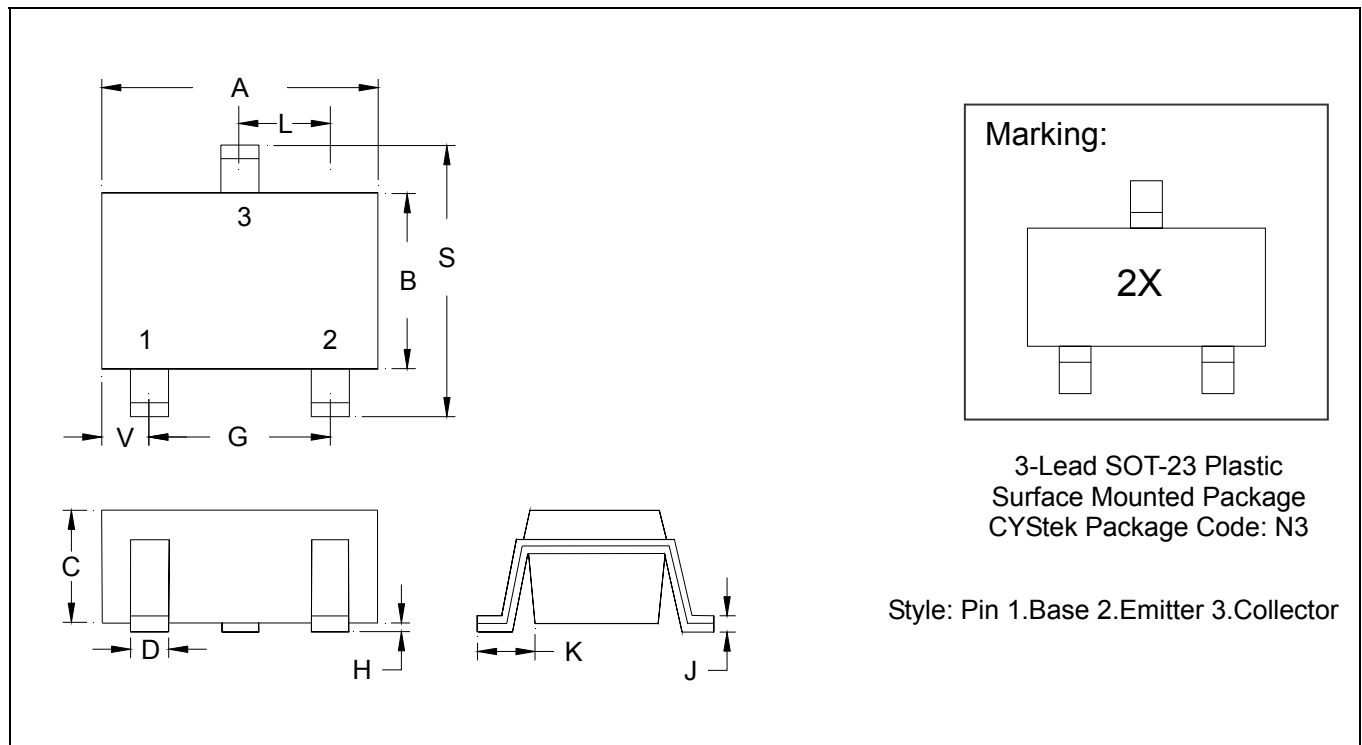
Reel Dimension



Carrier Tape Dimension



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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