General Purpose NPN Epitaxial Planar Transistor

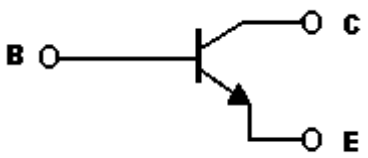
BTC2411L3

Description

- The BTC2411L3 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. $V_{CE(sat)}$ = 0.3V at I_C/I_B = 500mA/50mA.
  Optimal for low Voltage operation.
- Complementary to BTA1036L3.

Symbol

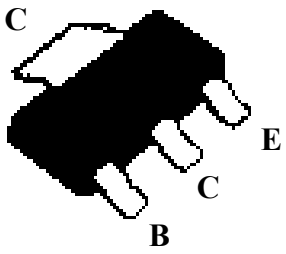
BTC2411L3



B：Base
C：Collector
E：Emitter

Outline

SOT-223



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 (T_C=25°C)	P_D	5	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

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

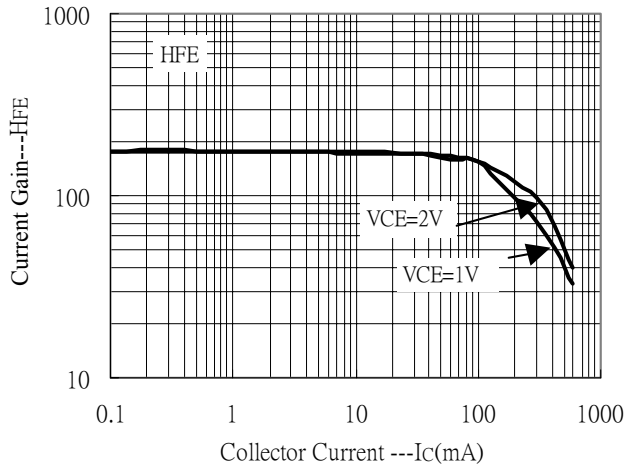
*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

Classification Of h_{FE} 4

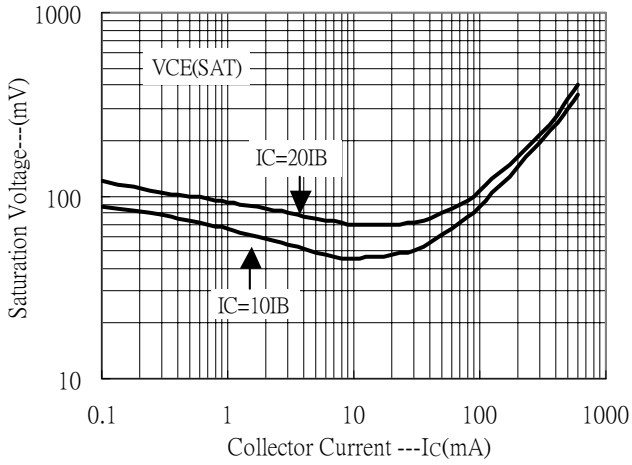
Rank	P	Q	R
Range	82~180	120~270	180~390

Characteristic Curves

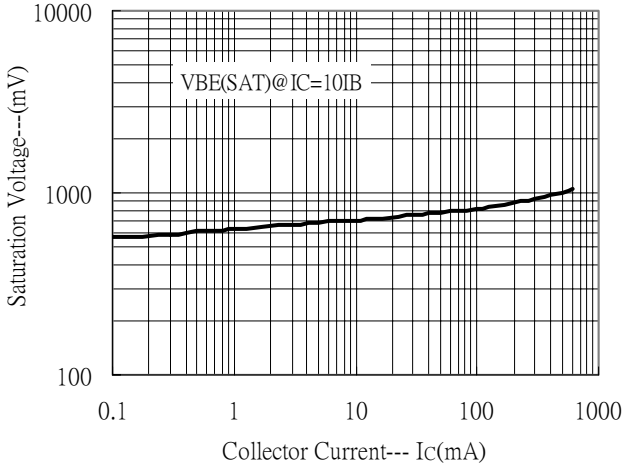
Current Gain vs Collector Current



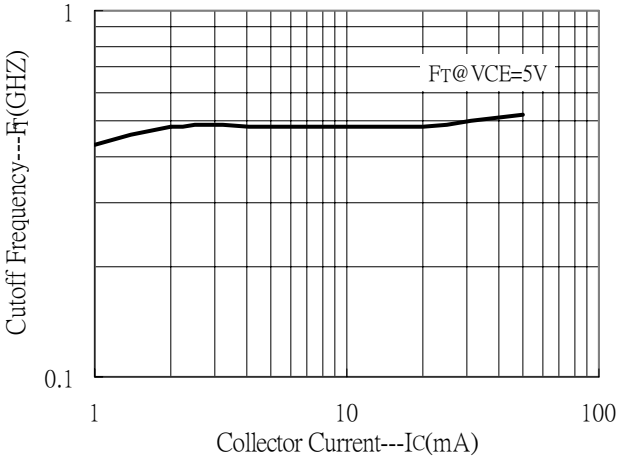
Saturation Voltage vs Collector Current



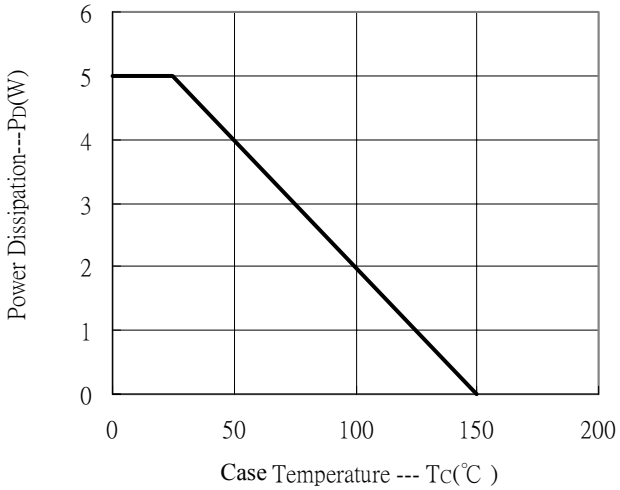
Saturation Voltage vs Collector Current



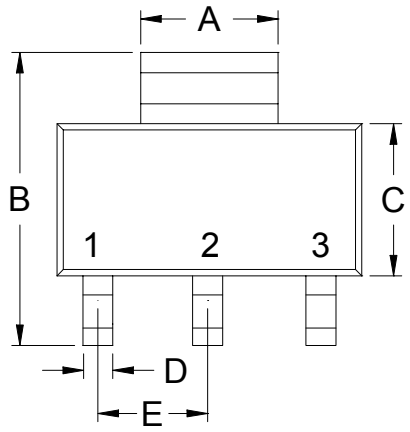
Cutoff Frequency vs Collector Current

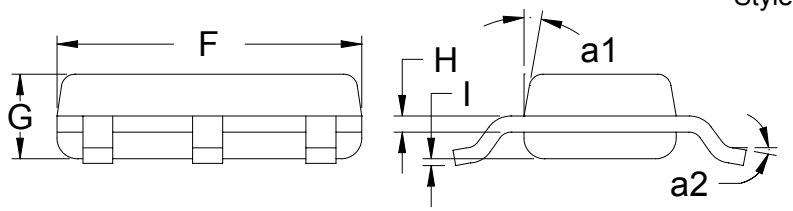


Power Derating Curve

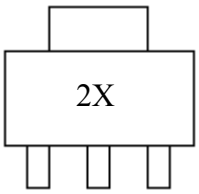


SOT-223 Dimension





Marking:



Style: Pin 1.Base 2.Collector 3.Emitter

3-Lead SOT-223 Plastic
Surface Mounted Package
CYStek Package Code: L3

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1142	0.1220	2.90	3.10	G	0.0551	0.0709	1.40	1.80
B	0.2638	0.2874	6.70	7.30	H	0.0098	0.0138	0.25	0.35
C	0.1299	0.1457	3.30	3.70	I	0.0008	0.0039	0.02	0.10
D	0.0236	0.0315	0.60	0.80	a1	*13°	-	*13°	-
E	*0.0906	-	*2.30	-	a2	0°	10°	0°	10°
F	0.2480	0.2638	6.30	6.70					

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