

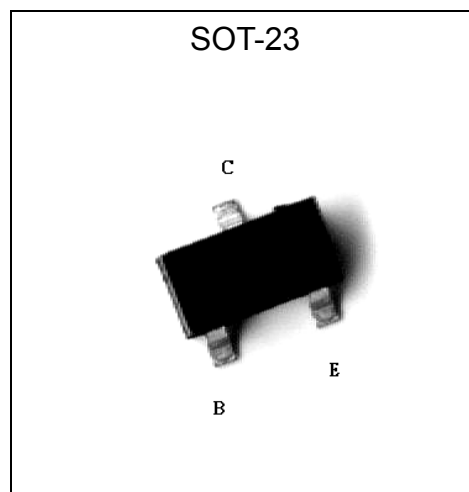
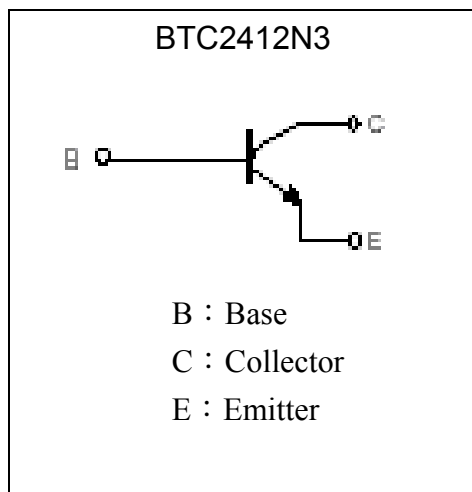
**General Purpose NPN Epitaxial Planar Transistor**

# BTC2412N3

**Description**

- The BTC2412N3 is designed for using in driver stage of AF amplifier and general purpose amplification.
- Low Cob. Typ. Cob=2.0pF
- Complementary to BTA1037N3 .

**Equivalent Circuit**



**Absolute Maximum Ratings** (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	VCBO	60	V
Collector-Emitter Voltage	VCEO	50	V
Emitter-Base Voltage	VEBO	7	V
Collector Current	IC	150	mA
Power Dissipation	Pd	225	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C



**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	60	-	-	V	IC=100uA
BVCEO	50	-	-	V	IC=1mA
BVEBO	7	-	-	V	IE=50uA
ICBO	-	-	0.1	uA	VCB=60V
IEBO	-	-	0.1	uA	VEB=7V
*VCE(sat)	-	0.2	0.4	V	IC=50mA, IB=5mA
*hFE	120	-	820		VCE=6V, IC=1mA
fT	80	180	-	MHz	VCE=12V, IC=2mA, f=100MHz
Cob	-	2	3.5	pF	VCB=12V, f=1MHz

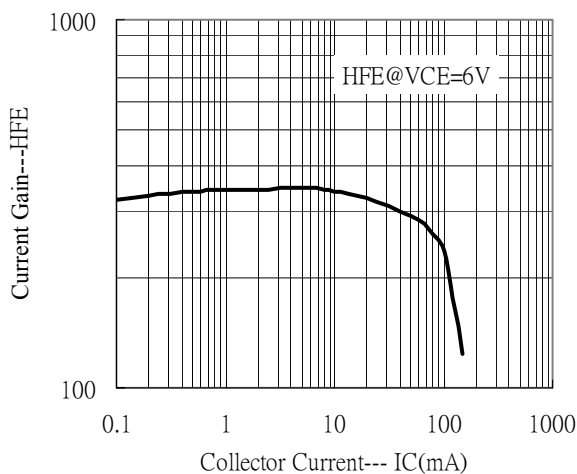
\*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

**Classification Of hFE**

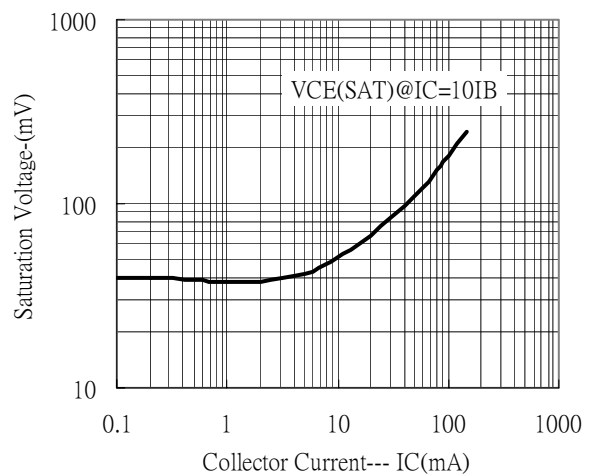
Rank	Q	R	S	T
Range	120-270	180-390	270-560	410-820

**Characteristic Curves**

Current Gain vs Collector Current

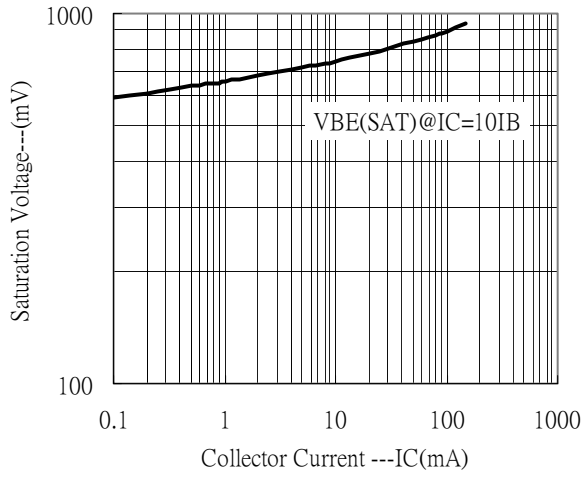


Saturation Voltage vs Collector Current

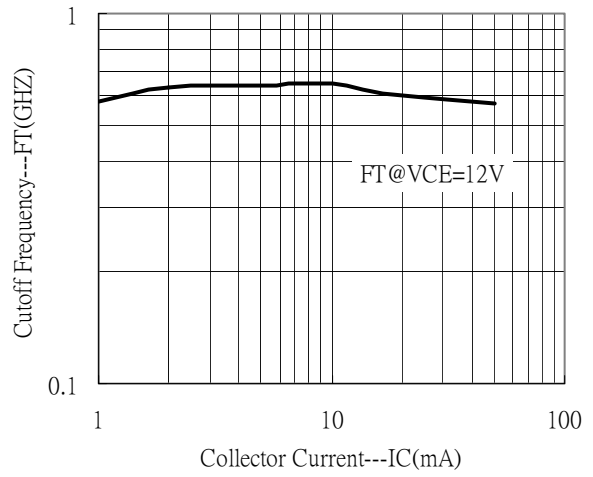




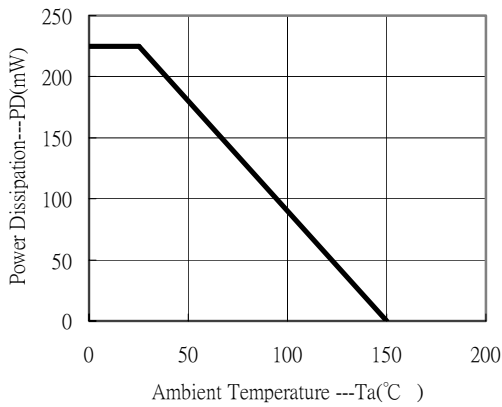
Saturation Voltage vs Collector Current



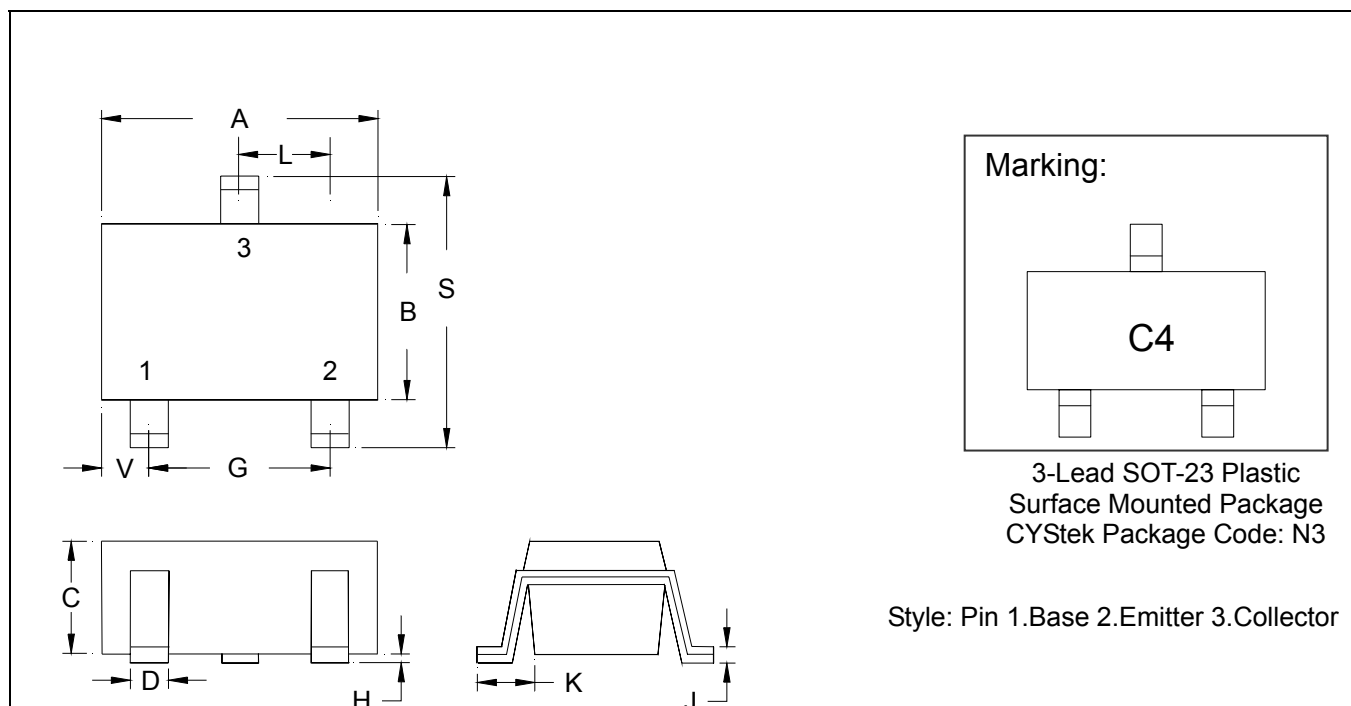
Cutoff Frequency vs Collector Current



PD - Ta



**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.Dimension and tolerance based on our Spec. dated Feb. 18,2002.
  - 2.Controlling dimension: millimeters.
  - 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
  - 4.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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