General Purpose NPN Epitaxial Planar Transistor

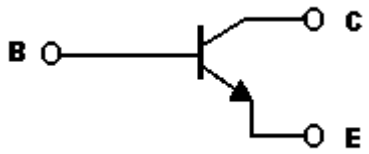
BTC9014A3

Description

- The BTC9014A3 is designed for use in pre-amplifier of low level and low noise.
- Complementary to BTA9015A3.
- Pb-free package

Symbol

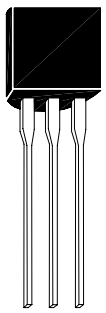
BTC9014A3



B：Base
C：Collector
E：Emitter

Outline

TO-92



E B C

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Base Current	I_B	20	mA
Power Dissipation @Ta=25℃	Pd	450	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	278	°C/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}	50	-	-	V	I_C=100μA
BV_{CEO}	45	-	-	V	I_C=1mA
BV_{EBO}	5	-	-	V	I_E=10μA
I_{CBO}	-	-	50	nA	V_{CB}=50V
I_{EBO}	-	-	50	nA	V_{EB}=5V
*$V_{CE(sat)}$	-		0.3	V	I_C=100mA, I_B=5mA
*$V_{BE(sat)}$	-	0.85	1.0	V	I_C=100mA, I_B=5mA
V_{BE}	0.58	-	0.7	V	V_{CE}=5V, I_C=2mA
h_{FE}	200	-	600	-	V_{CE}=5V, I_C=1mA
f_T	150	-	-	MHz	V_{CE}=5V, I_C=10mA, f=100MHz
Cob	-	-	3.5	pF	V_{CB}=10V, I_E=0A, f=1MHz

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

Classification of h_{FE}

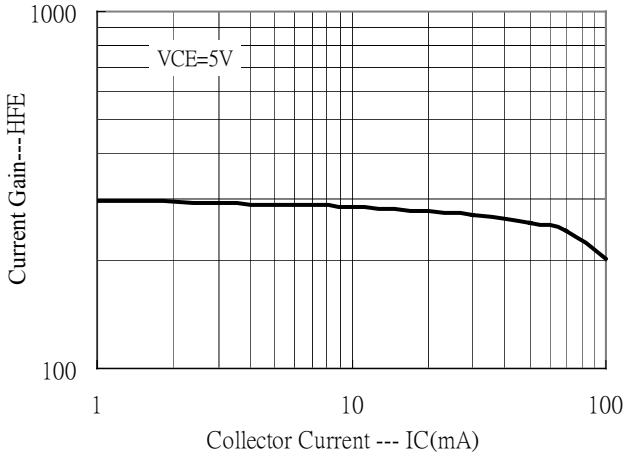
Rank	C
Range	200~600

Ordering Information

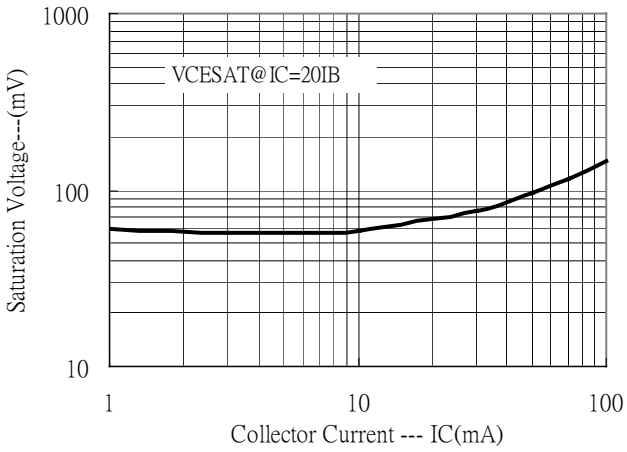
Device	Package	Shipping	Marking
BTC9014A3	TO-92 (Pb-free)	1000 pcs / bag, 10 bags/box	C9014

Characteristic Curves

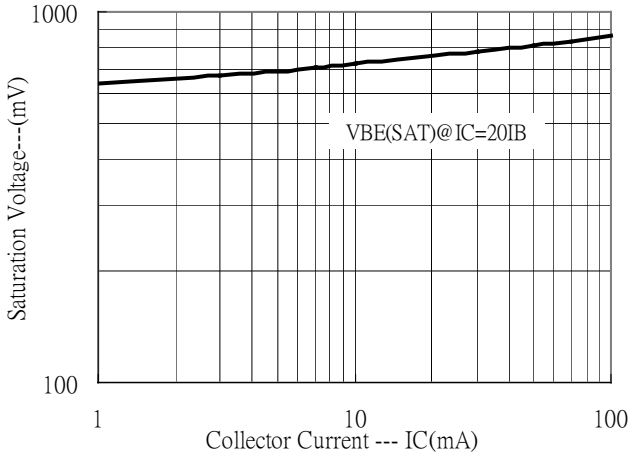
Current Gain vs Collector Current



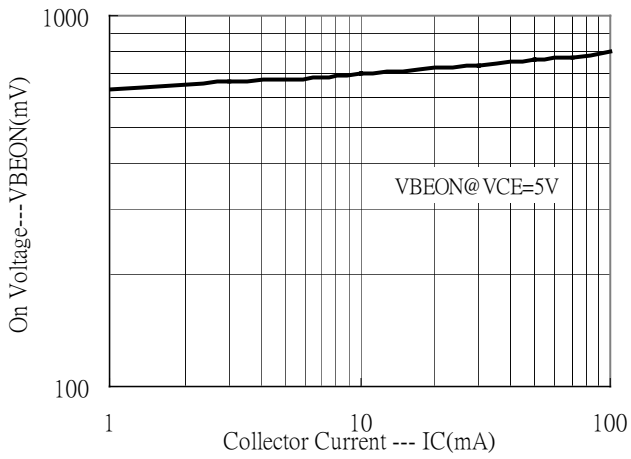
Saturation Voltage vs Collector Current



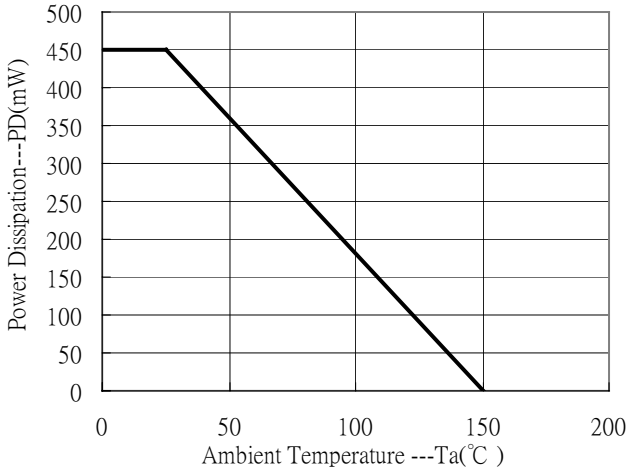
Saturation Voltage vs Collector Current



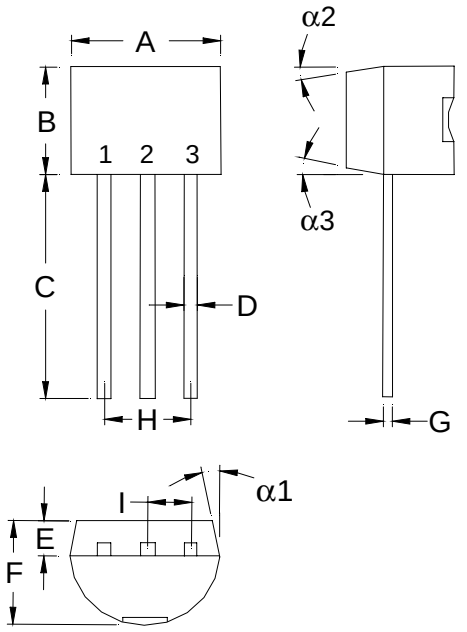
On Voltage vs Collector Current



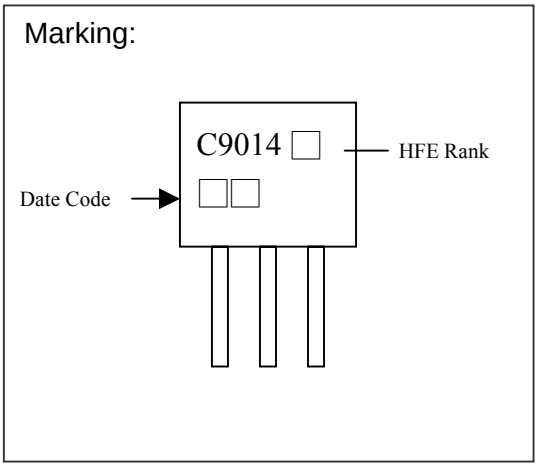
Power Derating Curve



TO-92 Dimension



Marking:



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

3-Lead TO-92 Plastic Package
CYStek Package Code: A3

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1704	0.1902	4.33	4.83	G	0.0142	0.0220	0.36	0.56
B	0.1704	0.1902	4.33	4.83	H	-	*0.1000	-	*2.54
C	0.5000	-	12.70	-	I	-	*0.0500	-	*1.27
D	0.0142	0.0220	0.36	0.56	α1	-	*5°	-	*5°
E	-	*0.0500	-	*1.27	α2	-	*2°	-	*2°
F	0.1323	0.1480	3.36	3.76	α3	-	*2°	-	*2°

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

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