

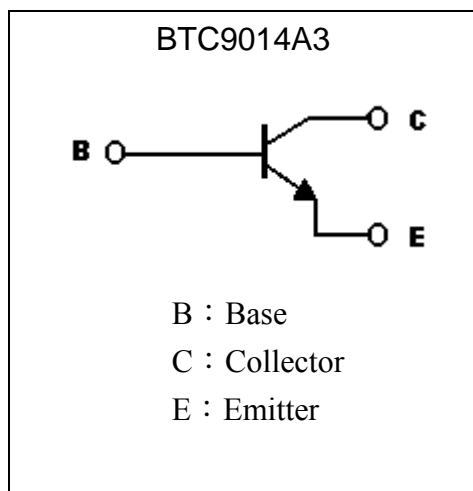
General Purpose NPN Epitaxial Planar Transistor

BTC9014A3

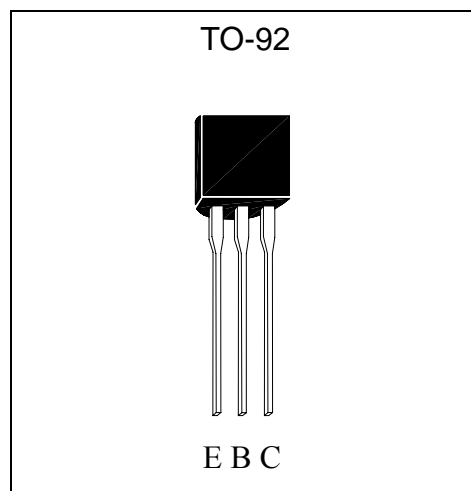
Description

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

Symbol



Outline



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°C	P _d	450	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	278	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-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 hFE

Rank	C
Range	200~600

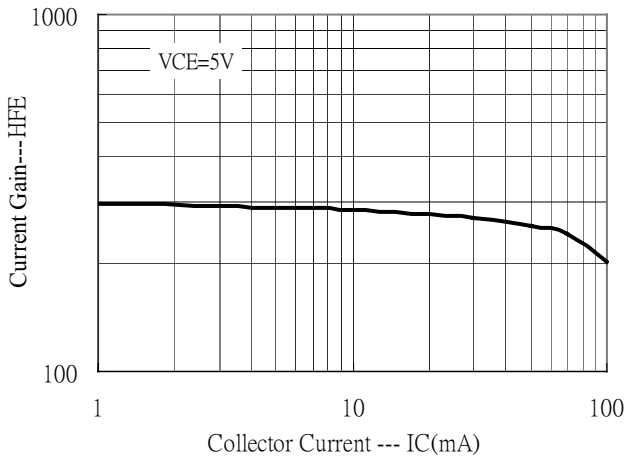
Ordering Information

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

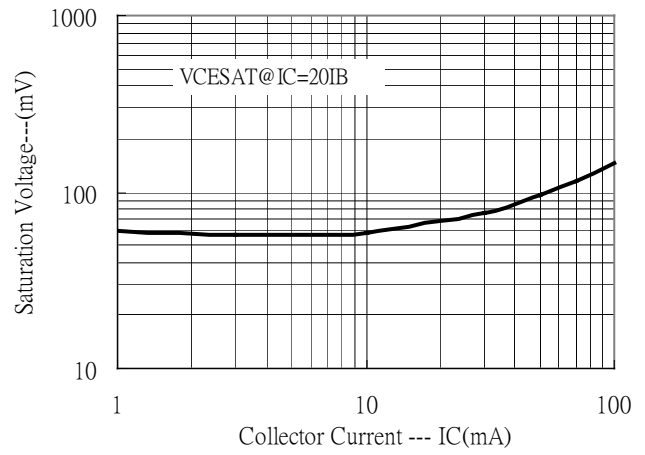


Characteristic Curves

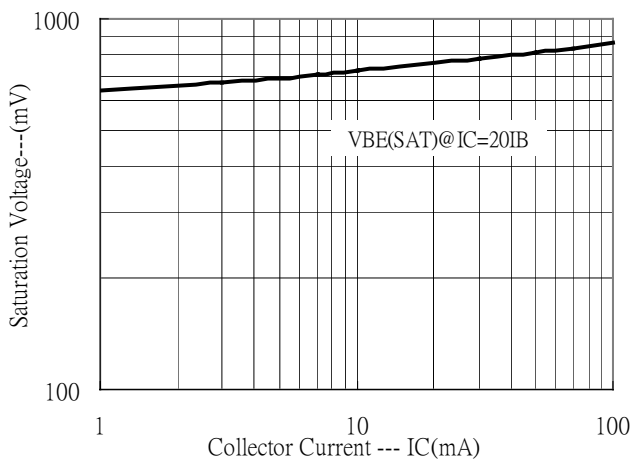
Current Gain vs Collector Current



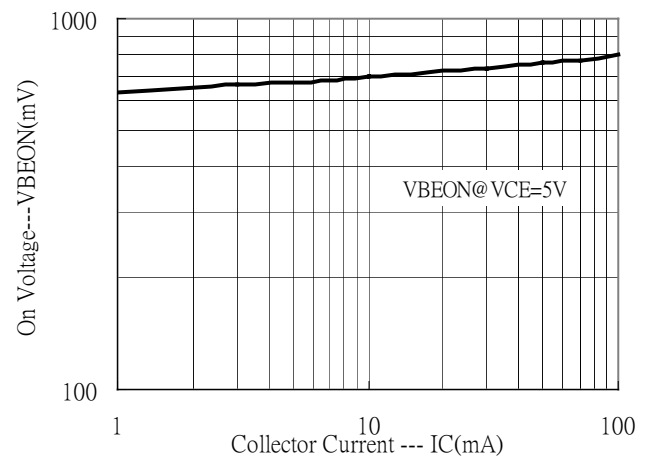
Saturation Voltage vs Collector Current



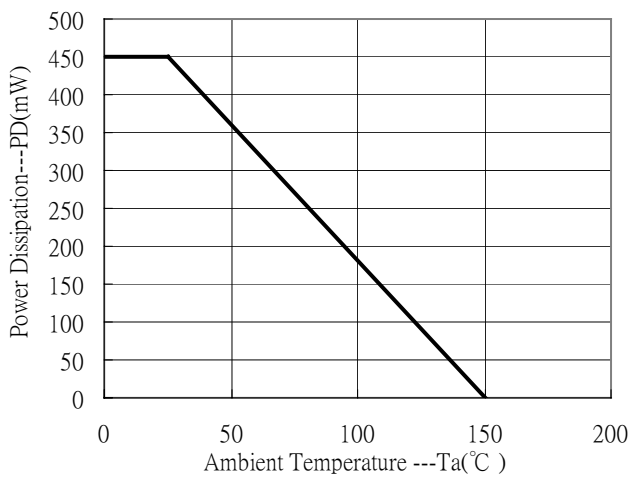
Saturation Voltage vs Collector Current



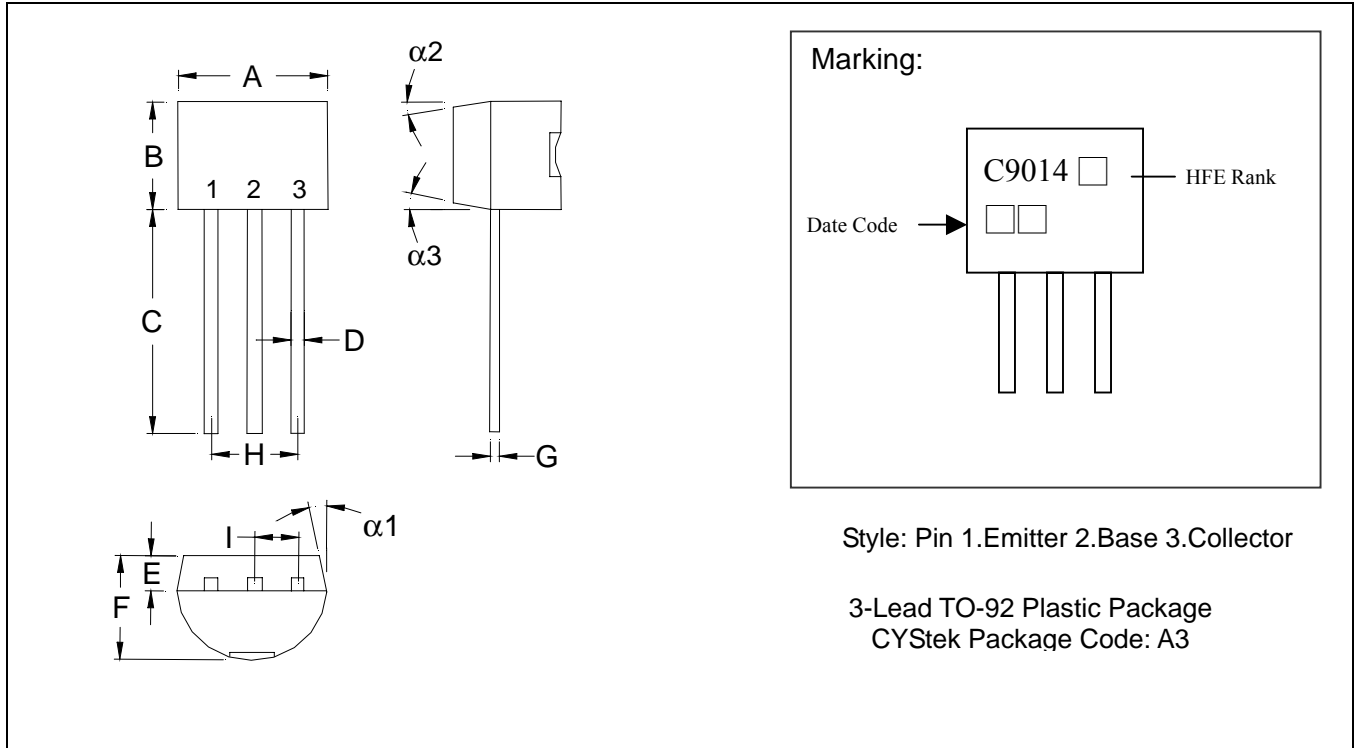
On Voltage vs Collector Current



Power Derating Curve



TO-92 Dimension



*: 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	$\alpha 1$	-	*5°	-	*5°
E	-	*0.0500	-	*1.27	$\alpha 2$	-	*2°	-	*2°
F	0.1323	0.1480	3.36	3.76	$\alpha 3$	-	*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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