General Purpose PNP Epitaxial Planar Transistor

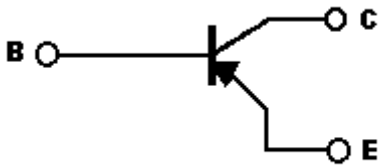
BTA608A3

Features

- The BTA608A3 is designed for use in driver stage of AF amplifier and general purpose amplification.
- High H_{FE} and excellent linearity
- Large current capability and wide SOA
- Complementary to BTC536A3
- Pb-free package

Symbol

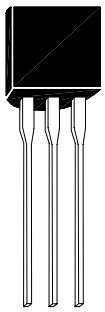
BTA608A3



B：Base
C：Collector
E：Emitter

Outline

TO-92



E C B

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current (DC)	I_C	-150	mA
Collector Current (Pulse)	I_{CP}	-400	mA
Power Dissipation	Pd	500	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	250	°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_{CEO}	-50	-	-	V	I_C=-1mA
BV_{CBO}	-60	-	-	V	I_C=-10μA
BV_{EBO}	-6	-	-	V	I_E=-10μA
I_{CBO}	-	-	-0.1	μA	V_{CB}=-40V
I_{EBO}	-	-	-0.1	μA	V_{EB}=-5V
*$V_{CE(sat)}$	-	-	-0.3	V	I_C=-100mA, I_B=-10mA
$V_{BE(sat)}$	-	-	-1.0	V	I_C=-100mA, I_B=-10mA
h_{FE} 1	160	-	560	-	V_{CE}=-6V, I_C=-1mA
h_{FE} 2	70	-	-	-	V_{CE}=-6V, I_C=-0.1mA
f_T	-	200	-	MHz	V_{CE}=-6V, I_C=-10mA
Cob	-	4.5	-	pF	V_{CB}=-6V, f=1MHz

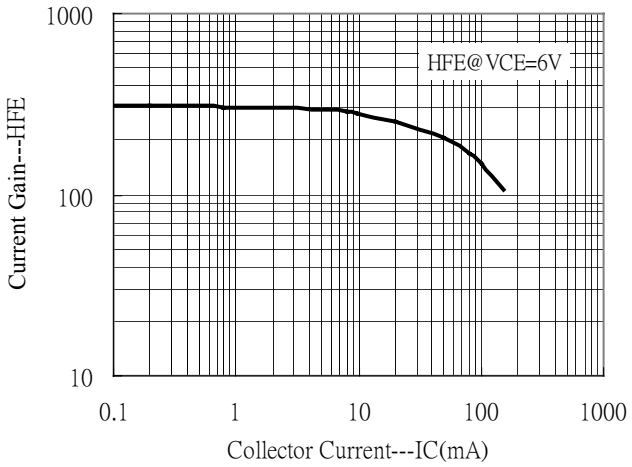
*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

Classification Of h_{FE} 1

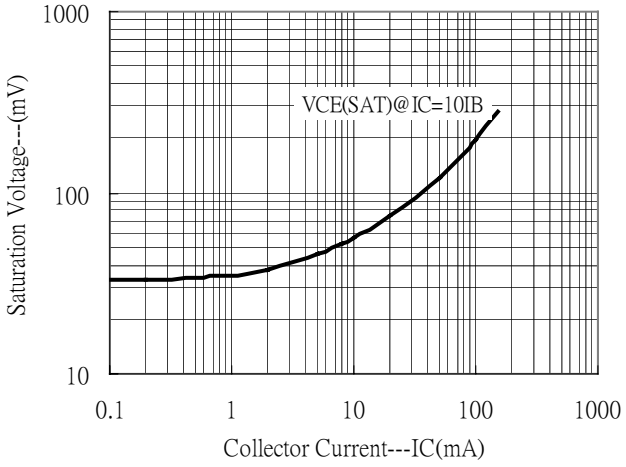
Rank	F	G
Range	160~320	280~560

Characteristic Curves

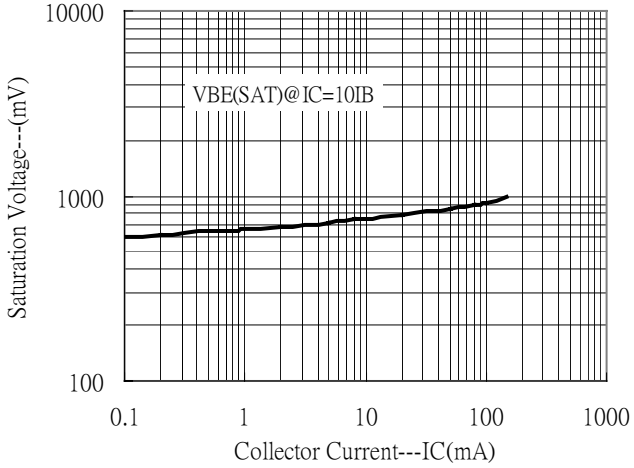
Current Gain vs Collector Current



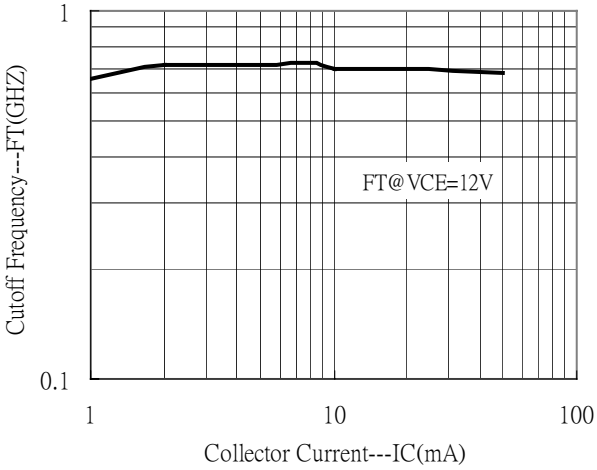
Saturation Voltage vs Collector Current



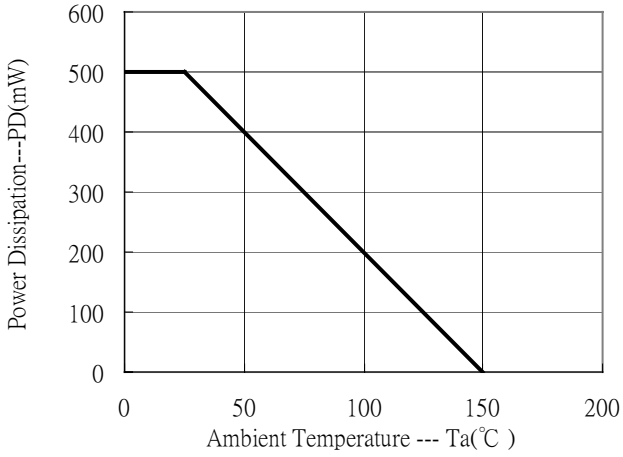
Saturation Voltage vs Collector Current



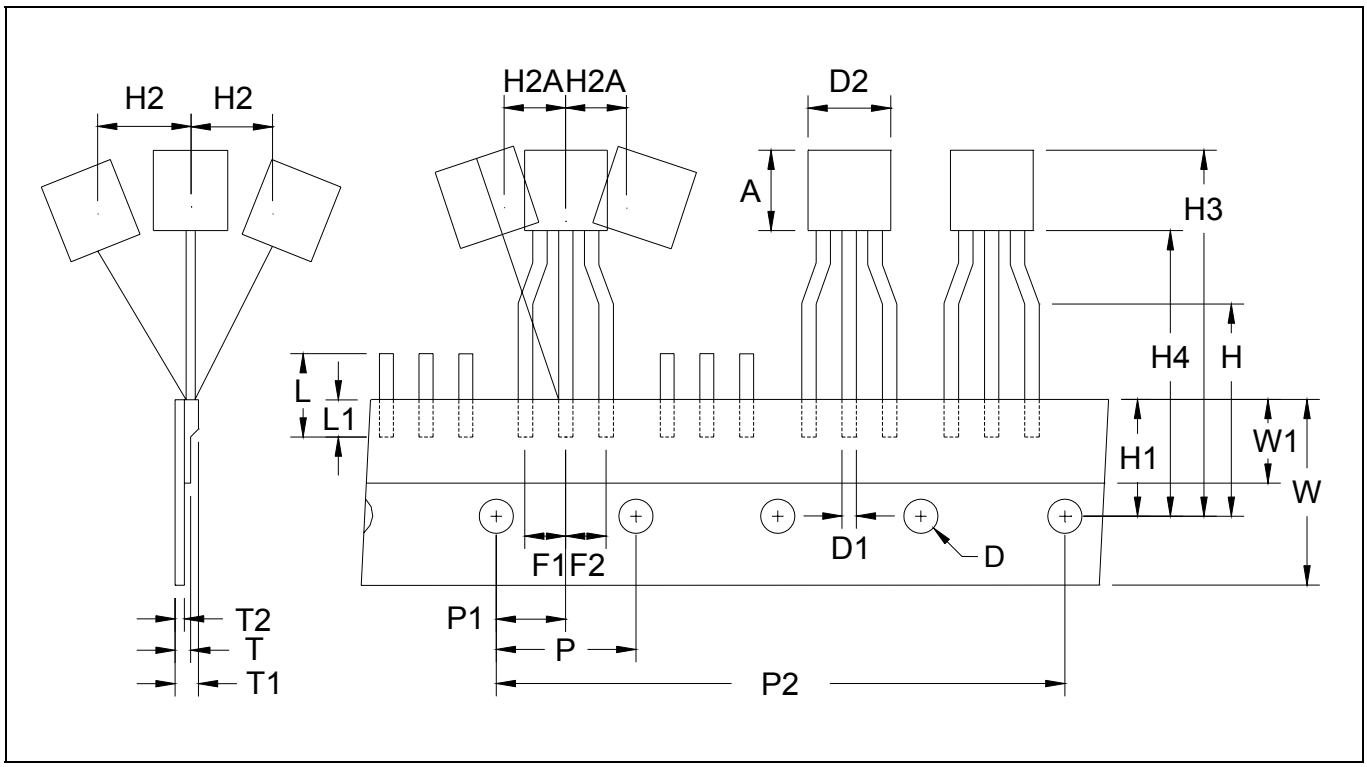
Cutoff Frequency vs Collector Current



Power Derating Curve

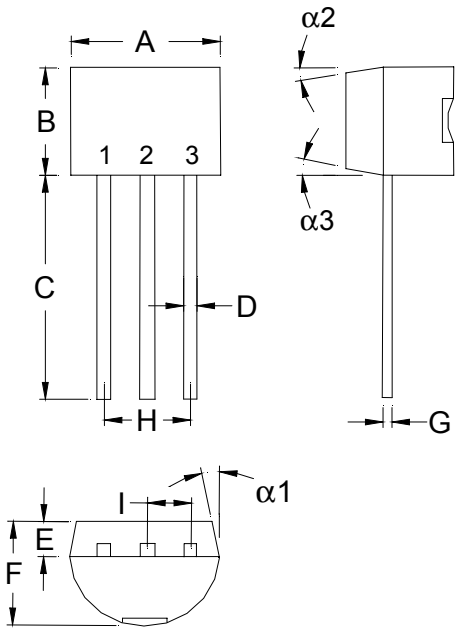


TO-92 Taping Outline

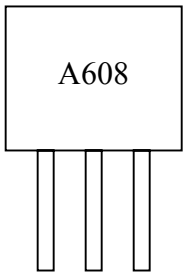


DIM	Item	Millimeters	
		Min.	Max.
A	Component body height	4.33	4.83
D	Tape Feed Diameter	3.80	4.20
D1	Lead Diameter	0.36	0.53
D2	Component Body Diameter	4.33	4.83
F1,F2	Component Lead Pitch	2.40	2.90
F1,F2	F1-F2	-	±0.3
H	Height Of Seating Plane	15.50	16.50
H1	Feed Hole Location	8.50	9.50
H2	Front To Rear Deflection	-	1
H2A	Deflection Left Or Right	-	1
H3	Component Height	-	27
H4	Feed Hole To Bottom Of Component	-	21
L	Lead Length After Component Removal	-	11
L1	Lead Wire Enclosure	2.50	-
P	Feed Hole Pitch	12.50	12.90
P1	Center Of Seating Plane Location	5.95	6.75
P2	4 Feed Hole Pitch	50.30	51.30
T	Over All Tape Thickness	-	0.55
T1	Total Taped Package Thickness	-	1.42
T2	Carrier Tape Thickness	0.36	0.68
W	Tape Width	17.50	19.00
W1	Adhesive Tape Width	5.00	7.00
-	20 pcs Pitch	253	255

TO-92 Dimension



Marking:



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

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