

**NPN Epitaxial Planar Transistor**

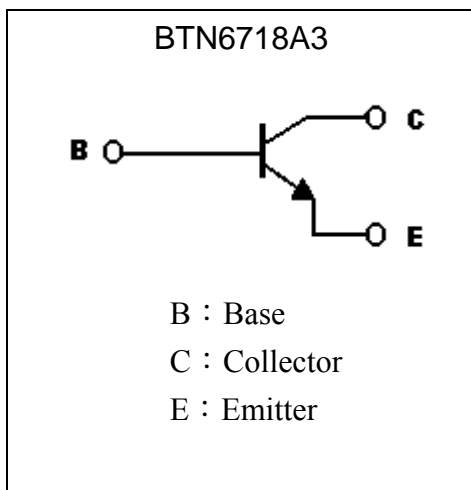
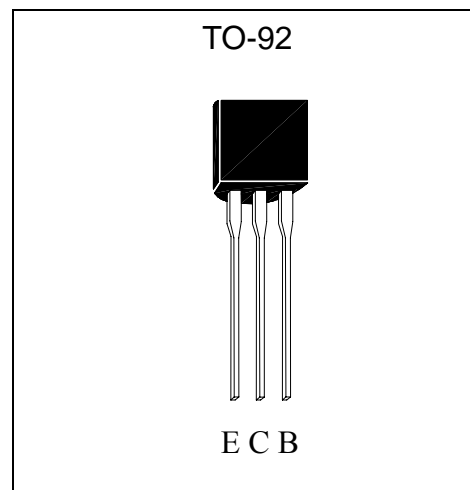
# BTN6718A3

**Description**

The BTN6718A3 is designed for general purpose medium power amplifier and switching applications.

**Features**

- Low collector saturation voltage
- High breakdown voltage,  $V_{CEO}=100V$  (min.)
- High collector current,  $I_{C(max)}=1A$  (DC)
- Pb-free package

**Symbol**

**Outline**

**Absolute Maximum Ratings** ( $T_a=25^{\circ}C$ )

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	$V_{CBO}$	100	V
Collector-Emitter Voltage	$V_{CEO}$	100	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current (DC)	$I_C$	1	A
Collector Current (Pulse)	$I_{CP}$	2 (Note)	A
Power Dissipation	$P_D$	850	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	147	$^{\circ}C/W$
Junction Temperature	$T_j$	150	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55~+150	$^{\circ}C$

Note : Pulse test,  $P_w \leq 10ms$ , Duty  $\leq 50\%$ .

**Characteristics** (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV <sub>CB0</sub>	100	-	-	V	I <sub>C</sub> =100μA
BV <sub>CEO</sub>	100	-	-	V	I <sub>C</sub> =1mA
BV <sub>EBO</sub>	5	-	-	V	I <sub>E</sub> =10μA
I <sub>CB0</sub>	-	-	100	nA	V <sub>CB</sub> =80V, I <sub>E</sub> =0
I <sub>EBO</sub>	-	-	100	nA	V <sub>EB</sub> =4V, I <sub>C</sub> =0
*V <sub>CE(SAT)</sub>	-	-	350	mV	I <sub>C</sub> =350mA, I <sub>B</sub> =35mA
*h <sub>FE</sub> 1	90	-	-	-	V <sub>CE</sub> =1V, I <sub>C</sub> =50mA
*h <sub>FE</sub> 2	100	-	300	-	V <sub>CE</sub> =1V, I <sub>C</sub> =250mA
*h <sub>FE</sub> 3	20	-	-	-	V <sub>CE</sub> =1V, I <sub>C</sub> =500mA
f <sub>T</sub>	50	-	-	MHz	V <sub>CE</sub> =10V, I <sub>C</sub> =50mA, f=100MHz
C <sub>ob</sub>	-	-	20	pF	V <sub>CB</sub> =10V, I <sub>E</sub> =0A, f=1MHz

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

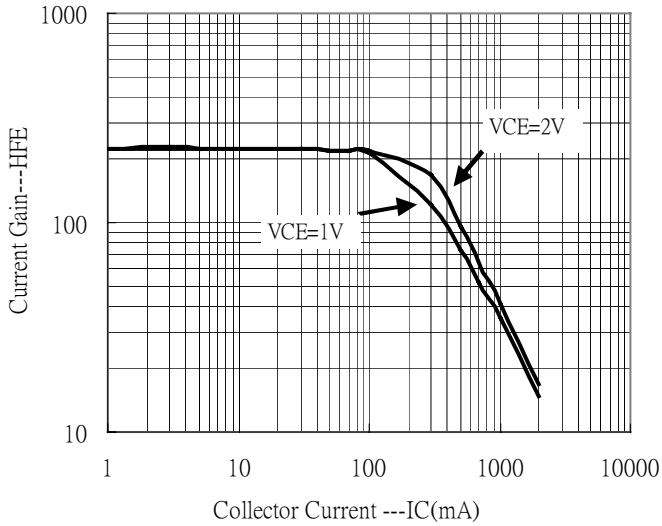
**Ordering Information**

Device	Package	Shipping	Marking
BTN6718A3	TO-92 (Pb-free)	2000 pcs / Tape & Box	N6718

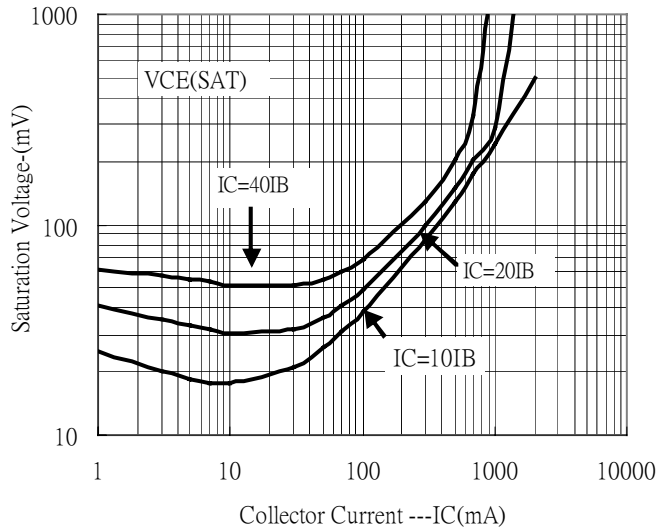


### Characteristic Curves

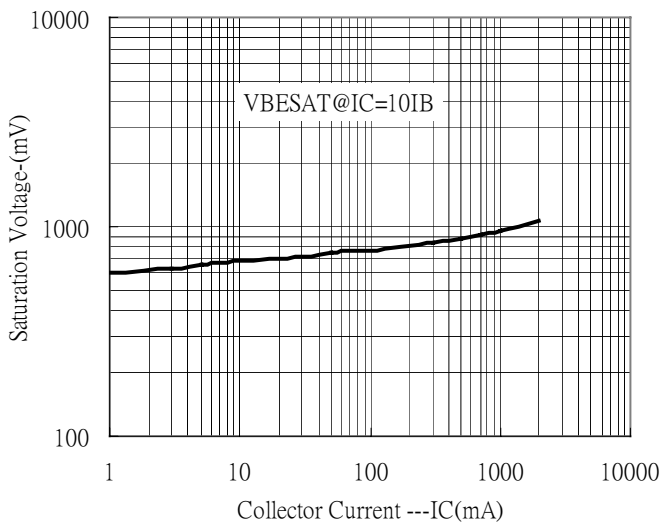
Current Gain vs Collector Current



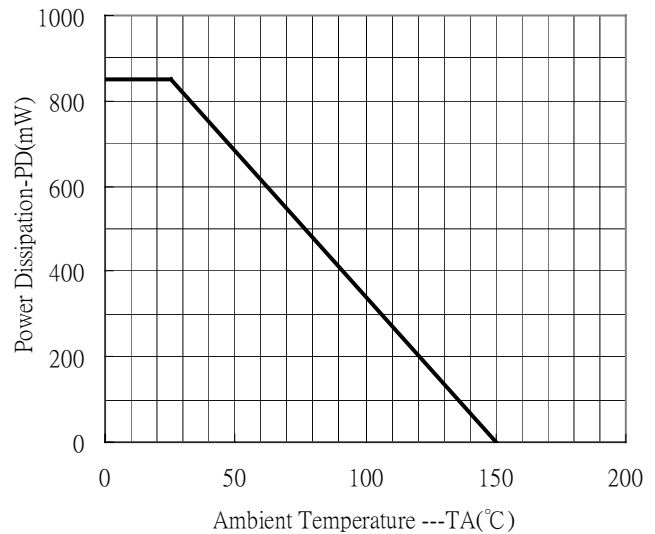
Saturation Voltage vs Collector Current



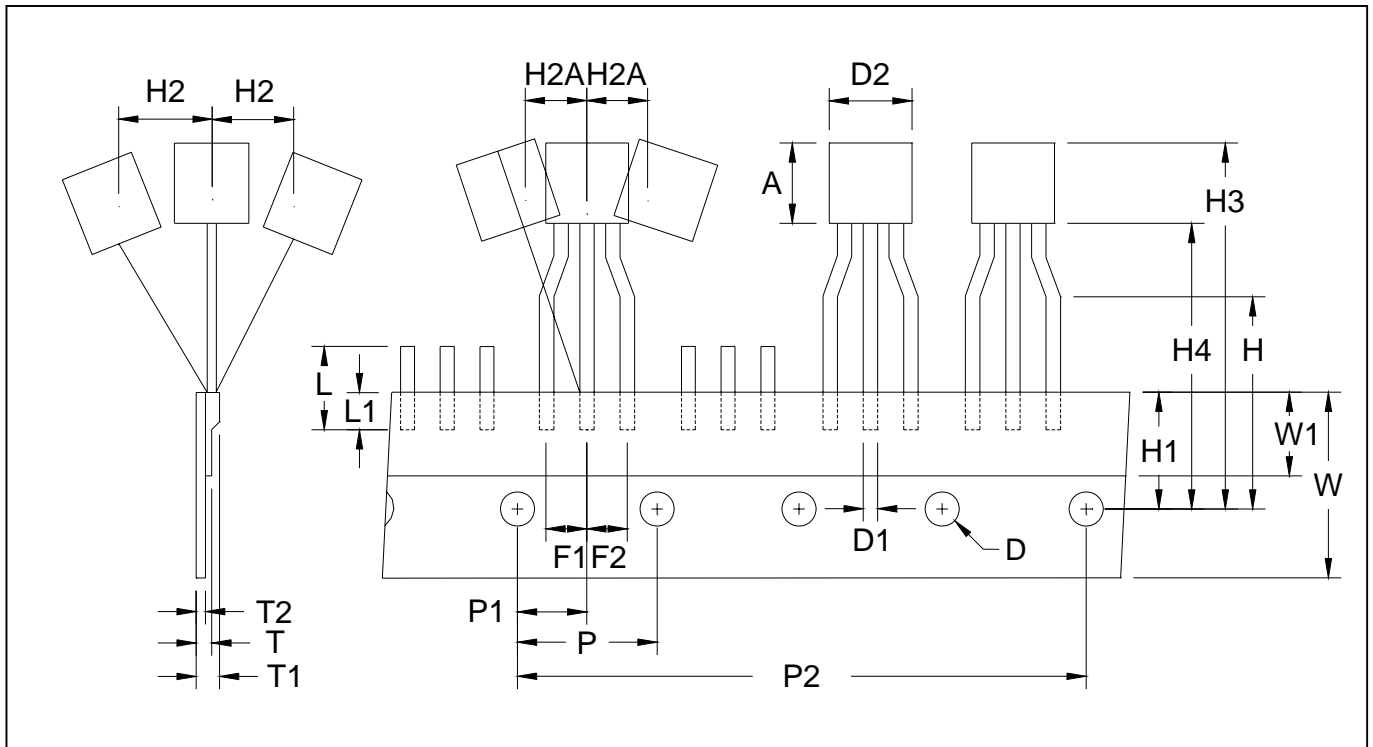
Saturation Voltage vs Collector Current



Power Derating Curve

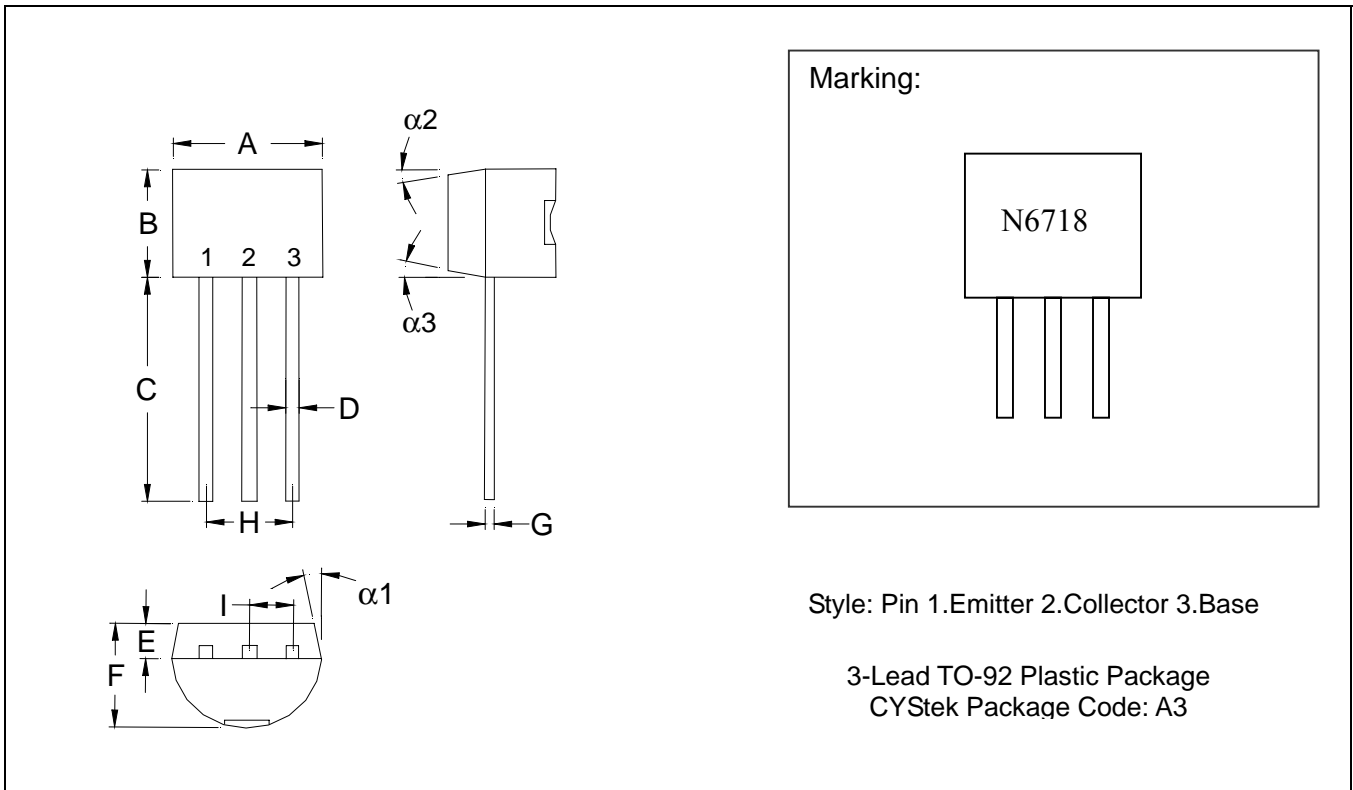


**TO-92 Taping Outline**



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**



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

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