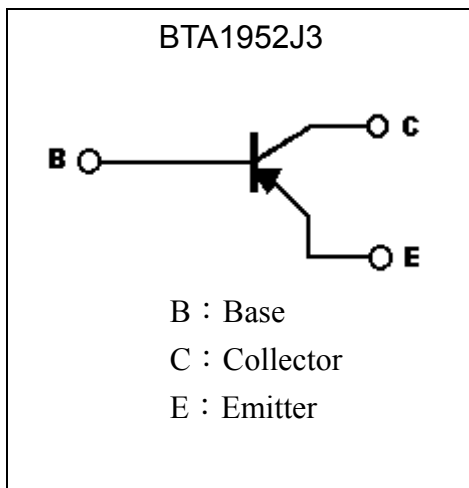
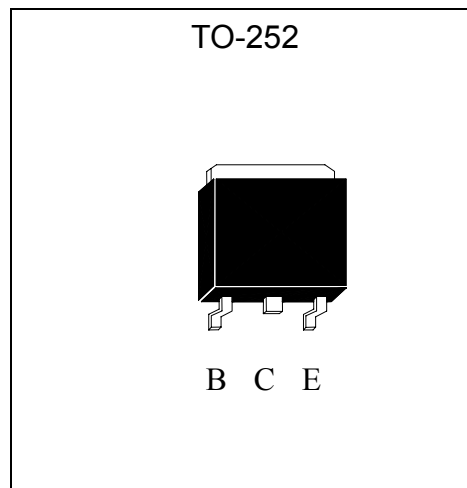


**Low Vcesat PNP Epitaxial Planar Transistor**

# BTA1952J3

**Features**

- Low  $V_{CE(sat)}$ ,  $V_{CE(sat)} = -0.3$  V (typical), at  $I_C / I_B = -2A / -0.2A$
- Excellent DC current gain characteristics
- Wide SOA
- Complementary to BTC5103J3

**Symbol**

**Outline**

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

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	$V_{CBO}$	-100	V
Collector-Emitter Voltage	$V_{CEO}$	-80	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C(DC)$	-5	A
	$I_C(Pulse)$	-10 *1	
Power Dissipation	$P_d(T_a = 25^\circ\text{C})$	1	W
	$P_d(T_c = 25^\circ\text{C})$	10	
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55~+150	$^\circ\text{C}$

 Note : \*1. Single Pulse  $P_w = 10\text{ms}$



**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV <sub>CBO</sub>	-100	-	-	V	I <sub>C</sub> =-50μA, I <sub>E</sub> =0
BV <sub>CEO</sub>	-80	-	-	V	I <sub>C</sub> =-1mA, I <sub>B</sub> =0
BV <sub>EBO</sub>	-5	-	-	V	I <sub>E</sub> =-50μA, I <sub>C</sub> =0
I <sub>CBO</sub>	-	-	-10	μA	V <sub>CB</sub> =-100V, I <sub>E</sub> =0
I <sub>EBO</sub>	-	-	-10	μA	V <sub>EB</sub> =-5V, I <sub>C</sub> =0
*V <sub>CE(sat)</sub>	-	-0.3	-1.0	V	I <sub>C</sub> =-2A, I <sub>B</sub> =-0.2A
*V <sub>BE(sat)</sub>	-	-	-1.5	V	I <sub>C</sub> =-2A, I <sub>B</sub> =-0.2A
*h <sub>FE 1</sub>	100	-	-	-	V <sub>CE</sub> =-3V, I <sub>C</sub> =-0.5A
*h <sub>FE 2</sub>	120	-	390	-	V <sub>CE</sub> =-2V, I <sub>C</sub> =-1A
f <sub>T</sub>	-	120	-	MHz	V <sub>CE</sub> =-5V, I <sub>C</sub> =-500mA, f=30MHz

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

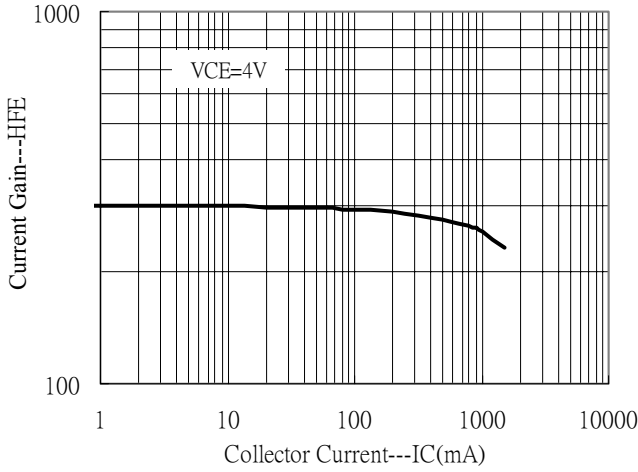
**Classification of hFE 2**

Rank	Q	R
Range	120~270	180~390

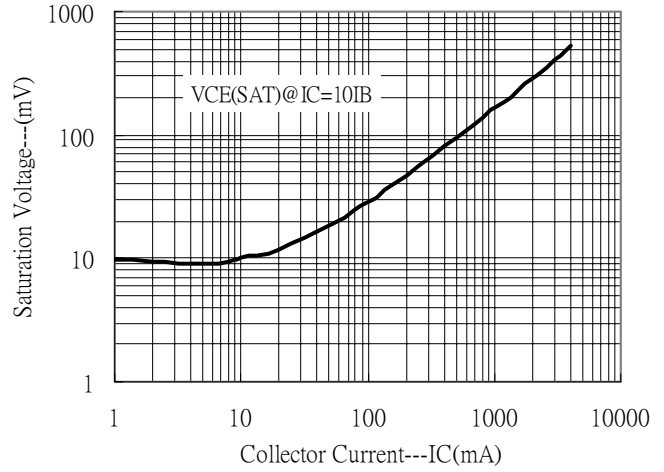


### Characteristic Curves

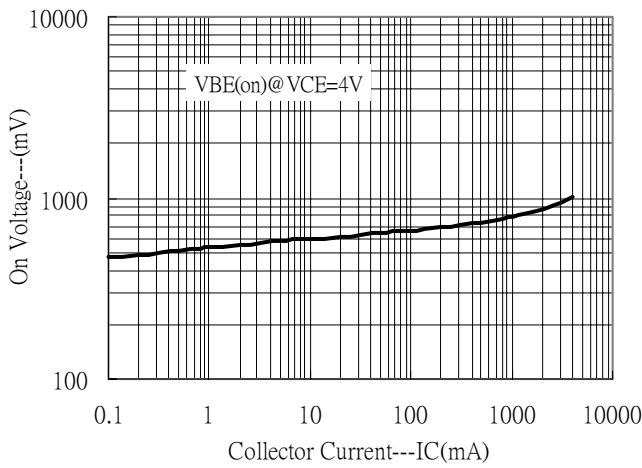
Current Gain vs Collector Current



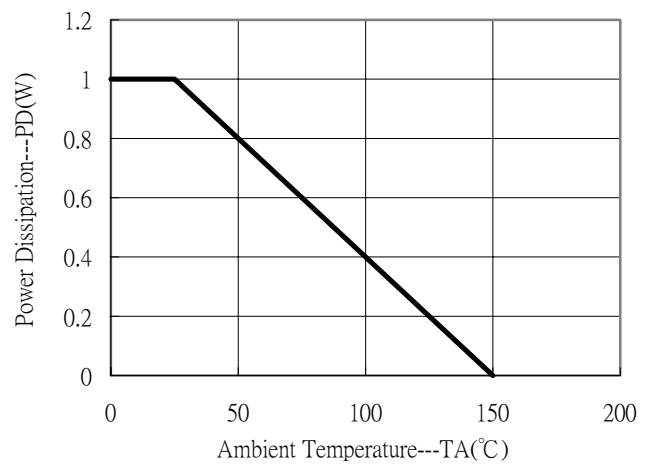
Saturation Voltage vs Collector Current



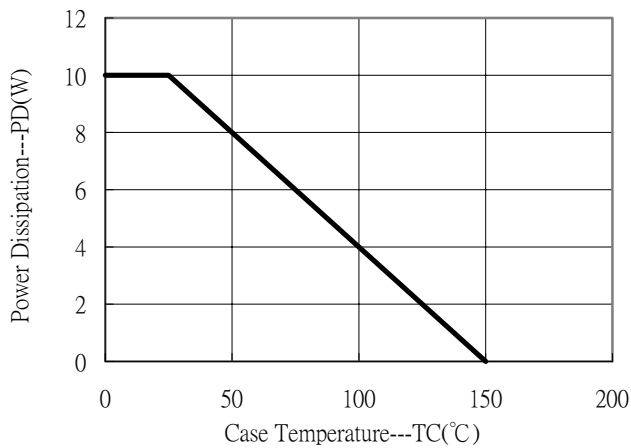
On Voltage vs Collector Current



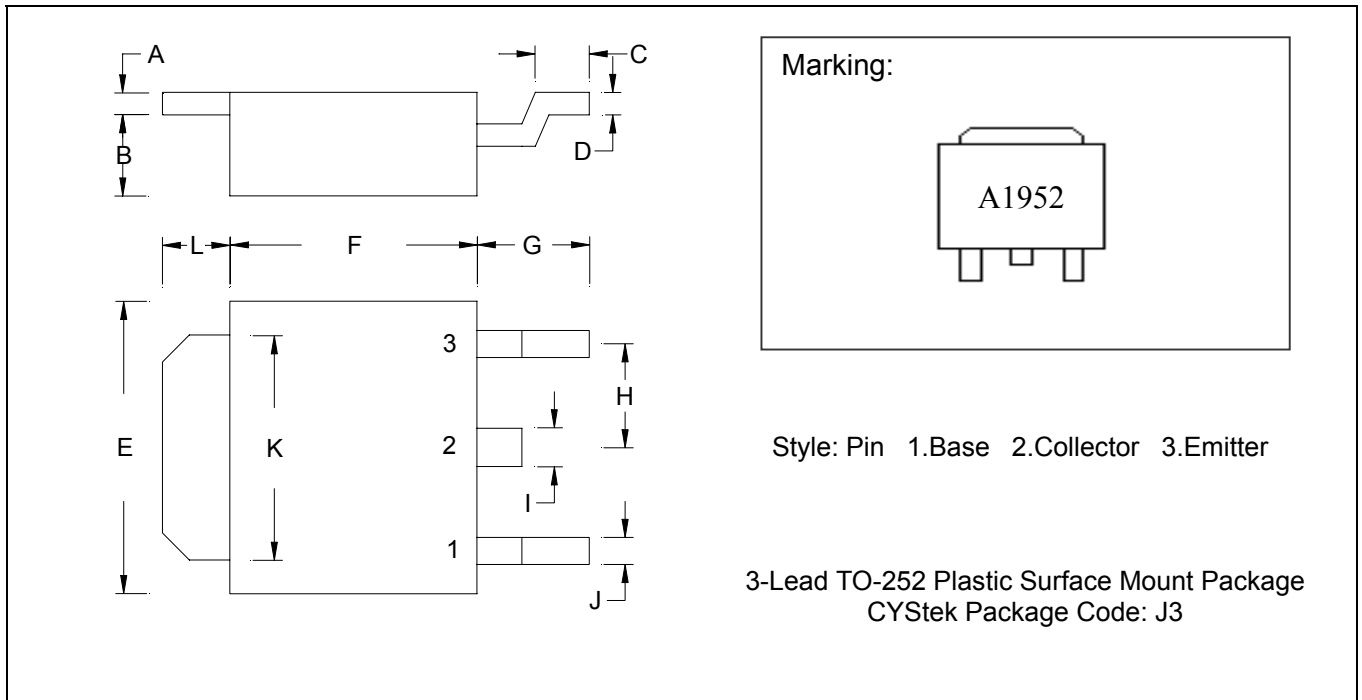
Power Derating Curve



Power Derating Curve



**TO-252 Dimension**



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0177	0.0217	0.45	0.55	G	0.0866	0.1102	2.20	2.80
B	0.0650	0.0768	1.65	1.95	H	-	*0.0906	-	*2.30
C	0.0354	0.0591	0.90	1.50	I	-	0.0354	-	0.90
D	0.0177	0.0236	0.45	0.60	J	-	0.0315	-	0.80
E	0.2520	0.2677	6.40	6.80	K	0.2047	0.2165	5.20	5.50
F	0.2125	0.2283	5.40	5.80	L	0.0551	0.0630	1.40	1.60

- Notes:**
- Controlling dimension: millimeters.
  - Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
  - 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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