

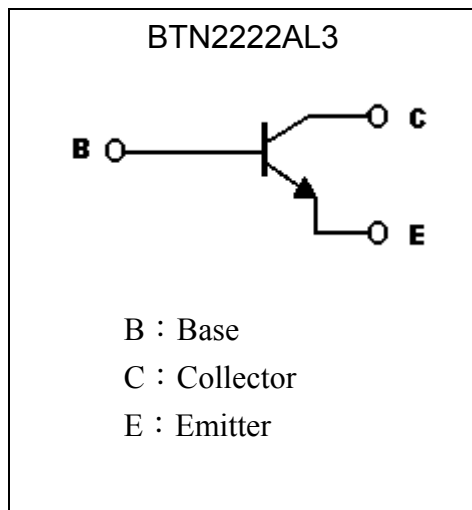
General Purpose NPN Epitaxial Planar Transistor

BTN2222AL3

Description

- Low collector output capacitance.
- High current capability
- Low leakage current
- High cutoff frequency
- Complementary to BTP2907AL3

Symbol



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V _{CB0}	75	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter-Base Voltage	V _{EB0}	6	V
Collector Current	I _c	600	mA
Power Dissipation @T _c =25°C	P _d	5	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~+150	°C

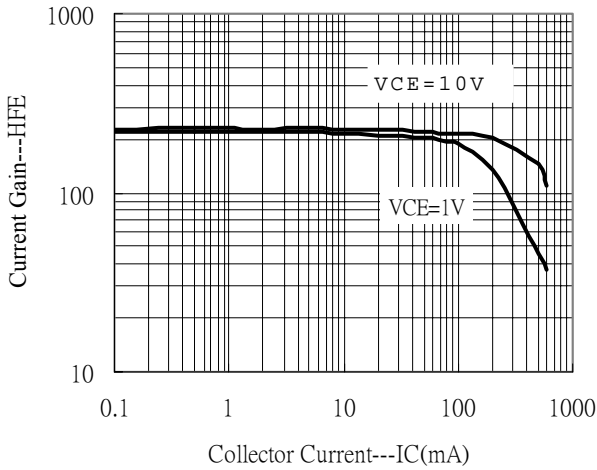
**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	75	-	-	V	$I_C=10\mu A$
BV_{CEO}	40	-	-	V	$I_C=10mA$
BV_{EBO}	6	-	-	V	$I_E=10\mu A$
I_{CBO}	-	-	10	nA	$V_{CB}=60V$
I_{CEX}	-	-	10	nA	$V_{CE}=60V, V_{EB(off)}=3V$
I_{EBO}	-	-	100	nA	$V_{EB}=3V$
* $V_{CE(sat)1}$	-	-	0.3	V	$I_C=150mA, I_B=15mA$
* $V_{CE(sat)2}$	-	-	1.0	V	$I_C=500mA, I_B=50mA$
* $V_{BE(sat)1}$	-	-	1.2	V	$I_C=150mA, I_B=15mA$
* $V_{BE(sat)2}$	-	-	2.0	V	$I_C=500mA, I_B=50mA$
h_{FE1}	35	-	-	-	$V_{CE}=10V, I_C=0.1mA$
h_{FE2}	50	-	-	-	$V_{CE}=10V, I_C=1mA$
h_{FE3}	75	-	-	-	$V_{CE}=10V, I_C=10mA$
* h_{FE4}	100	-	300	-	$V_{CE}=10V, I_C=150mA$
* h_{FE5}	50	-	-	-	$V_{CE}=1V, I_C=150mA$
* h_{FE6}	40	-	-	-	$V_{CE}=10V, I_C=500mA$
f_T	300	-	-	MHz	$V_{CE}=20V, I_C=20mA, f=100MHz$
C_{ob}	-	-	8	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

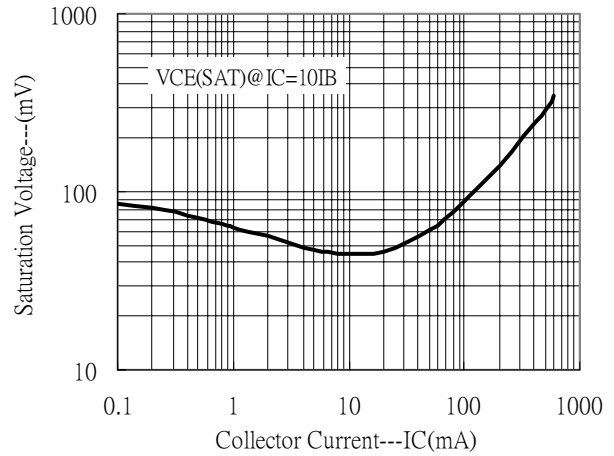
*Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

Characteristic Curves

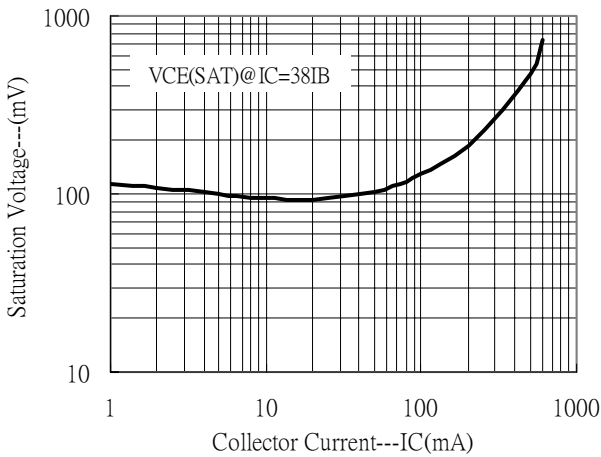
Current Gain vs Collector Current



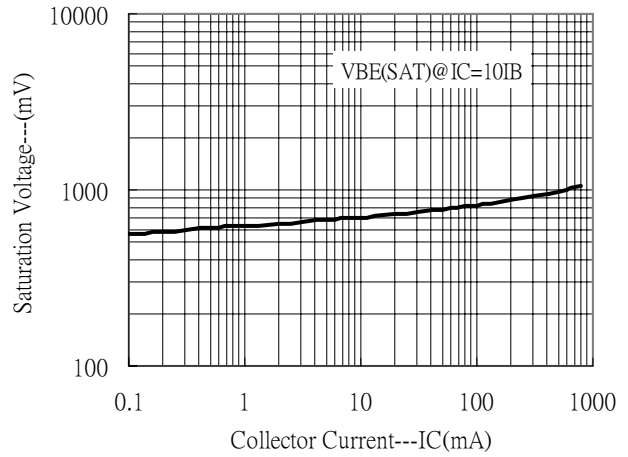
Saturation Voltage vs Collector Current



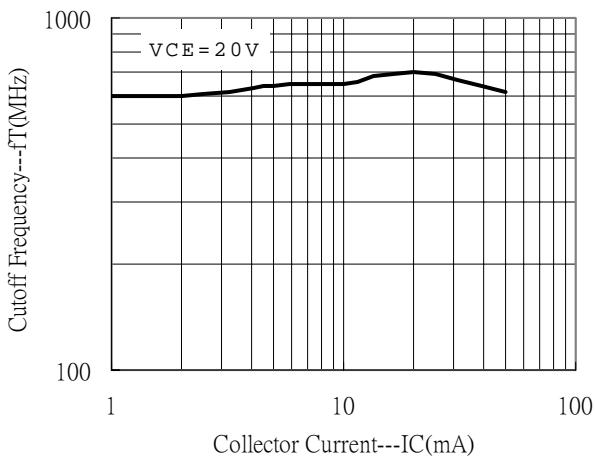
Saturation Voltage vs Collector Current



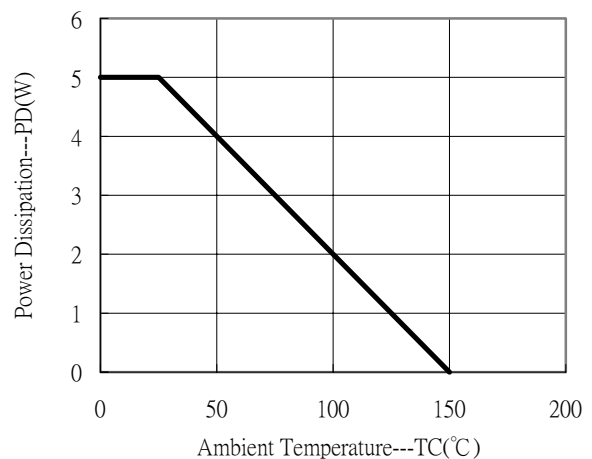
Saturation Voltage vs Collector Current



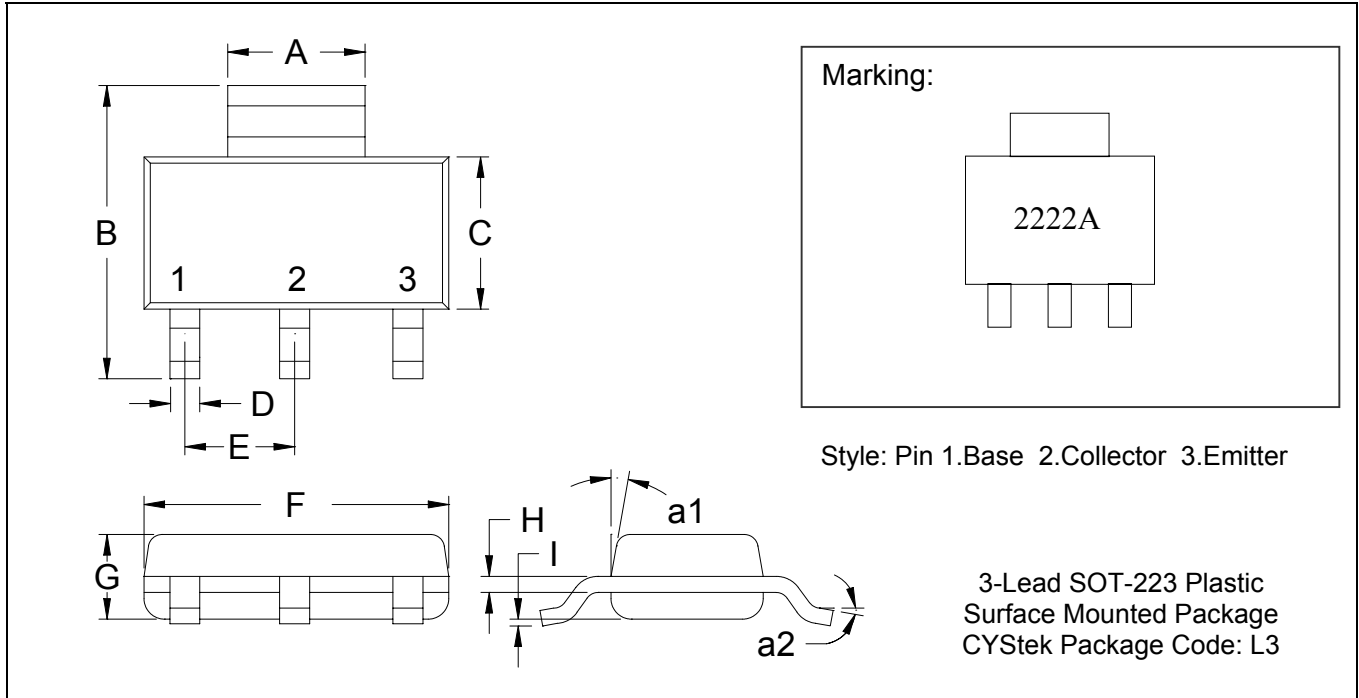
Cutoff Frequency vs Collector Current



Power Derating Curve



SOT-223 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1142	0.1220	2.90	3.10	G	0.0551	0.0709	1.40	1.80
B	0.2638	0.2874	6.70	7.30	H	0.0098	0.0138	0.25	0.35
C	0.1299	0.1457	3.30	3.70	I	0.0008	0.0039	0.02	0.10
D	0.0236	0.0315	0.60	0.80	a1	*13°	-	*13°	-
E	*0.0906	-	*2.30	-	a2	0°	10°	0°	10°
F	0.2480	0.2638	6.30	6.70					

- 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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