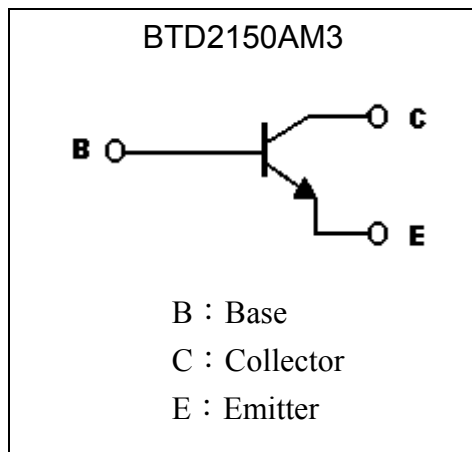
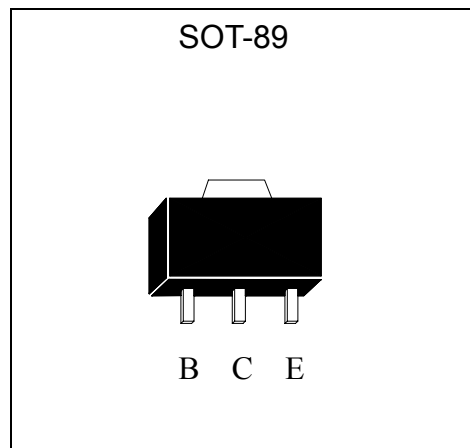


Low Vcesat NPN Epitaxial Planar Transistor

BTD2150AM3

Features

- Low $V_{CE(sat)}$, $V_{CE(sat)}=0.1$ V (typical), at $I_C / I_B = 1A / 50mA$
- Excellent current gain characteristics
- Complementary to BTB1424AM3
- Pb-free package

Symbol

Outline

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

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	3	A
Power Dissipation	P_d	0.6	W
		1 *1	
		2 *2	
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~+150	$^\circ\text{C}$

Note : *1 Printed circuit board, 1.7mm thick, collector copper plating 10mm*10mm.

*2 When mounted on a 40*40*0.7mm ceramic board.



Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	80	-	-	V	$I_C=50\mu A, I_E=0$
BV_{CEO}	50	-	-	V	$I_C=1mA, I_B=0$
BV_{EBO}	6	-	-	V	$I_E=50\mu A, I_C=0$
I_{CBO}	-	-	0.1	μA	$V_{CB}=60V, I_E=0$
I_{EBO}	-	-	0.1	μA	$V_{EB}=5V, I_C=0$
* $V_{CE(sat)}$	-	0.1	0.25	V	$I_C=1A, I_B=50mA$
* $V_{CE(sat)}$	-	0.25	0.5	V	$I_C=2A, I_B=0.2A$
* $V_{BE(sat)}$	-	-	2	V	$I_C=2A, I_B=0.2A$
* h_{FE1}	120	-	-	-	$V_{CE}=2V, I_C=0.1A$
* h_{FE2}	120	-	820	-	$V_{CE}=2V, I_C=0.5A$
* h_{FE3}	100	-	-	-	$V_{CE}=2V, I_C=1A$
f_T	-	90	-	MHz	$V_{CE}=5V, I_C=0.1A, f=100MHz$
Cob	-	45	-	pF	$V_{CB}=10V, f=1MHz$

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

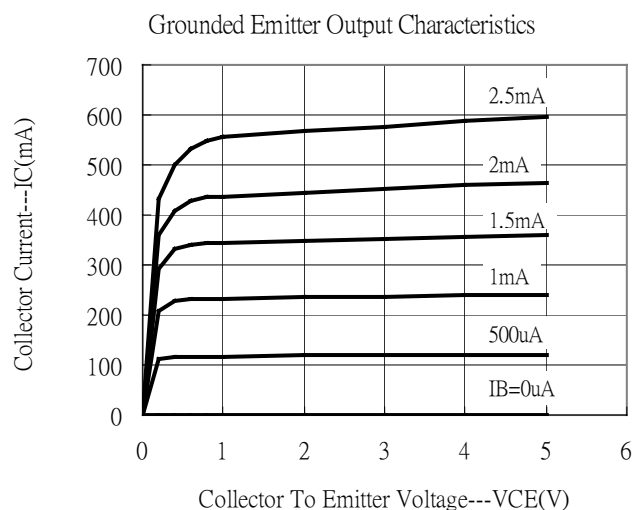
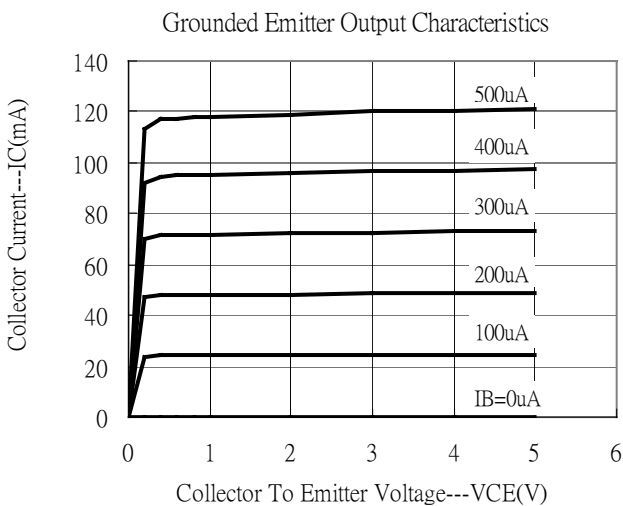
Classification Of $h_{FE} 2$

Rank	Q	R	S	T
Range	120~270	180~390	270~560	390~820

Ordering Information

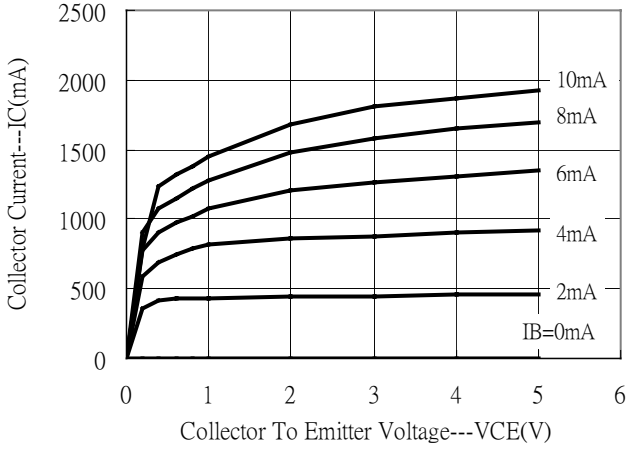
Device	Package	Shipping	Marking
BTD2210AM3	SOT-89 (Pb-free)	1000 pcs / Tape & Reel	CF

Characteristic Curves

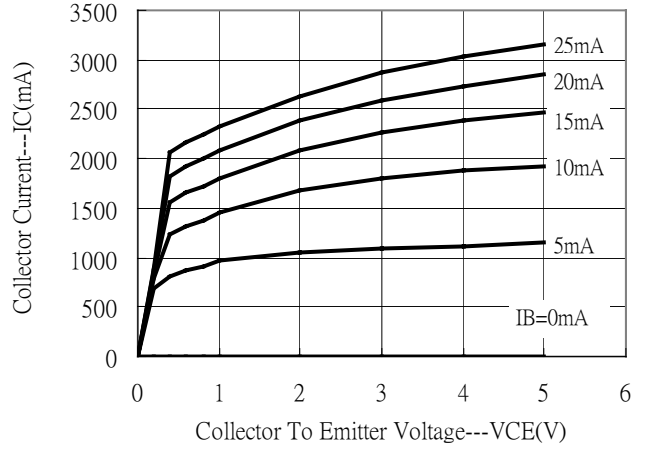


Characteristic Curves(Cont.)

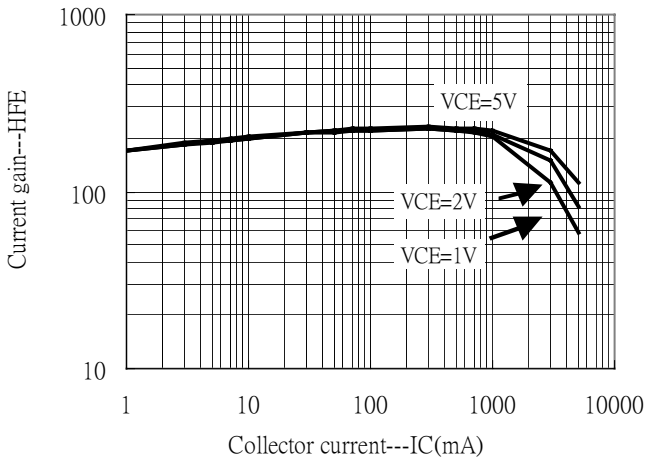
Grounded Emitter Output Characteristics



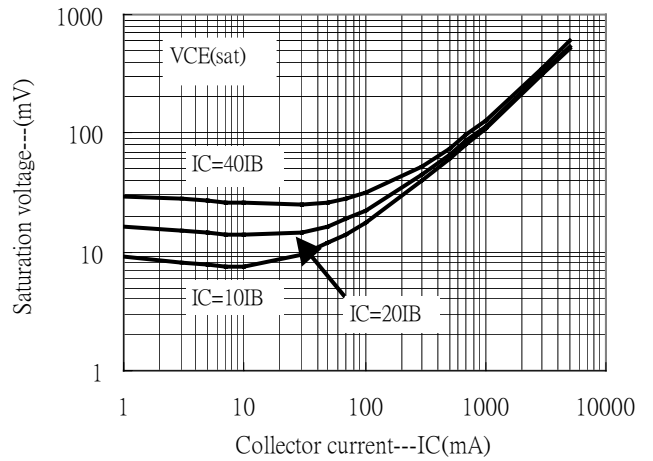
Grounded Emitter Output Characteristics



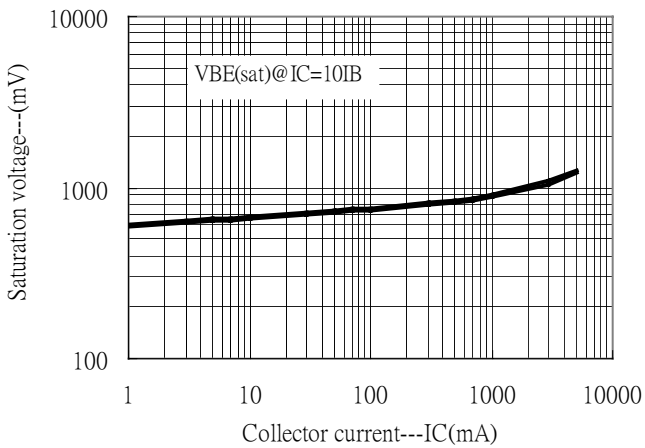
Current gain vs Collector current



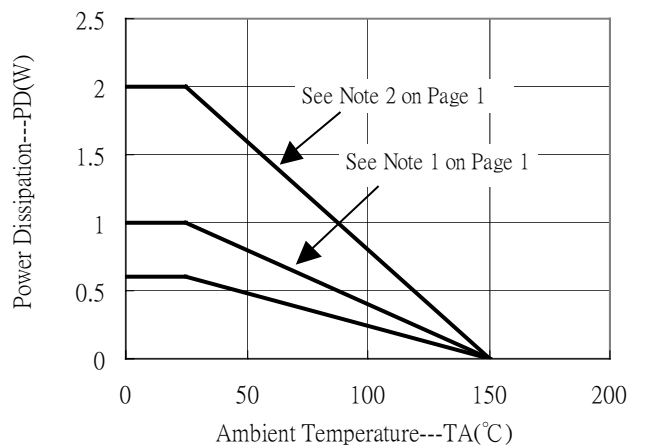
Saturation voltage vs Collector current



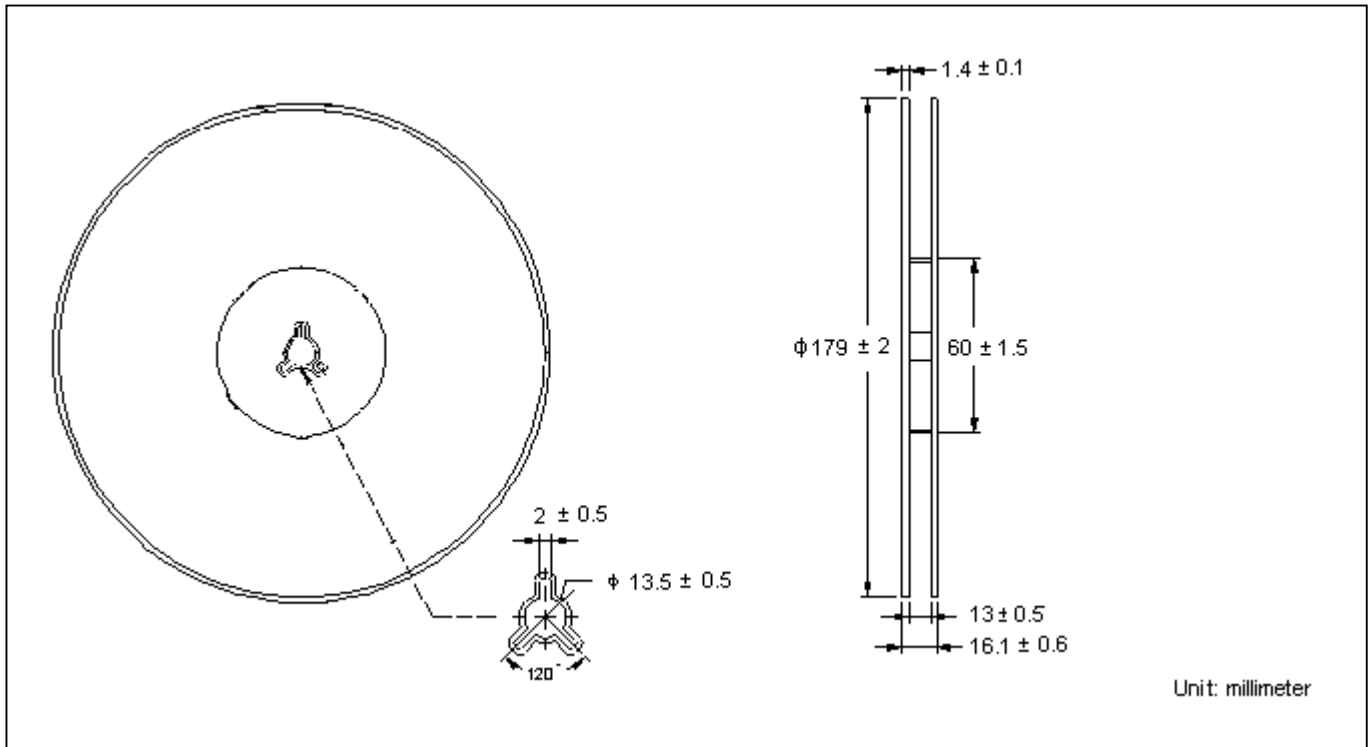
Saturation voltage vs Collector current



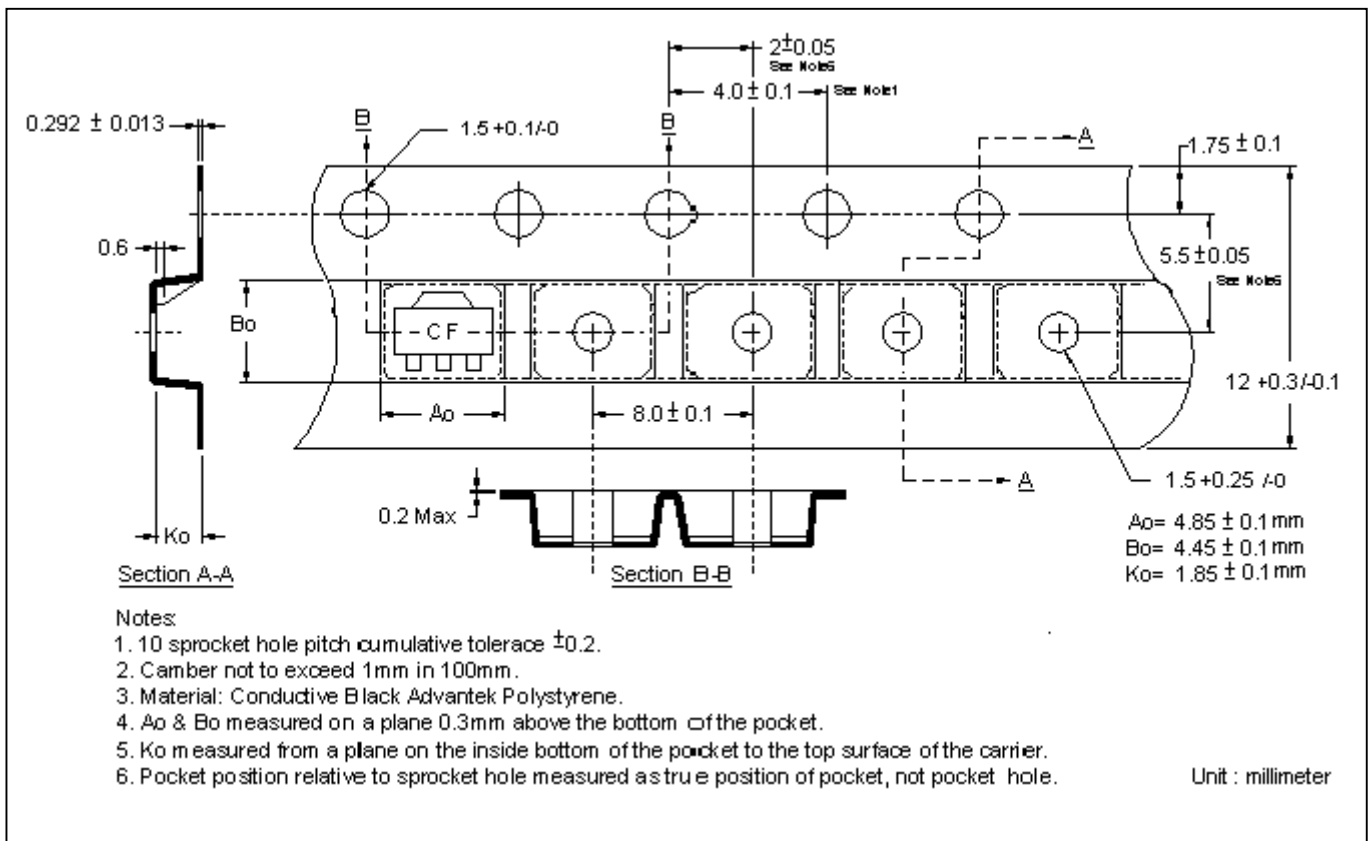
Power Derating Curves



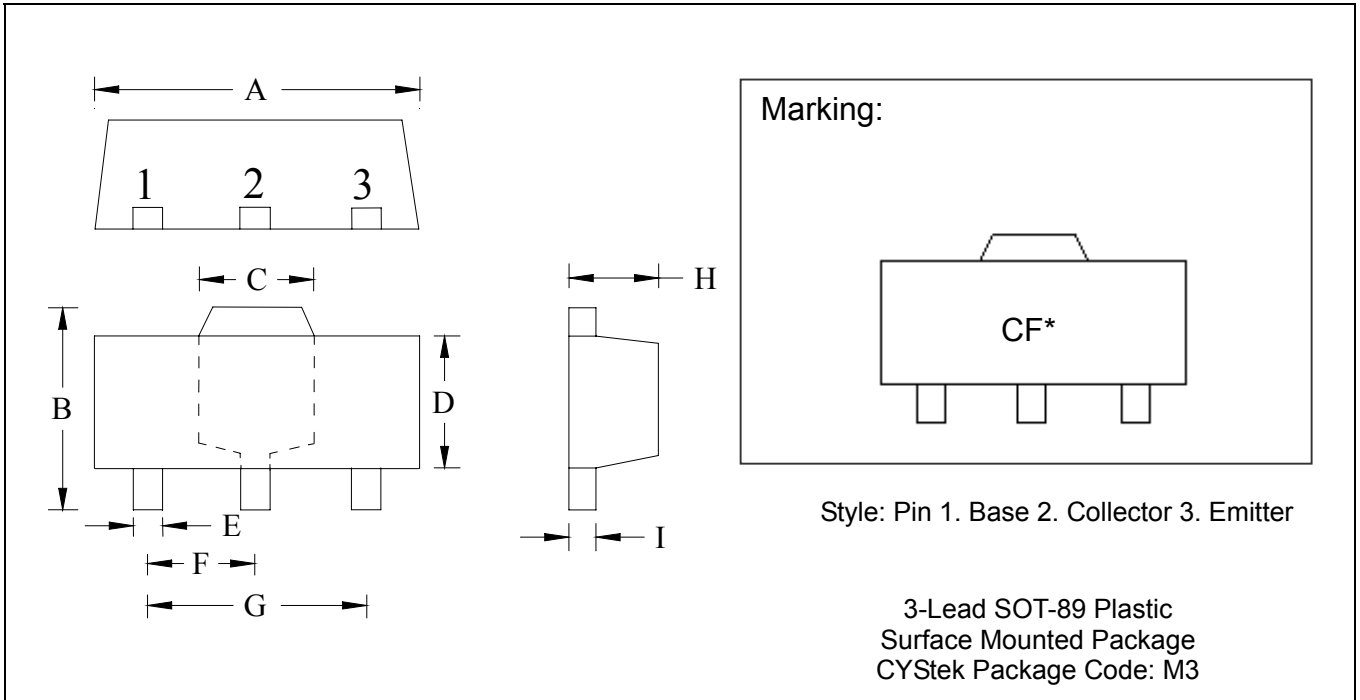
Reel Dimension



Carrier Tape Dimension



SOT-89 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1732	0.1811	4.40	4.60	F	0.0583	0.0598	1.48	1.527
B	0.1594	0.1673	4.05	4.25	G	0.1165	0.1197	2.96	3.04
C	0.0591	0.0663	1.50	1.70	H	0.0551	0.0630	1.40	1.60
D	0.0945	0.1024	2.40	2.60	I	0.0138	0.0161	0.35	0.41
E	0.01417	0.0201	0.36	0.51					

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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