

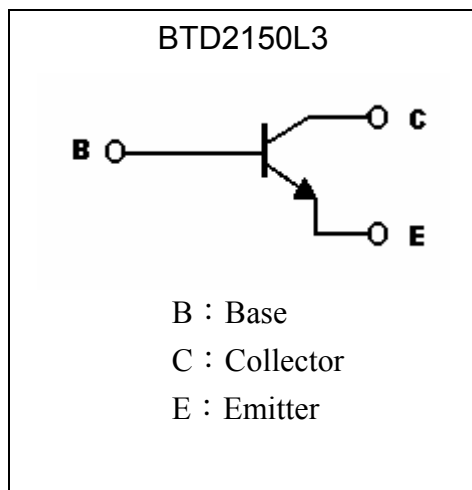
Low Vcesat NPN Epitaxial Planar Transistor

BTD2150L3

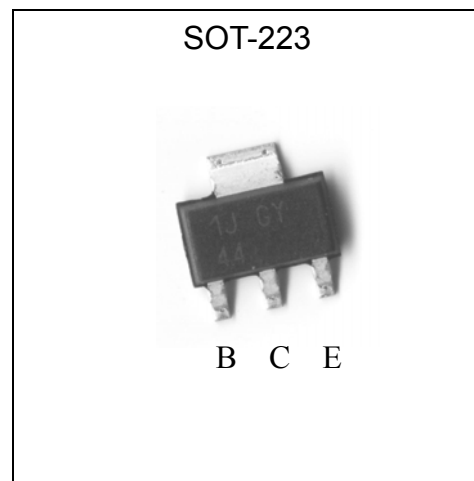
Features

- Low $V_{CE(sat)}$, $V_{CE(sat)}=0.25\text{ V}$ (typical), at $I_C / I_B = 2\text{ A} / 0.2\text{ A}$
- Excellent current gain characteristics
- Complementary to BTB1424L3

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	3	A
Power Dissipation @Tc=25°C	P_d	5	W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

Characteristics (Ta=25°C)

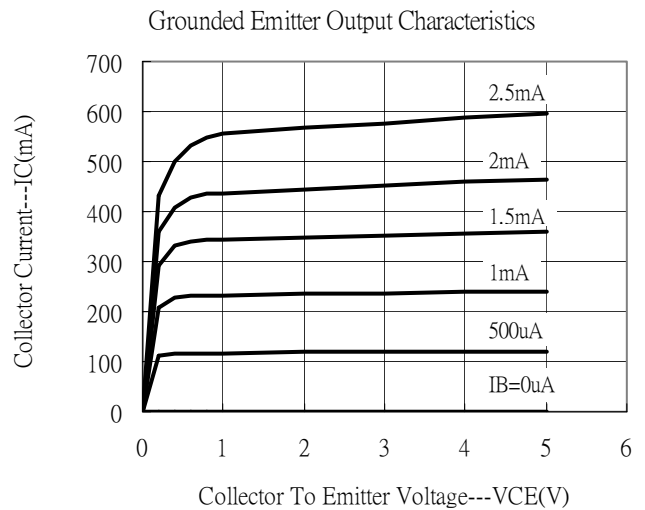
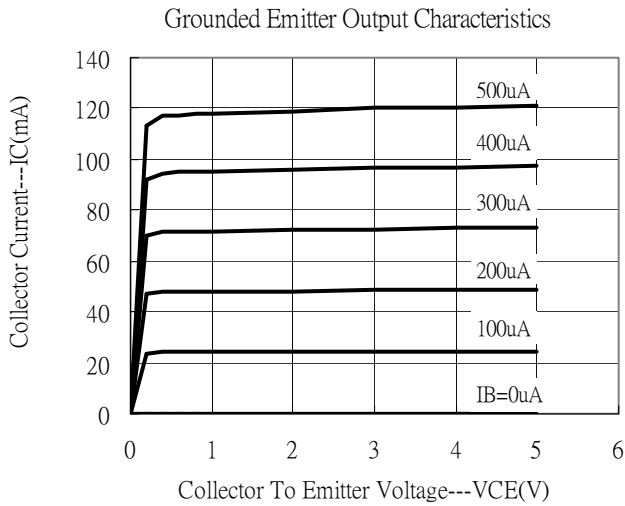
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CB0}	40	-	-	V	I _C =50μA, I _E =0
BV _{CE0}	30	-	-	V	I _C =1mA, I _B =0
BV _{EB0}	5	-	-	V	I _E =50μA, I _C =0
I _{CBO}	-	-	100	nA	V _{CB} =30V, I _E =0
I _{EBO}	-	-	100	nA	V _{EB} =3V, I _C =0
*V _{CE(sat)}	-	0.25	0.5	V	I _C =2A, I _B =0.2A
*V _{BE(sat)}	-	-	1.5	V	I _C =2A, I _B =0.2A
*h _{FE1}	52	-	-	-	V _{CE} =2V, I _C =20mA
*h _{FE2}	82	-	560	-	V _{CE} =2V, I _C =0.1A
*h _{FE3}	50	-	-	-	V _{CE} =3V, 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 ≤380μs, Duty Cycle ≤2%

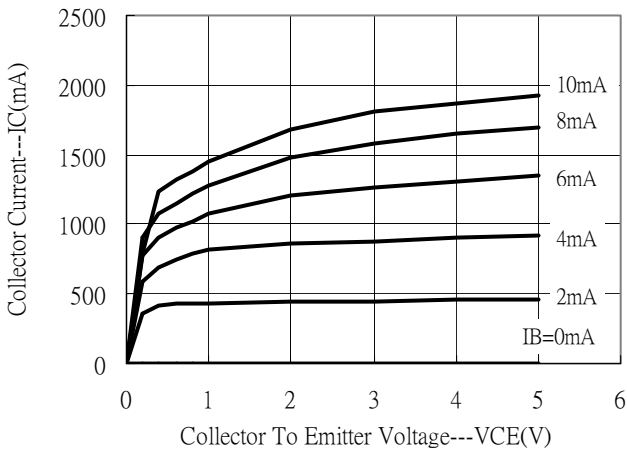
Classification Of hFE 2

Rank	P	Q	R	S
Range	82~180	120~270	180~390	270~560

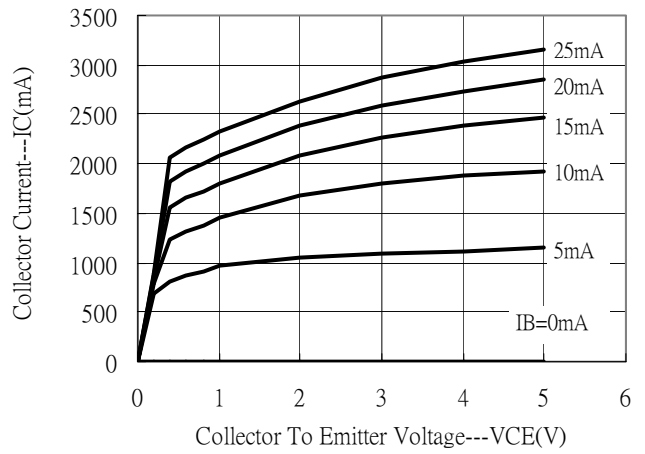
Characteristic Curves



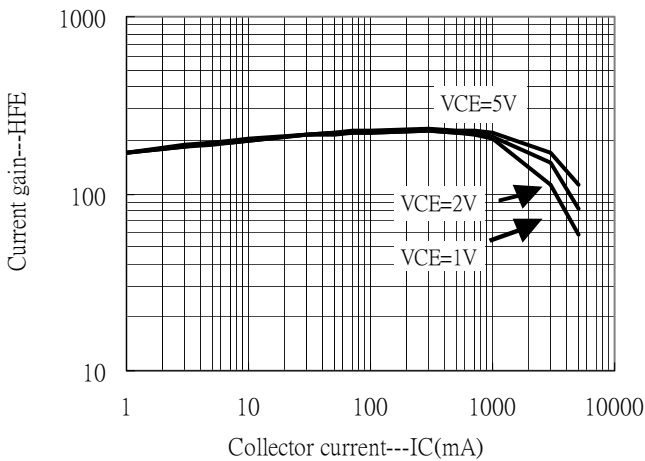
Grounded Emitter Output Characteristics



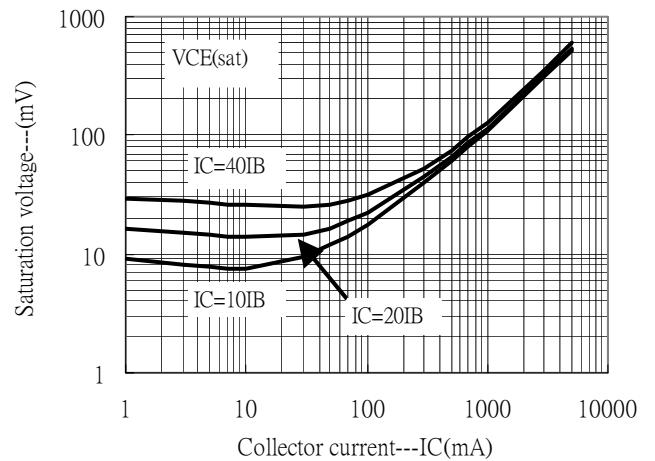
Grounded Emitter Output Characteristics



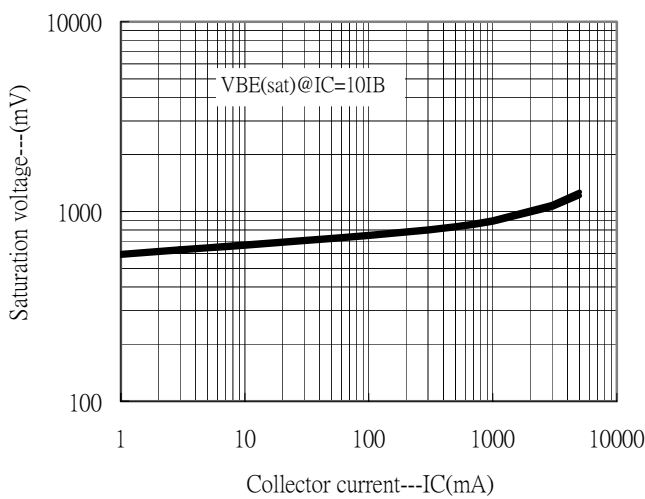
Current gain vs Collector current



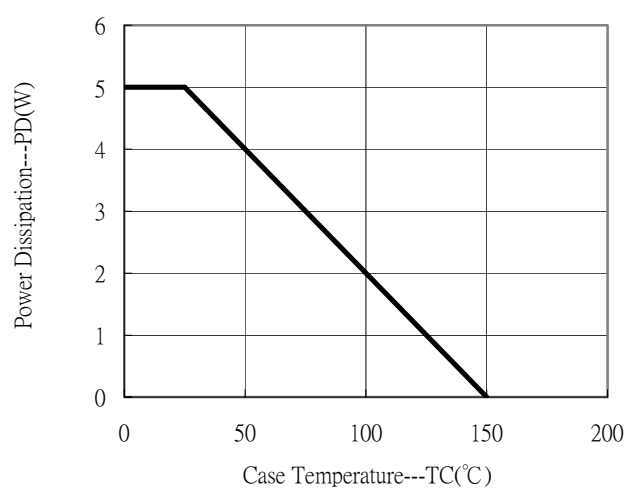
Saturation voltage vs Collector current



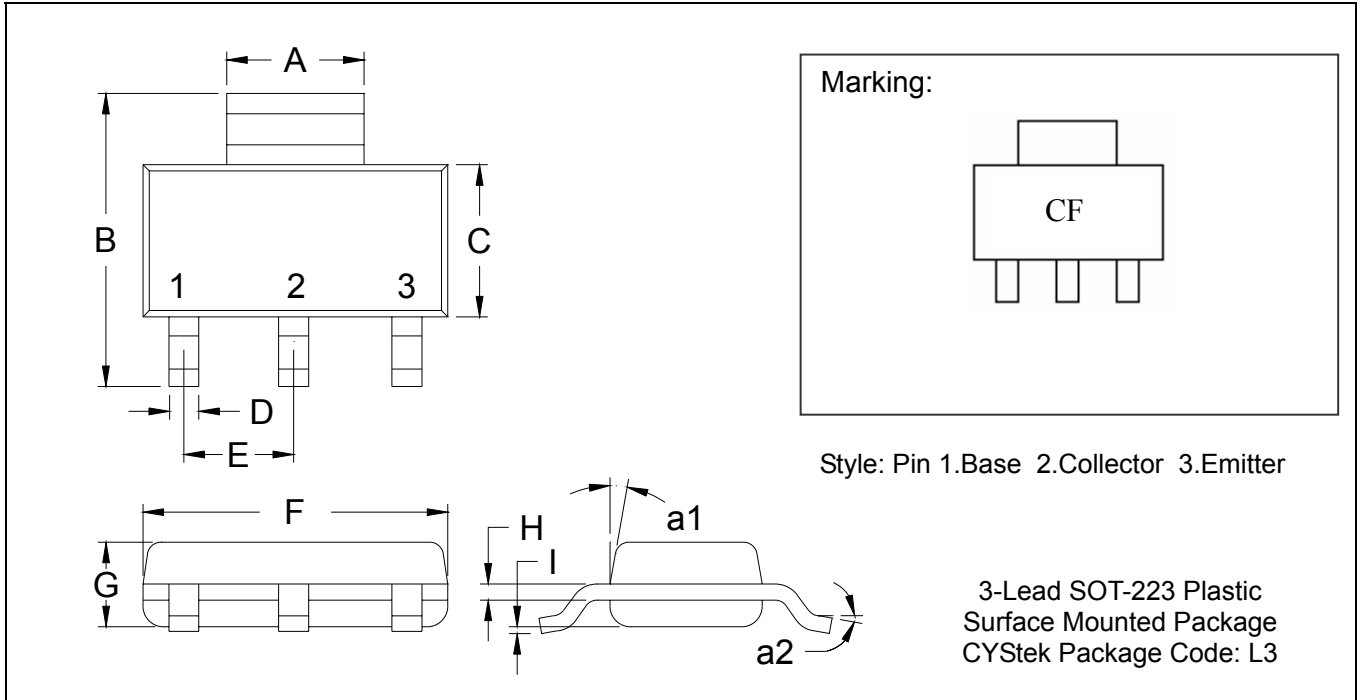
Saturation voltage vs Collector current



Power Derating 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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