Low Vcesat NPN Epitaxial Planar Transistor

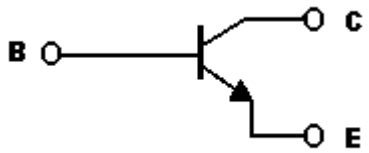
BTD882T3/S

Features

- Low V_{CE}(sat), typically 0.25V at I_C / I_B = 2A / 0.2A
- Excellent current gain characteristics
- Complementary to BTB772T3/S
- Pb-free package is available

Symbol

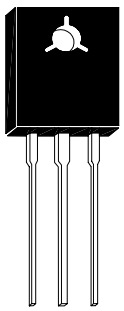
BTD882T3



B：Base
C：Collector
E：Emitter

Outline

TO-126



E C B

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limit	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(DC)	3	A
	I_C(Pulse)	7 *1	A
Power Dissipation	Pd(Ta=25℃)	1	W
	Pd(Tc=25℃)	10	
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

Note : *1. Single Pulse Pw≦350μs,Duty≦2%.

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	40	-	-	V	I_C=50μA, I_E=0
BV_{CEO}	30	-	-	V	I_C=1mA, I_B=0
BV_{EBO}	5	-	-	V	I_E=50μA, I_C=0
I_{CBO}	-	-	1	μA	V_{CB}=50V, I_E=0
I_{EBO}	-	-	1	μA	V_{EB}=3V, I_C=0
*$V_{CE(sat)}$	-	0.25	0.5	V	I_C=2A, I_B=0.2A
*$V_{BE(sat)}$	-	-	2	V	I_C=2A, I_B=0.2A
*$h_{FE}1$	52	-	-	-	V_{CE}=2V, I_C=20mA
*$h_{FE}2$	100	-	500	-	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 ≤380μs, Duty Cycle≤2%

Classification Of h_{FE} 2

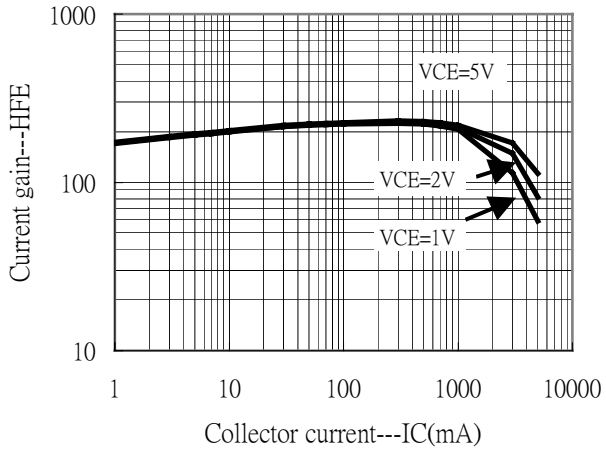
Rank	Q	P	E
Range	100~200	160~320	250~500

Ordering Information

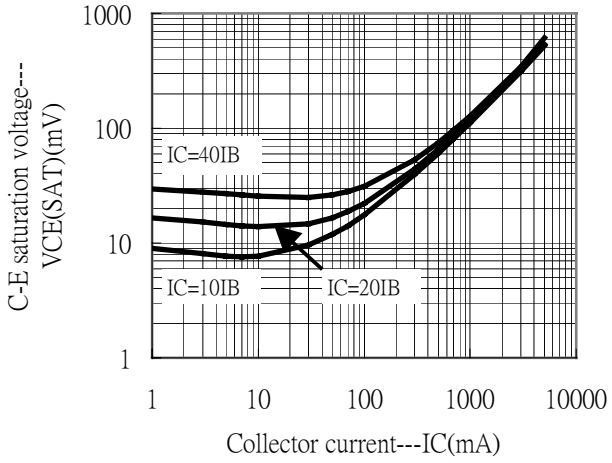
Device	Package	Shipping
BTB882T3	TO-126	500 pcs / bag
BTB882T3S	TO-126 (Pb-free)	500 pcs / bag

Characteristic Curves

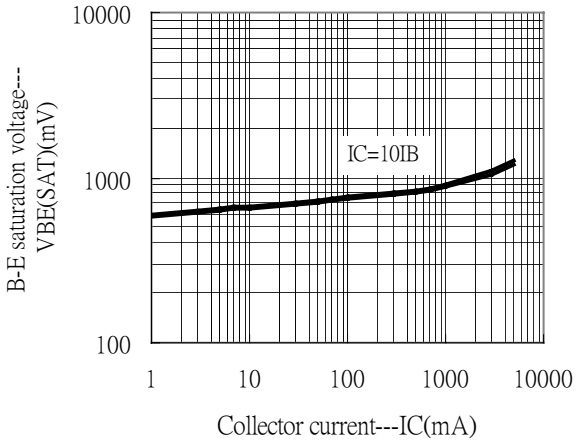
Current gain vs Collector current



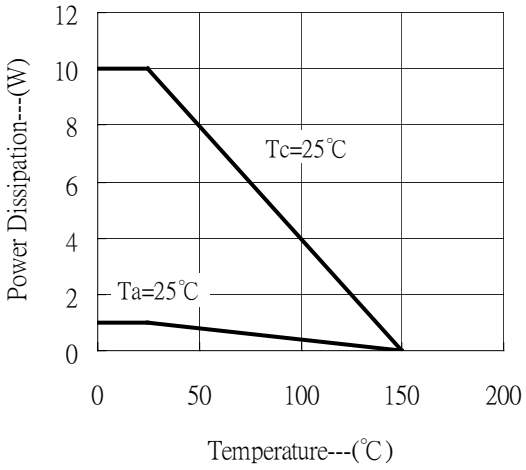
C-E saturation voltage vs Collector current



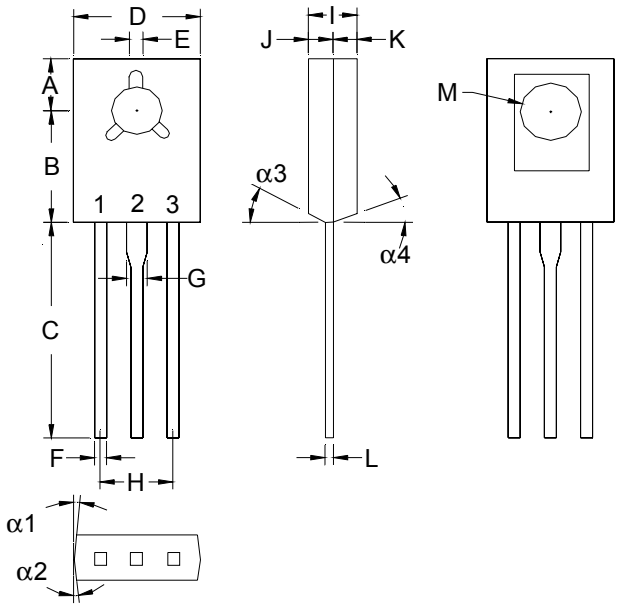
B-E saturation votlage vs Collector current



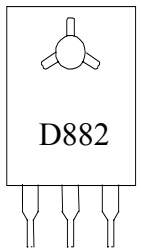
Power derating curves



TO-126 Dimension



Marking:



Style: Pin 1.Emitter 2.Collector 3.Base

3-Lead TO-126 Plastic Package
CYStek Package Code: T3

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
α1	-	*3°	-	*3°	F	0.0280	0.0319	0.71	0.81
α2	-	*3°	-	*3°	G	0.0480	0.0520	1.22	1.32
α3	-	*3°	-	*3°	H	0.1709	0.1890	4.34	4.80
α4	-	*3°	-	*3°	I	0.0950	0.1050	2.41	2.66
A	0.1500	0.1539	3.81	3.91	J	0.0450	0.0550	1.14	1.39
B	0.2752	0.2791	6.99	7.09	K	0.0450	0.0550	1.14	1.39
C	0.5315	0.6102	13.50	15.50	L	-	*0.0217	-	*0.55
D	0.2854	0.3039	7.52	7.72	M	0.1378	0.1520	3.50	3.86
E	0.0374	0.0413	0.95	1.05					

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