

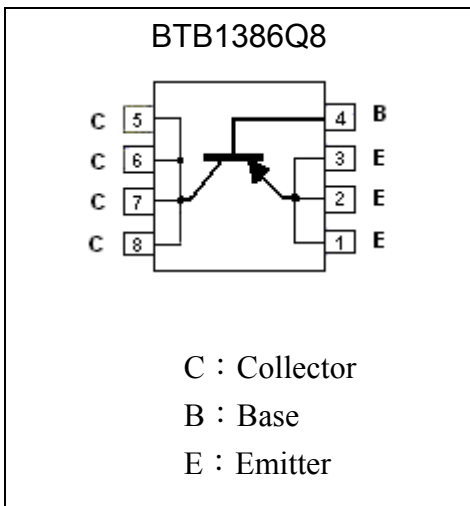
Low Vcesat PNP Epitaxial Planar Transistor

BTB1386Q8

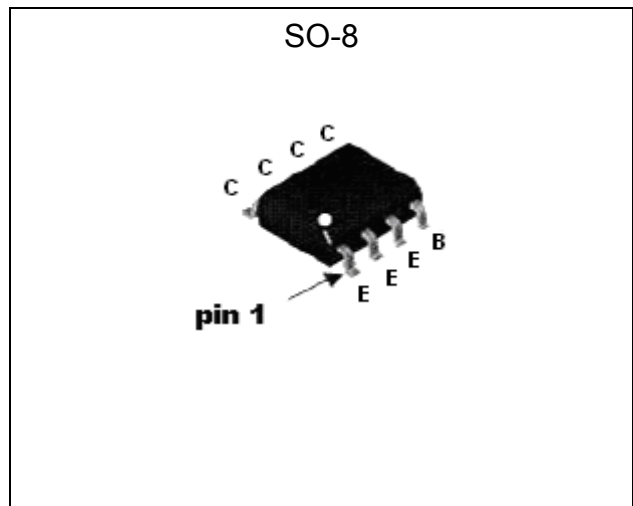
Features

- Low $V_{CE(sat)}$, $V_{CE(sat)}=-0.3$ V (typical), at $I_C / I_B = -3A / -0.15A$
- Excellent DC current gain characteristics
- Pb-free package

Equivalent Circuit



Outline



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

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-30	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-5	A
	I_{CP}	-10 (Note 1)	
Power Dissipation	P_d	2.5	W
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature	T_{stg}	-55~+150	$^{\circ}C$

Note : 1. Single Pulse $P_w=10ms$

**Characteristics (Ta=25°C)**

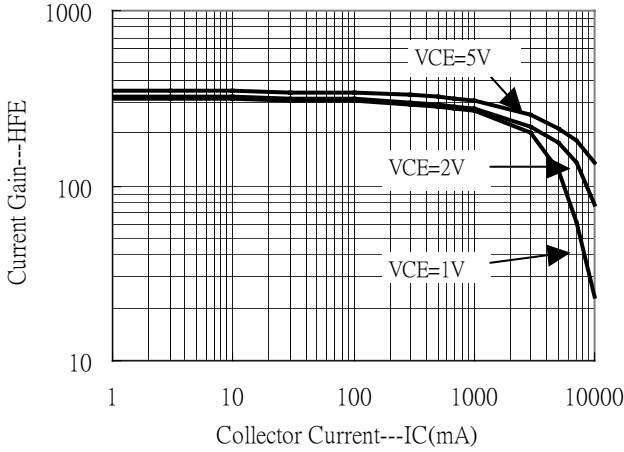
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	-40	-	-	V	I _C =-50μA, I _E =0
BV _{CEO}	-30	-	-	V	I _C =-1mA, I _B =0
BV _{EBO}	-6	-	-	V	I _E =-50μA, I _C =0
I _{CBO}	-	-	-0.5	μA	V _{CB} =-30V, I _E =0
I _{EBO}	-	-	-0.5	μA	V _{EB} =-5V, I _C =0
*V _{CE(sat)}	-	-0.3	-0.4	V	I _C =-3A, I _B =-0.15A
*V _{CE(sat)}	-	-0.4	-0.5	V	I _C =-4A, I _B =-0.1A
*h _{FE}	180	-	390	-	V _{CE} =-2V, I _C =-0.5A
f _T	-	120	-	MHz	V _{CE} =-6V, I _C =-50mA, f=30MHz
C _{ob}	-	60	-	pF	V _{CB} =-20V, f=1MHz

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

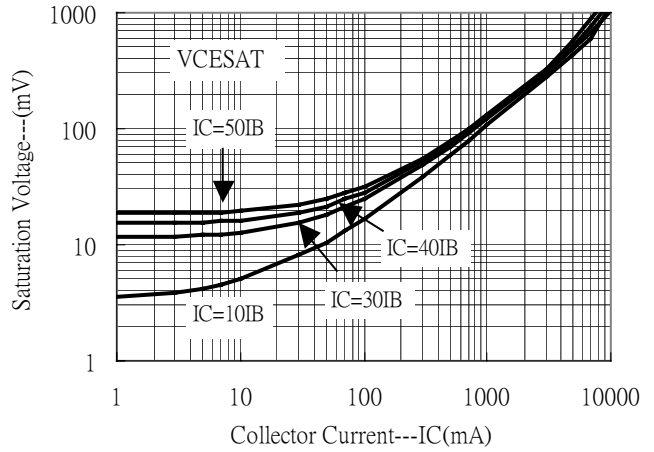


Characteristic Curves

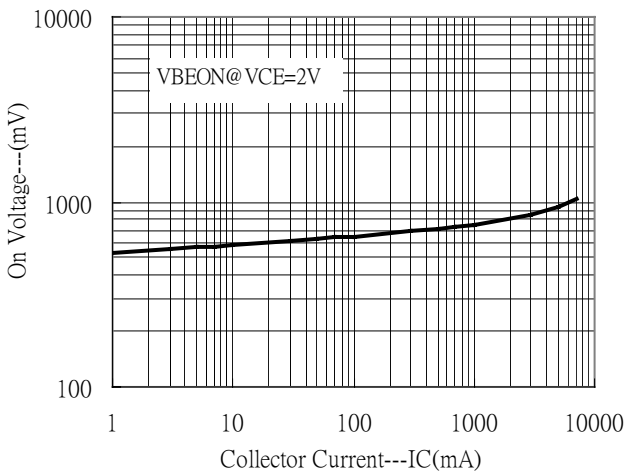
Current Gain vs Collector Current



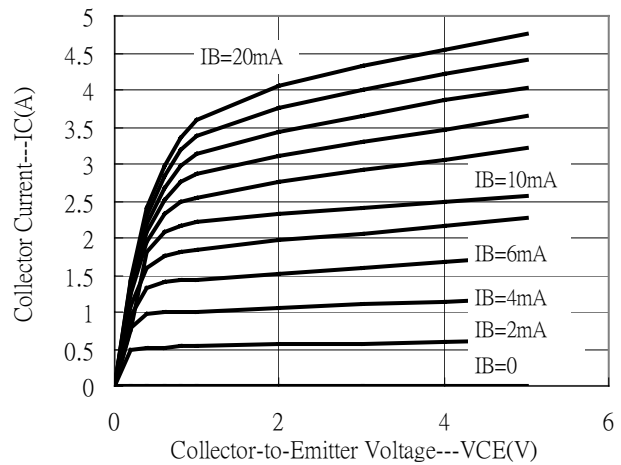
Saturation Voltage vs Collector Current



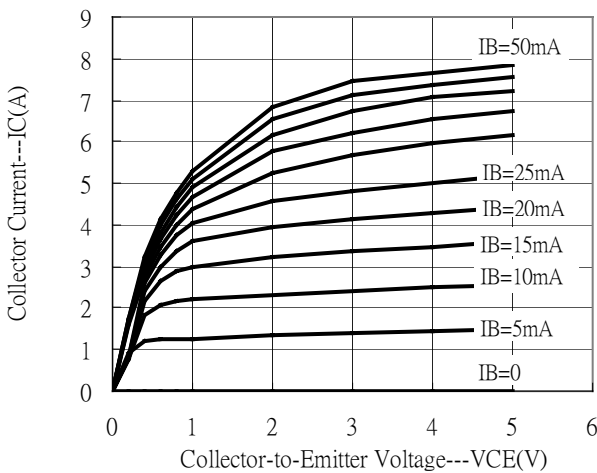
On Voltage vs Collector Current



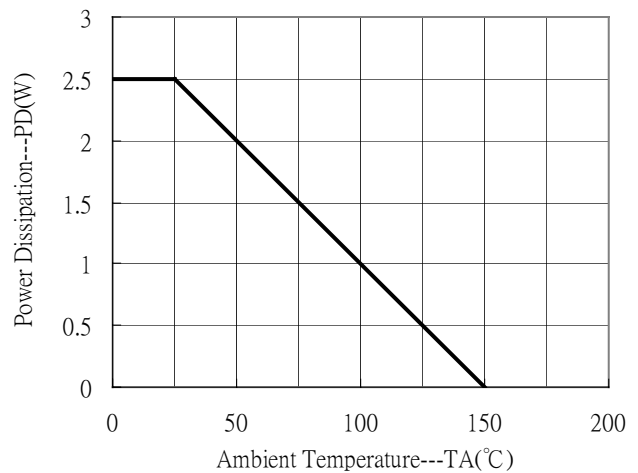
Output Characteristics



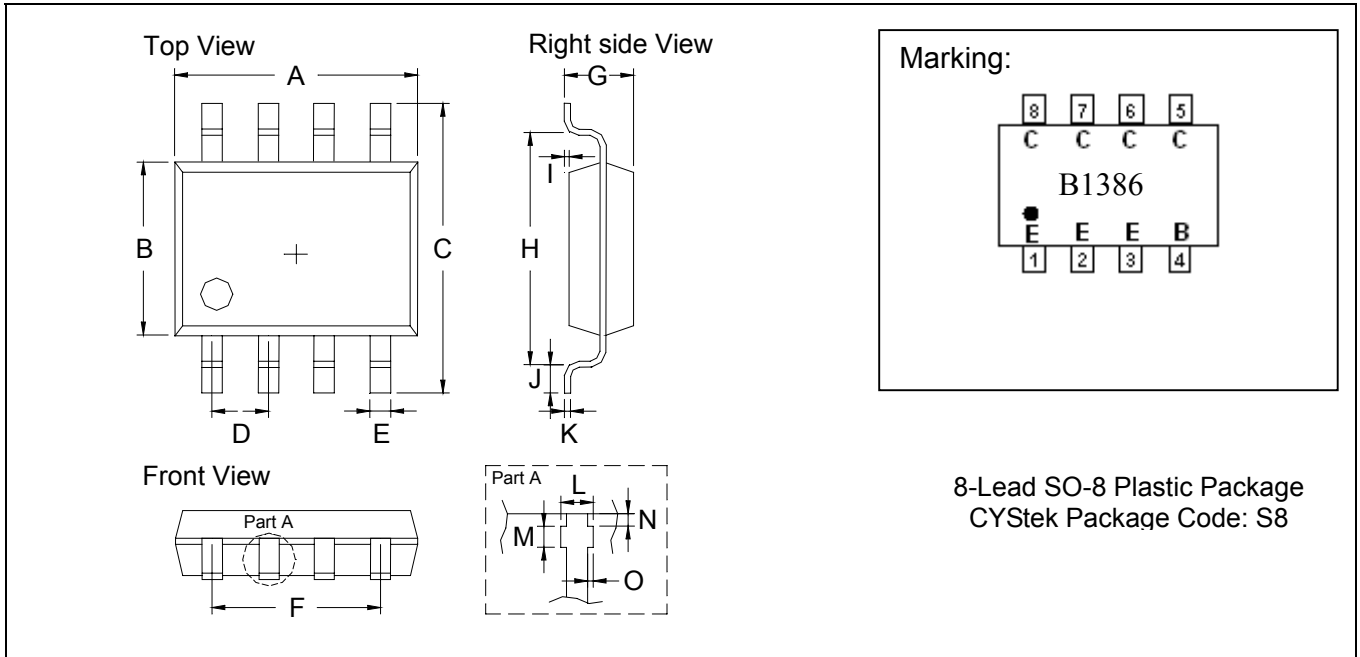
Output Characteristics



Power Derating Curve



SO-8 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1909	0.2007	4.85	5.10	I	0.0019	0.0078	0.05	0.20
B	0.1515	0.1555	3.85	3.95	J	0.0118	0.0275	0.30	0.70
C	0.2283	0.2441	5.80	6.20	K	0.0074	0.0098	0.19	0.25
D	0.0480	0.0519	1.22	1.32	L	0.0145	0.0204	0.37	0.52
E	0.0145	0.0185	0.37	0.47	M	0.0118	0.0197	0.30	0.50
F	0.1472	0.1527	3.74	3.88	N	0.0031	0.0051	0.08	0.13
G	0.0570	0.0649	1.45	1.65	O	0.0000	0.0059	0.00	0.15
H	0.1889	0.2007	4.80	5.10					

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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