

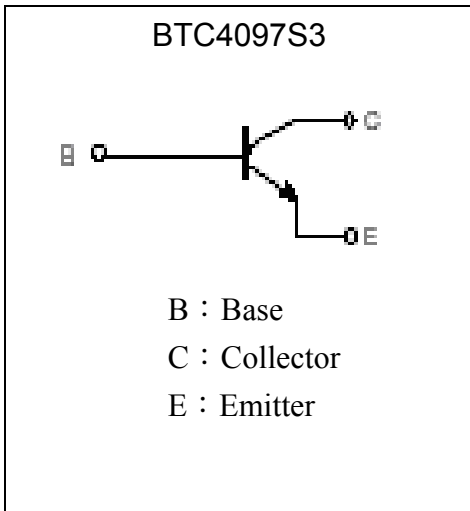
General Purpose NPN Epitaxial Planar Transistor

BTC4097S3

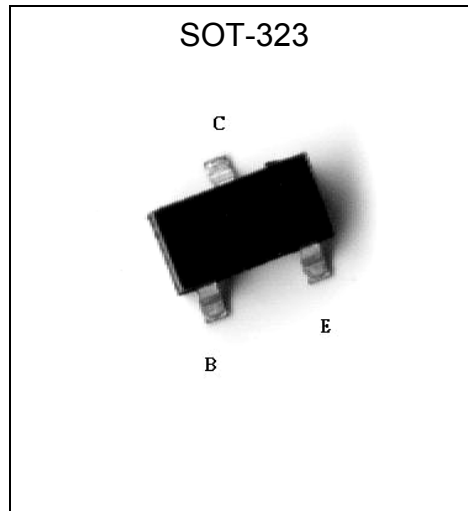
Description

- The BTC4097S3 is designed for use in driver stage of AF amplifier and general purpose switching application.
- High IC Max . IC Max = 0.6A
- Low Vce(set) . TYP. Vce(set) = 0.2V at IC/IB = 500mA/50mA
 Optimal for low Voltage operation
- Complementary to BTA1577S3.

Symbol



Outline



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	VCBO	60	V
Collector-Emitter Voltage	VCEO	40	V
Emitter-Base Voltage	VEBO	6	V
Collector Current	IC	0.6	A
Power Dissipation	Pd	225	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C



Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	60	-	-	V	IC=100uA
BVCEO	40	-	-	V	IC=1mA
BVEBO	6	-	-	V	IE=10uA
ICBX	-	-	100	nA	VCE=35V, VBE=-0.4V
*VCE(sat)1	-	-	0.4	V	IC=150mA, IB=15mA
*VCE(sat)2	-	0.2	0.75	V	IC=500mA, IB=50mA
*VBE(sat)1	-	-	0.95	V	IC=150mA, IB=15mA
*VBE(sat)2	-	-	1.2	V	IC=500mA, IB=50mA
*hFE1	20	-	-		VCE=1V, IC=0.1mA
*hFE2	40	-	-		VCE=1V, IC=1mA
*hFE3	80	-	-		VCE=1V, IC=10mA
*hFE4	82	-	390		VCE=1V, IC=150mA
*hFE5	40	-	-		VCE=2V, IC=500mA
fT	250	-	-	MHz	VCE=10V, IC=20mA, f=100MHz
Cob	-	-	6.5	pF	VCB=5V, f=1MHz

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

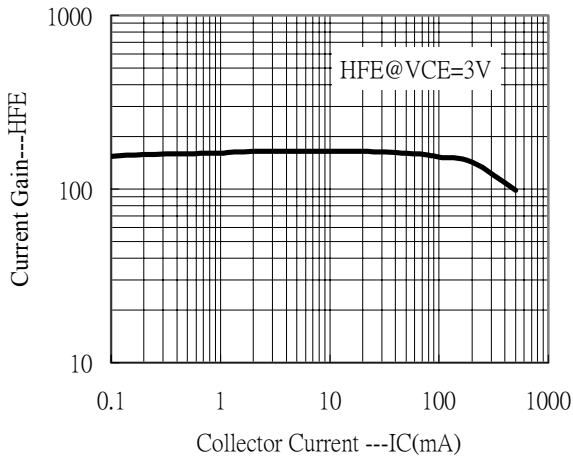
Classification Of hFE4

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

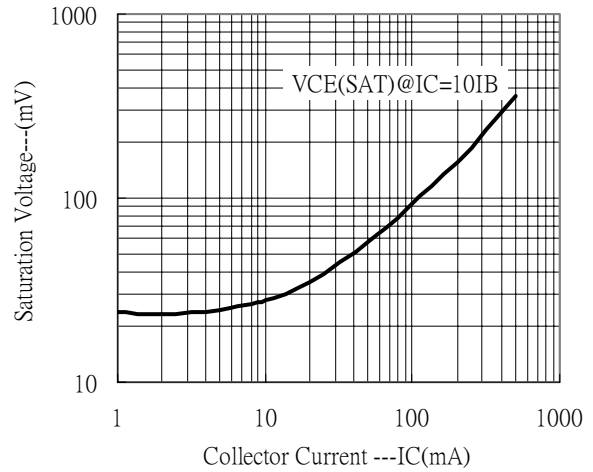


Characteristic Curves

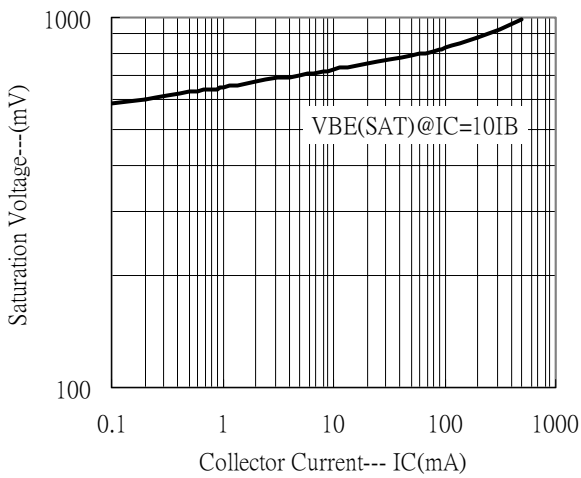
Current Gain vs Collector Current



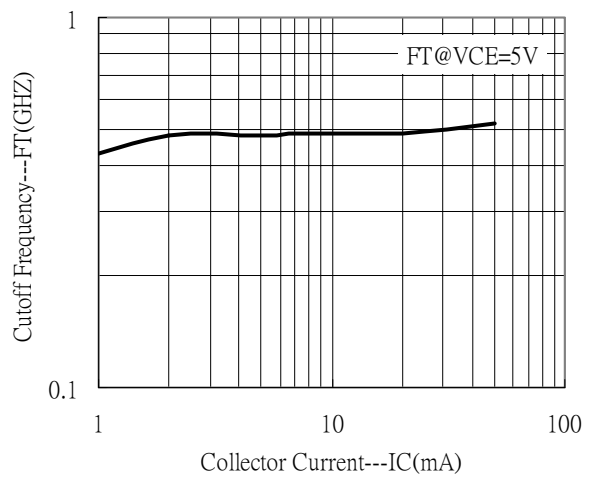
Saturation Voltage vs Collector Current



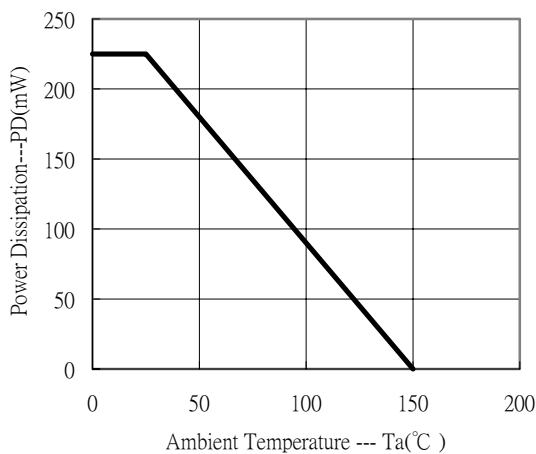
Saturation Voltage vs Collector Current



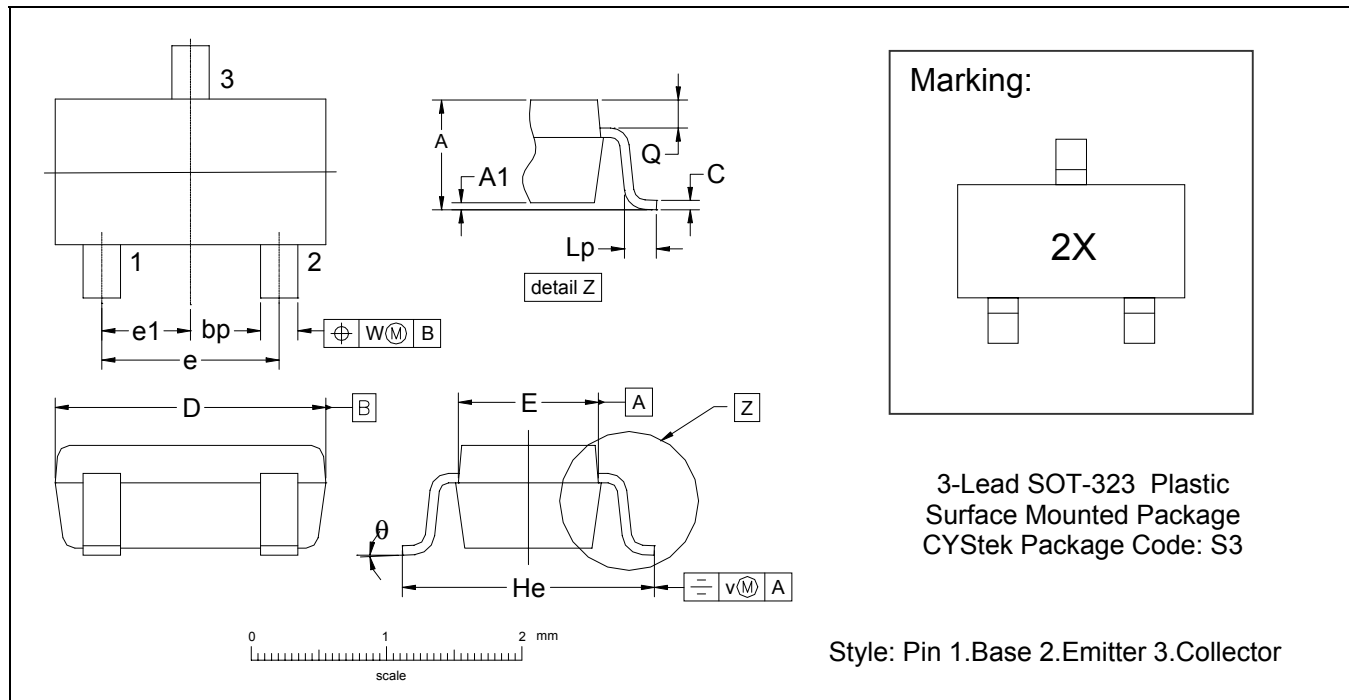
Cutoff Frequency vs Collector Current



Power Derating Curve



SOT-323 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0315	0.0433	0.80	1.10	e1	0.0256	-	0.65	-
A1	0.0000	0.0039	0.00	0.10	He	0.0787	0.0886	2.00	2.25
bp	0.0118	0.0157	0.30	0.40	Lp	0.0059	0.0177	0.15	0.45
C	0.0039	0.0098	0.10	0.25	Q	0.0051	0.0091	0.13	0.23
D	0.0709	0.0866	1.80	2.20	v	0.0079	-	0.2	-
E	0.0453	0.0531	1.15	1.35	w	0.0079	-	0.2	-
e	0.0512	-	1.3	-	θ	-	-	10°	0°

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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