

Dual General Purpose PNP Transistors

HBP3906S6R

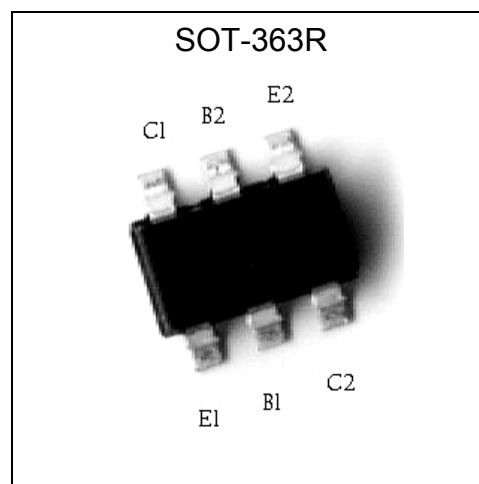
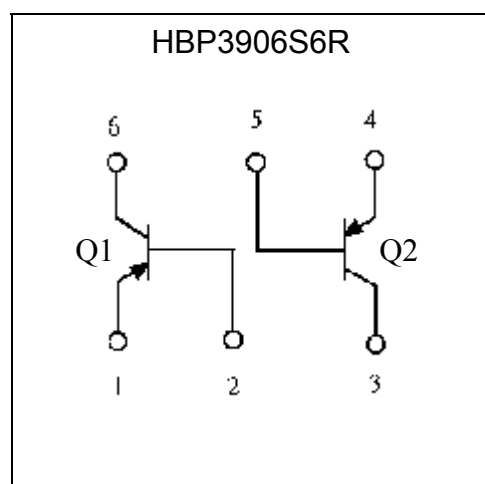
Description

The HBP3906S6R is a spin-off of our popular SOT-23/SOT-323 three-leaded devices. It is designed for general purpose amplifier applications and is housed in the SOT-363R six-leaded surface mount package. By putting two discrete devices in one package, this device is ideal for low power surface mount applications where board space is at a premium.

Features

- HFE, 100--300
- Low VCE(sat), $\leq 0.4V$
- Simplifies circuit design
- Reduces board space.
- Reduces component count

Equivalent Circuit



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	VCBO	-40	V
Collector-Emitter Voltage	VCEO	-40	V
Emitter-Base Voltage	VEBO	-5	V
Collector Current	IC	-200	mA
Total Package Dissipation @TA=25°C	Pd	150 (Note 1)	mW
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

Note 1: Device is mounted on a FR-4 glass epoxy PCB with area measuring 1.0x 0.75x 0.062 in.

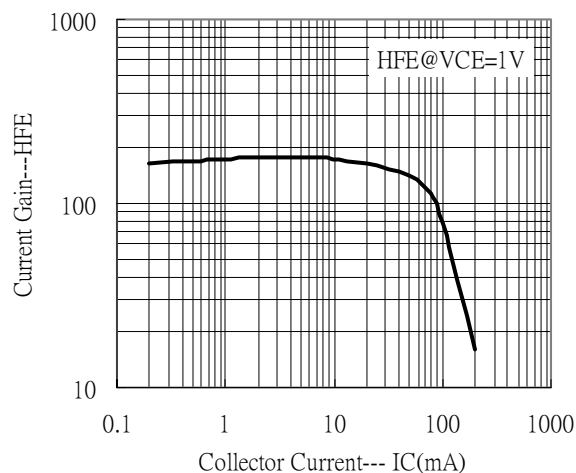
**Characteristics** (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCBO	-40	-	-	V	IC=-10uA
BVCEO	-40	-	-	V	IC=-1mA
BVEBO	-5	-	-	V	IE=-10uA
ICBO	-	-	-100	nA	VCB=-30V
ICEX	-	-	-50	nA	VCE=-30V, VEB=-3V
IEBO	-	-	-100	nA	VEB=-4V
VCE(sat)	-	-	-0.25	V	IC=-10mA, IB=-1mA
*VCE(sat)	-	-	-0.4	V	IC=-50mA, IB=-5mA
VBE(sat)	-	-	-0.85	V	IC=-10mA, IB=-1mA
*VBE(sat)	-	-	-0.95	V	IC=-50mA, IB=-5mA
hFE	60	-	-	-	VCE=-1V, IC=-100uA
hFE	80	-	-	-	VCE=-1V, IC=-1mA
hFE	100	-	300	-	VCE=-1V, IC=-10mA
*hFE	60	-	-	-	VCE=-1V, IC=-50mA
*hFE	30	-	-	-	VCE=-1V, IC=-100mA
fT	250	-	-	MHz	VCE=-20V, IC=-10mA, f=100MHz
Cob	-	-	4.5	pF	VCB=-5V, f=1MHz

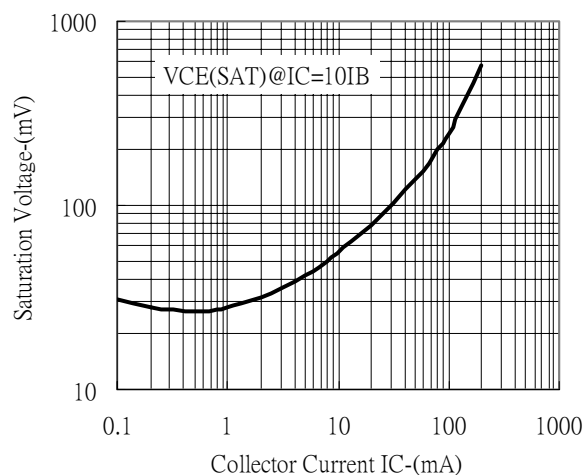
*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

Characteristic curves

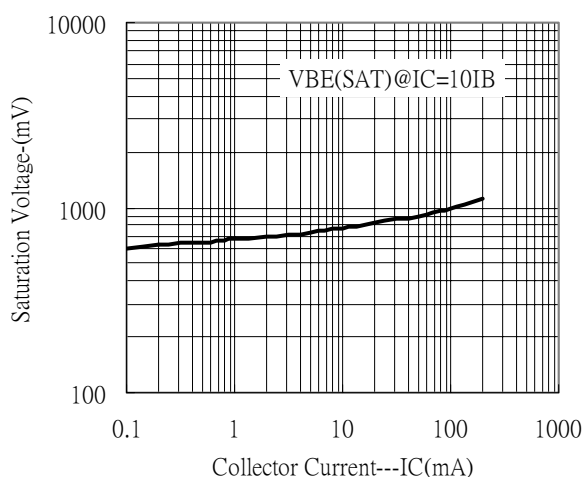
Current Gain vs Collector Current



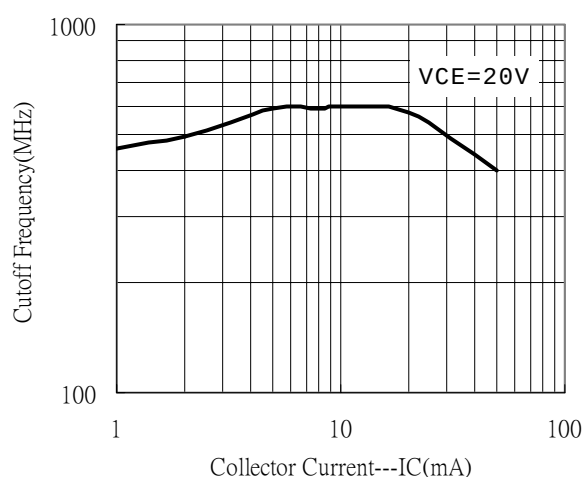
Saturation Voltage vs Collector Current



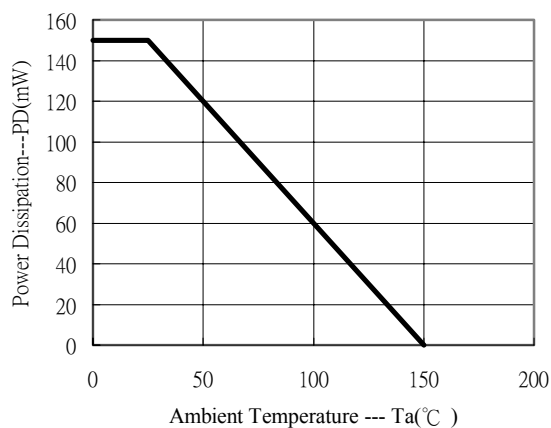
Saturation Voltage vs Collector Current



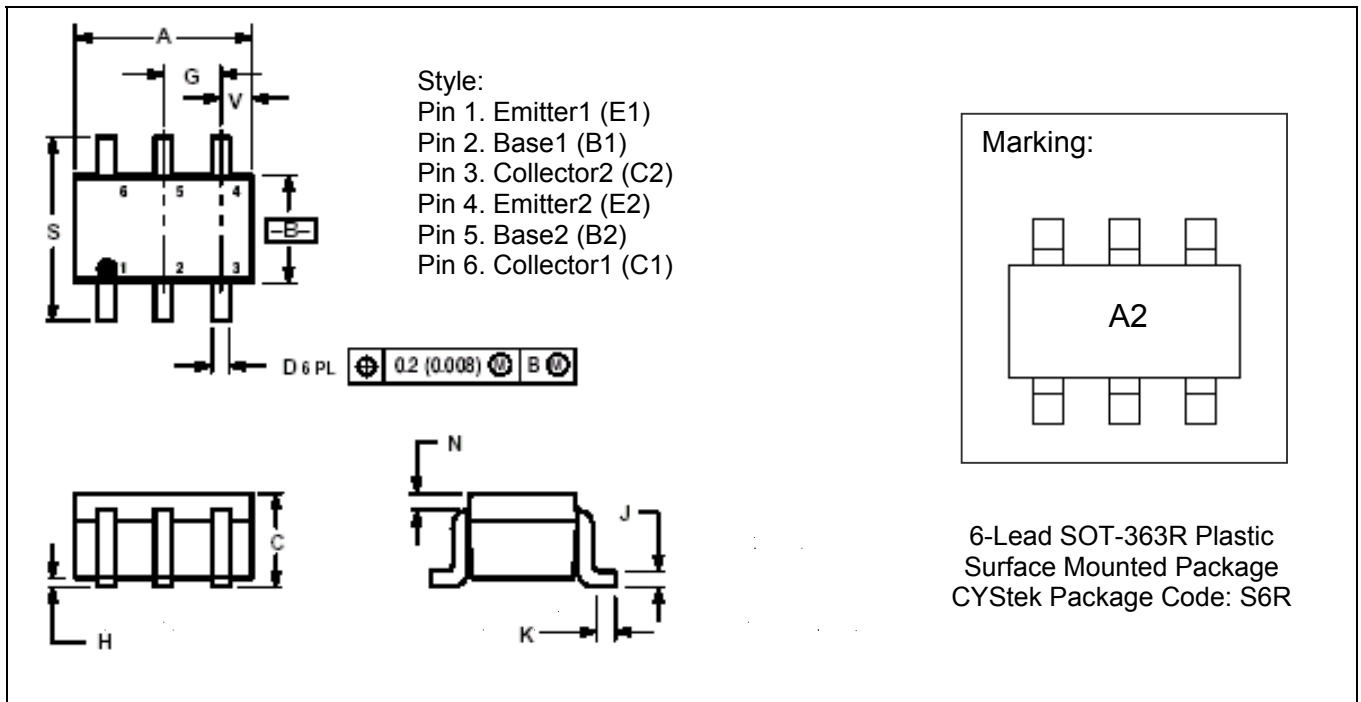
Cutoff Frequency vs Collector Current



Power Derating Curve



SOT-363R Dimension



*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.071	0.087	1.8	2.2	J	0.004	0.010	0.1	0.25
B	0.045	0.053	1.15	1.35	K	0.004	0.012	0.1	0.30
C	0.031	0.043	0.8	1.1	N	0.008 REF		0.20 REF	
D	0.004	0.012	0.1	0.3	S	0.079	0.087	2.00	2.40
G	0.026BSC		0.65BSC		Y	0.012	0.016	0.30	0.40
H	-	0.004	-	0.1					

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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