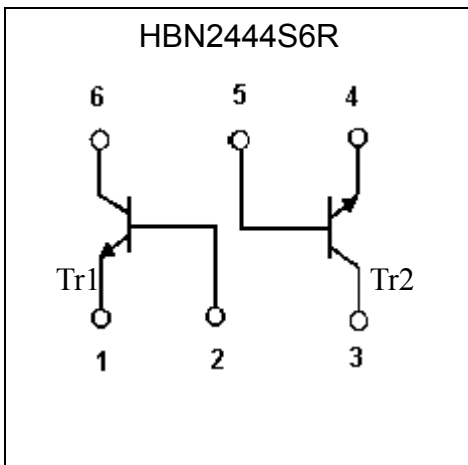
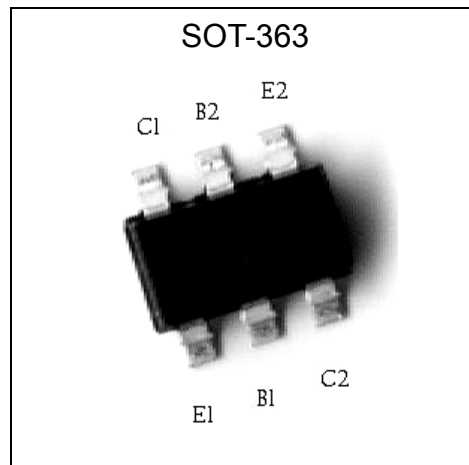


Low Vcesat NPN Epitaxial Planar Transistor

HBN2444S6R

(Dual Transistors)
Features

- Two BTD2444 chips in a SOT-363 package.
- Mounting possible with SOT-323 automatic mounting machines.
- Transistor elements are independent, eliminating interference.
- Mounting cost and area can be cut in half.
- Low $V_{CE(sat)}$, $V_{CE(sat)}=40mV$ (typical), at $I_C / I_B = 50mA / 2.5mA$
- Pb-free package

Equivalent Circuit

Outline

The following characteristics apply to both Tr1 and Tr2
Absolute Maximum Ratings ($T_a=25^{\circ}C$)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current (DC)	I_C	800	mA
Collector Current (Pulse)	I_{CP}	1.5 (Note 1)	A
Power Dissipation	P_d	200 (total) (Note 2)	mW
Junction Temperature	T_j	150	$^{\circ}C$
Storage Temperature	T_{stg}	-55~+150	$^{\circ}C$

 Note : 1.Single pulse, $P_w=10ms$

2.150mW per element must not be exceeded.

**Characteristics (Ta=25°C)**

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	40	-	-	V	I _C =100μA, I _E =0
BV _{CEO}	25	-	-	V	I _C =2mA, I _B =0
BV _{EBO}	6	-	-	V	I _E =100μA, I _C =0
I _{CBO}	-	-	0.5	μA	V _{CB} =30V, I _E =0
I _{EBO}	-	-	0.5	μA	V _{EB} =6V, I _C =0
*V _{CE(sat)1}	-	40	60	mV	I _C =50mA, I _B =2.5mA
*V _{CE(sat)2}	-	0.2	0.3	V	I _C =400mA, I _B =20mA
*V _{CE(sat)3}	-	0.3	0.5	V	I _C =800mA, I _B =80mA
*V _{BE(on)}	-	-	1	V	V _{CE} =1V, I _C =10mA
*h _{FE1}	180	-	560	-	V _{CE} =1V, I _C =100mA
*h _{FE2}	40	-	-	-	V _{CE} =1V, I _C =500mA
*h _{FE3}	82	-	-	-	V _{CE} =2V, I _C =50mA
f _T	-	150	-	MHz	V _{CE} =5V, I _C =50mA, f=100MHz
C _{ob}	-	15	-	pF	V _{CB} =10V, f=1MHz

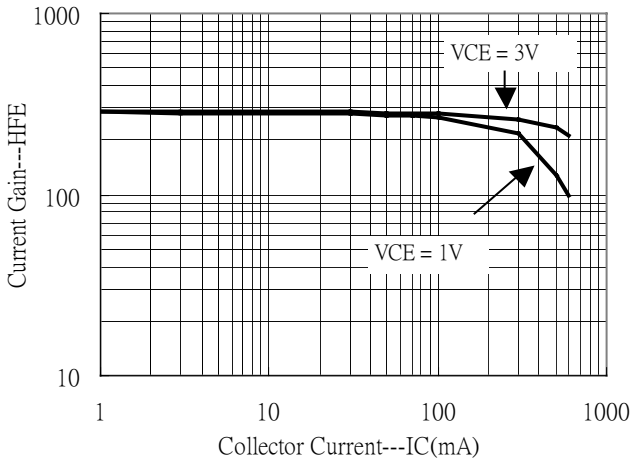
*Pulse Test : Pulse Width ≤380μs, Duty Cycle ≤2%

Ordering Information

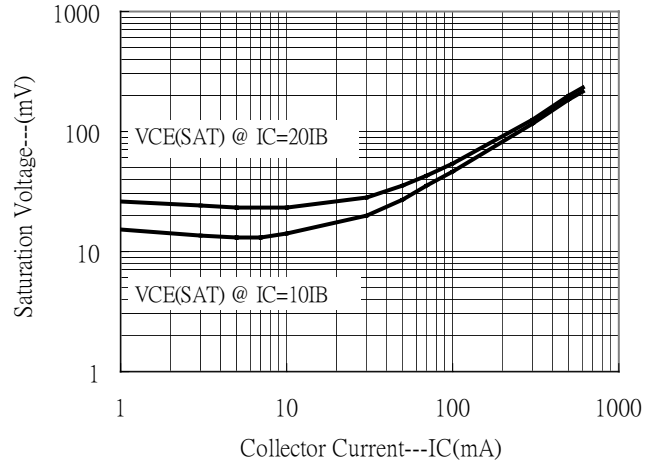
Device	Package	Shipping	Marking
HBN2444S6R	SOT-363 (Pb-free)	3000 pcs / Tape & Reel	BS

Characteristic Curves

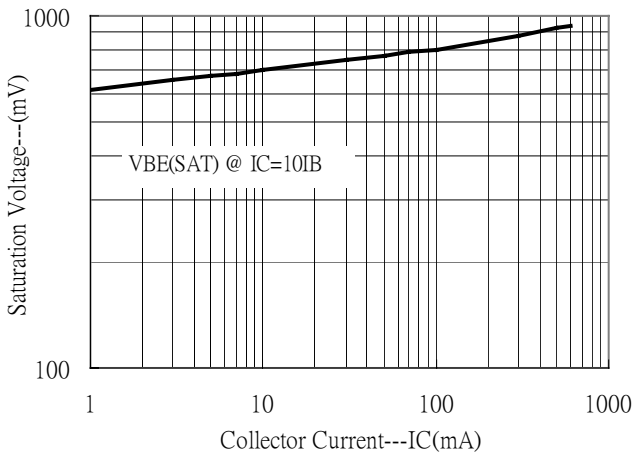
Current Gain vs Collector Current



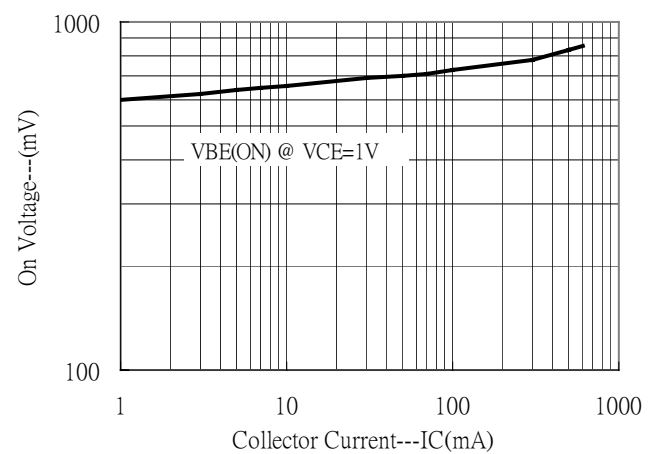
Saturation Voltage vs Collector Current



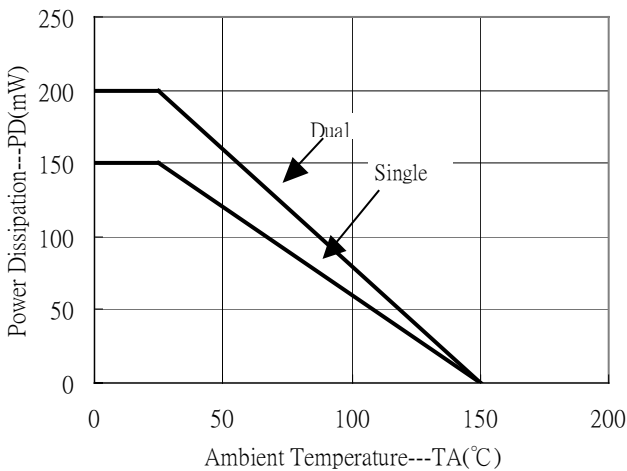
Saturation Voltage vs Collector Current



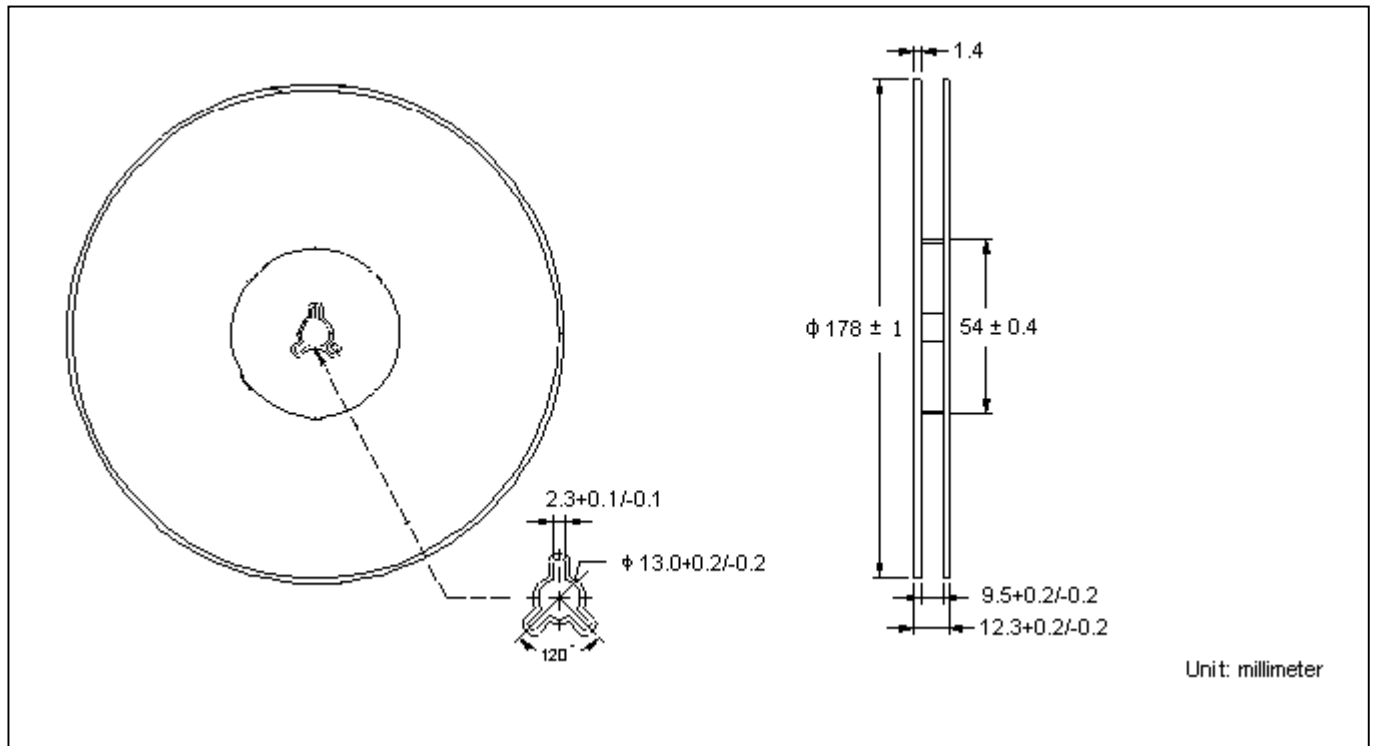
On Voltage vs Collector Current



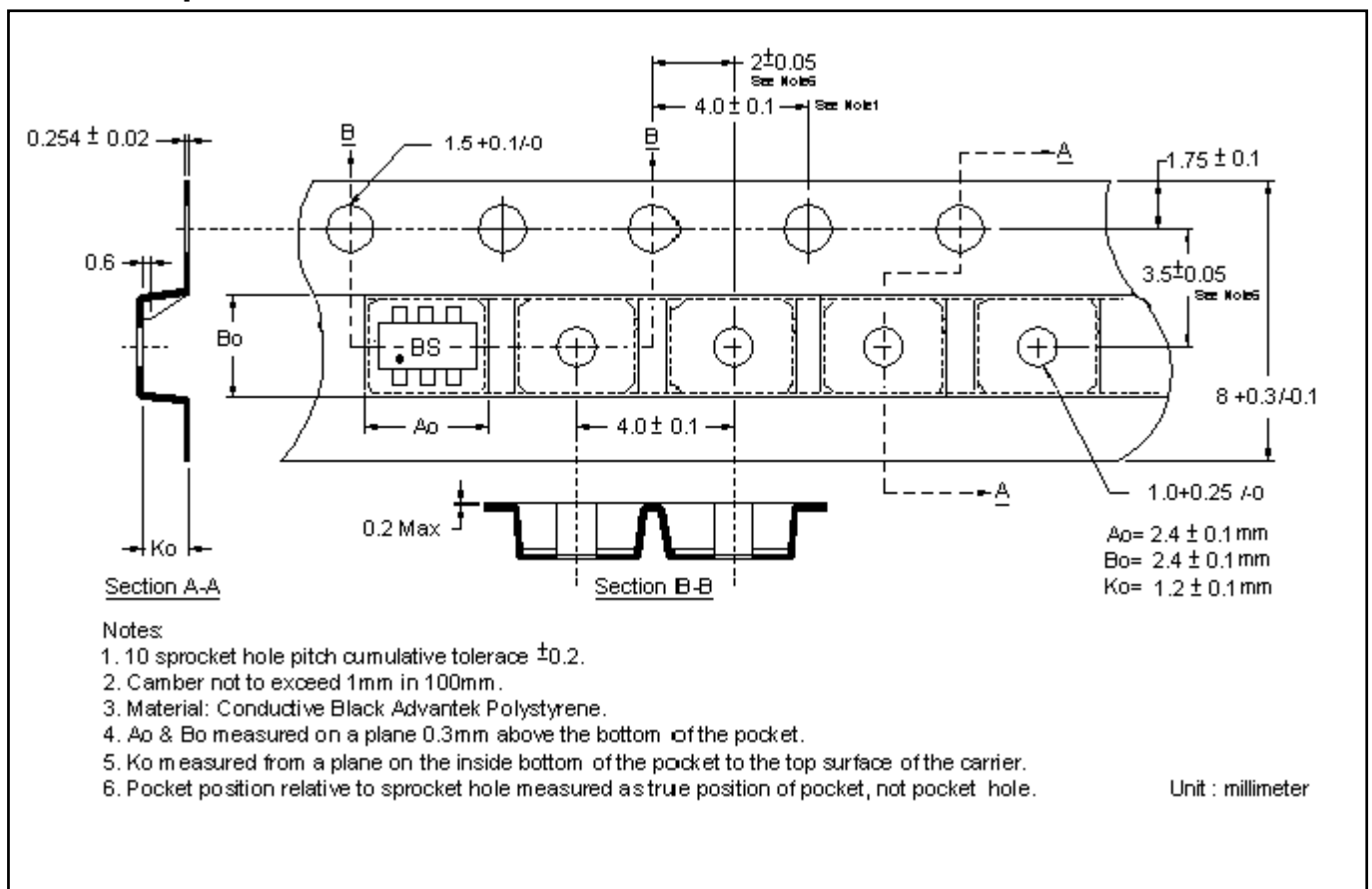
Power Derating Curves



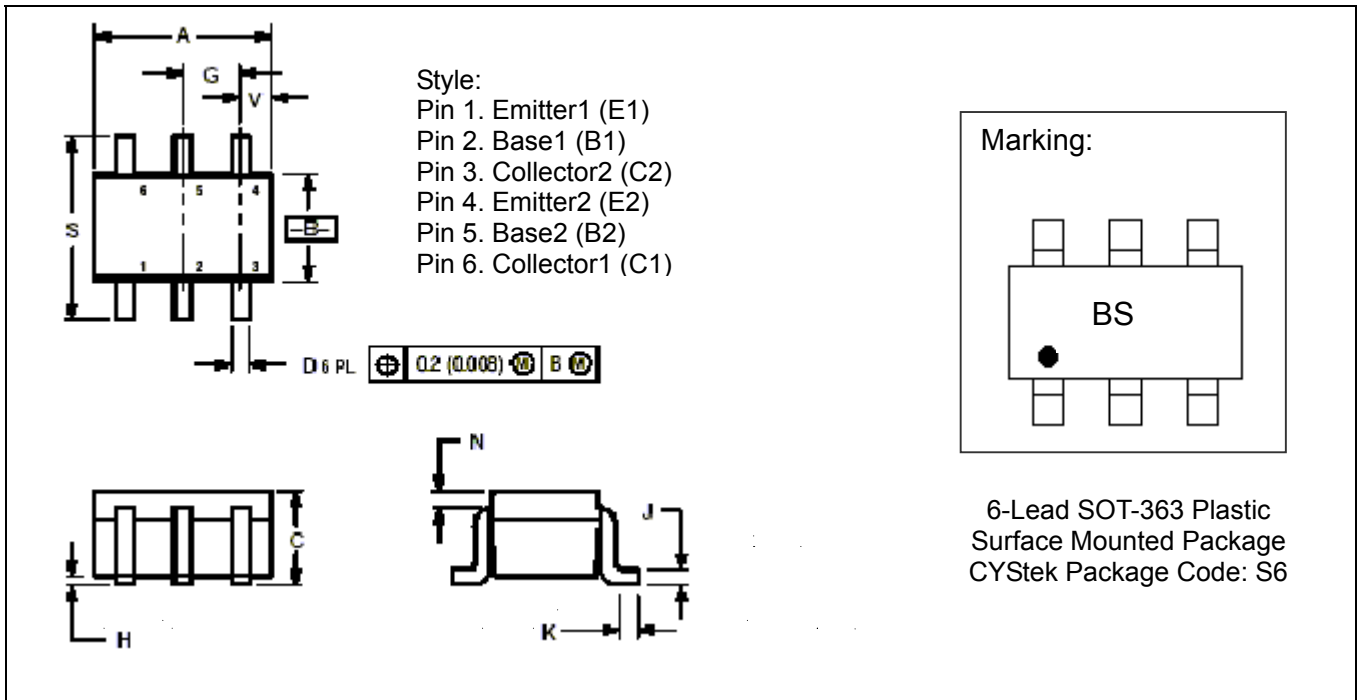
Reel Dimension



Carrier Tape Dimension



SOT-363 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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