

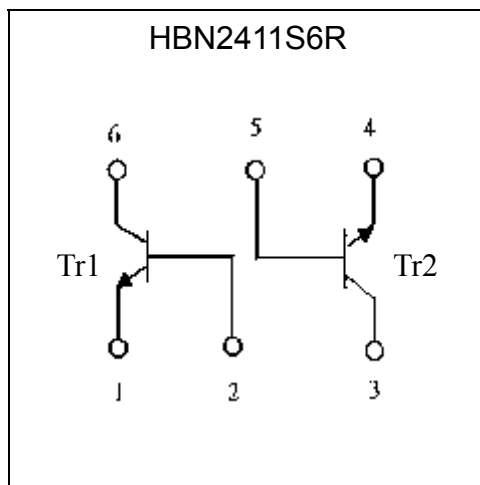
**General Purpose NPN Epitaxial Planar Transistors  
 (dual transistors)**

# HBN2411S6R

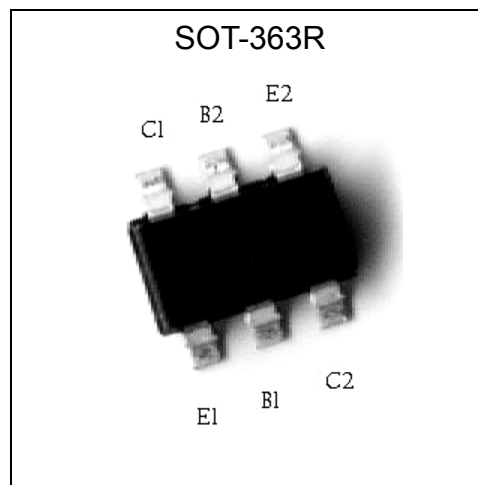
**Features**

- Two BTC2411chips 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.
- High  $I_{C(Max)}$  .  $I_{C(Max)} = 0.6A$
- Low  $V_{CE(sat)}$  , TYP.  $V_{CE(sat)} = 0.2V$  at  $I_C/I_B = 500mA/50mA$   
 Optimal for low Voltage operation
- Complementary to HBP1036S6R

**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	$V_{CBO}$	60	V
Collector-Emitter Voltage	$V_{CEO}$	40	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current	$I_C$	0.6	A
Power Dissipation	$P_d$	200(total) (Note)	mW
Junction Temperature	$T_j$	150	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55~+150	$^{\circ}C$

Note : 150mW per element must not be exceeded.

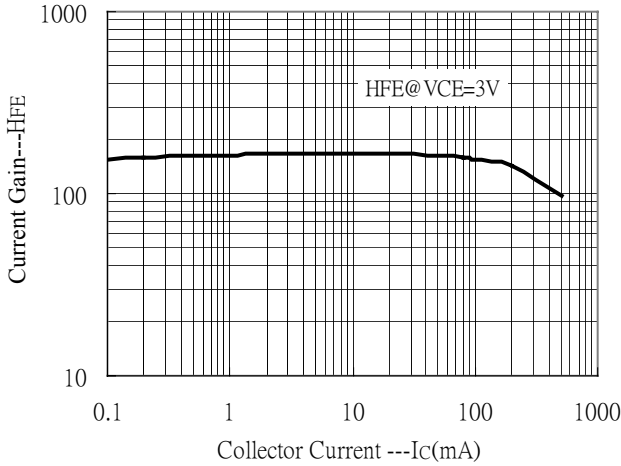
**Characteristics** (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV <sub>CBO</sub>	60	-	-	V	I <sub>C</sub> =100μA
BV <sub>CEO</sub>	40	-	-	V	I <sub>C</sub> =1mA
BV <sub>EBO</sub>	6	-	-	V	I <sub>E</sub> =10μA
I <sub>CEX</sub>	-	-	100	nA	V <sub>CE</sub> =35V, V <sub>EB</sub> =0.4V
*V <sub>CE(sat)</sub> 1	-	-	0.4	V	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA
*V <sub>CE(sat)</sub> 2	-	0.2	0.75	V	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA
*V <sub>BE(sat)</sub> 1	-	-	0.95	V	I <sub>C</sub> =150mA, I <sub>B</sub> =15mA
*V <sub>BE(sat)</sub> 2	-	-	1.2	V	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA
h <sub>FE</sub> 1	20	-	-		V <sub>CE</sub> =1V, I <sub>C</sub> =100μA
h <sub>FE</sub> 2	40	-	-		V <sub>CE</sub> =1V, I <sub>C</sub> =1mA
*h <sub>FE</sub> 3	80	-	-		V <sub>CE</sub> =1V, I <sub>C</sub> =10mA
*h <sub>FE</sub> 4	82	-	390		V <sub>CE</sub> =1V, I <sub>C</sub> =150mA
*h <sub>FE</sub> 5	40	-	-		V <sub>CE</sub> =2V, I <sub>C</sub> =500mA
f <sub>T</sub>	-	250	-	MHz	V <sub>CE</sub> =5V, I <sub>C</sub> =20mA, f=100MHz
C <sub>ob</sub>	-	6	-	pF	V <sub>CB</sub> =5V, f=1MHz

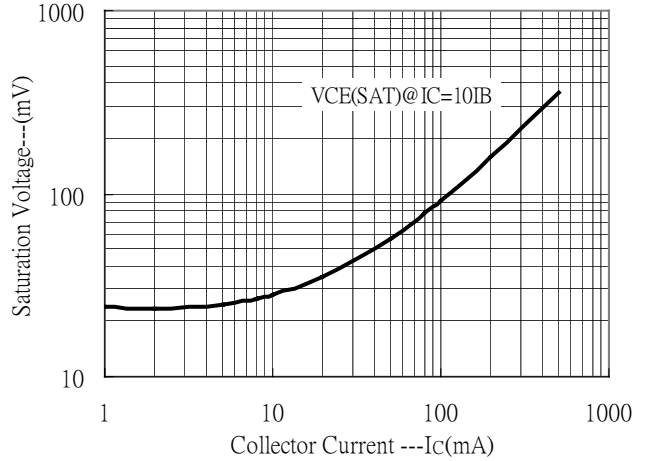
\*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

**Characteristic Curves**

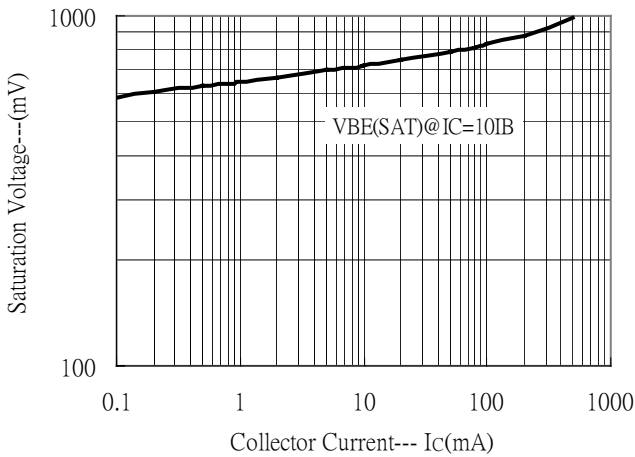
Current Gain vs Collector Current



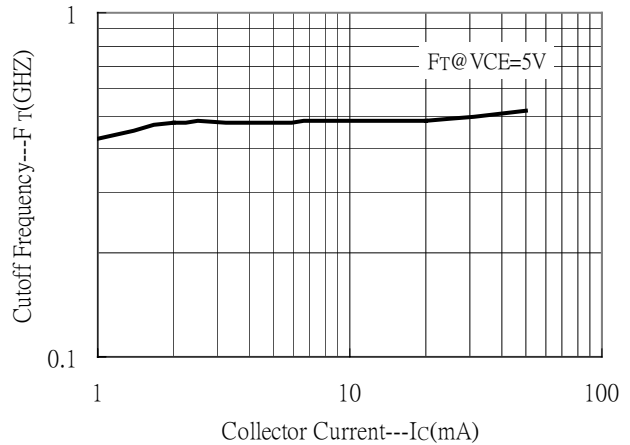
Saturation Voltage vs Collector Current



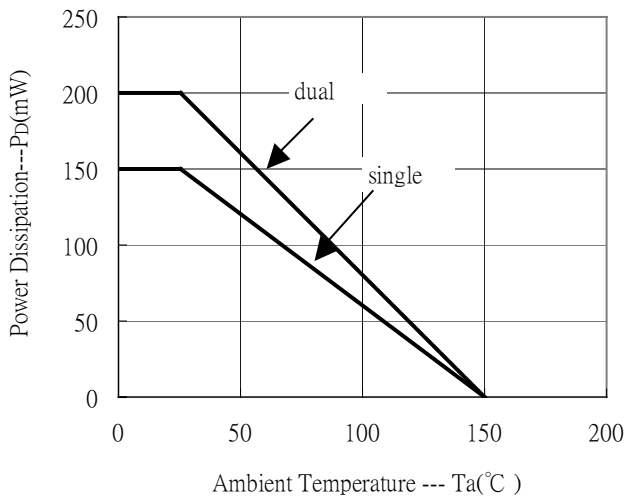
Saturation Voltage vs Collector Current



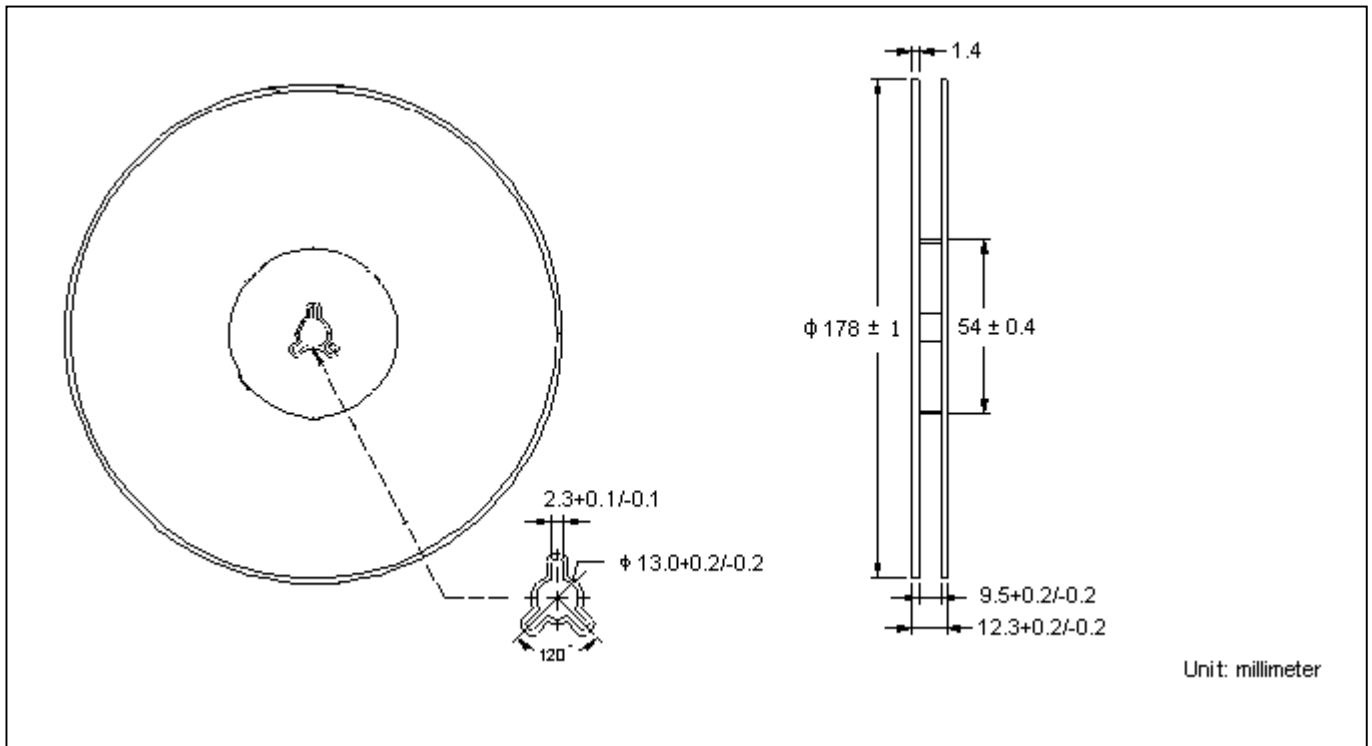
Cutoff Frequency vs Collector Current



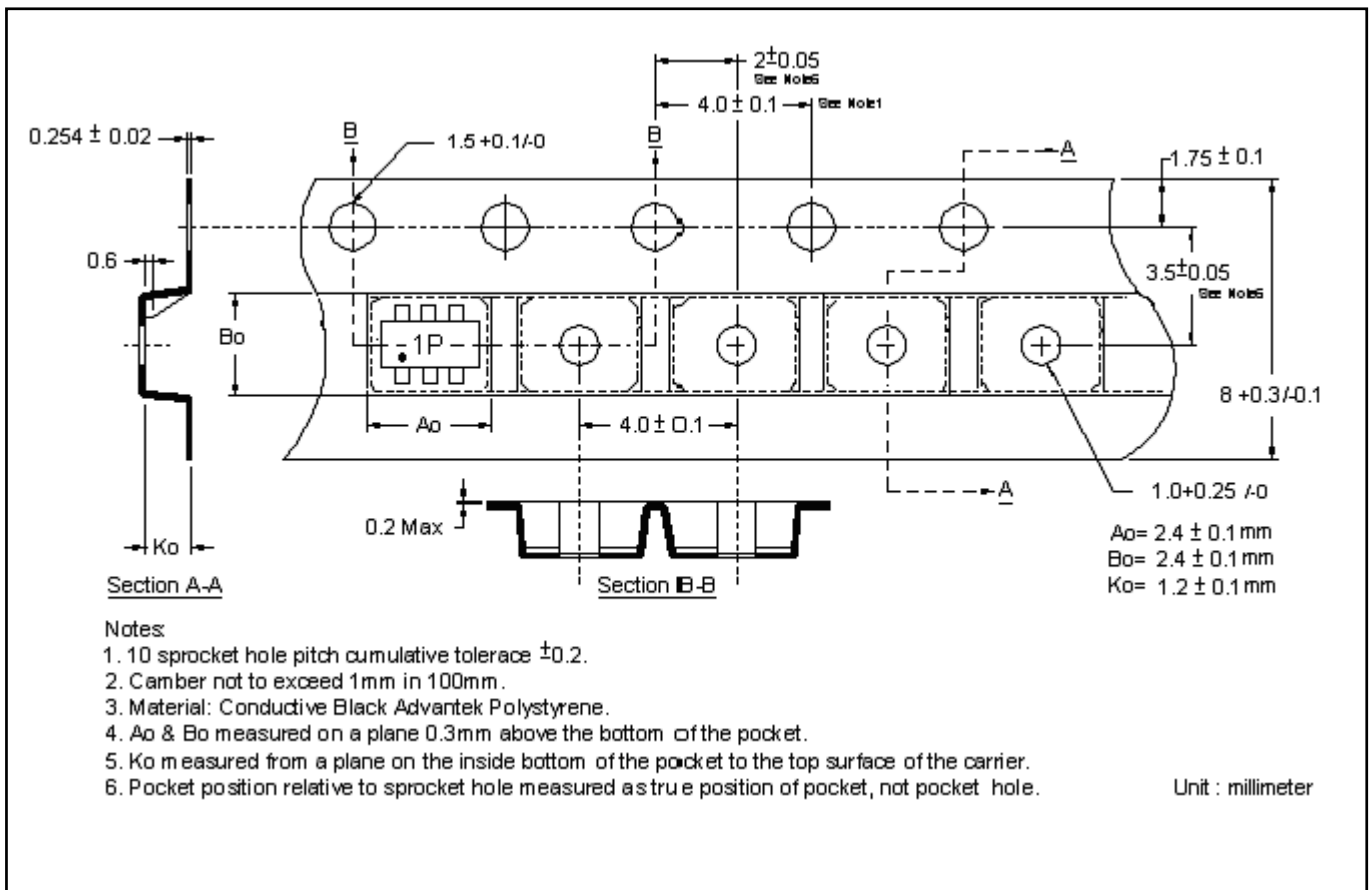
Power Derating Curves



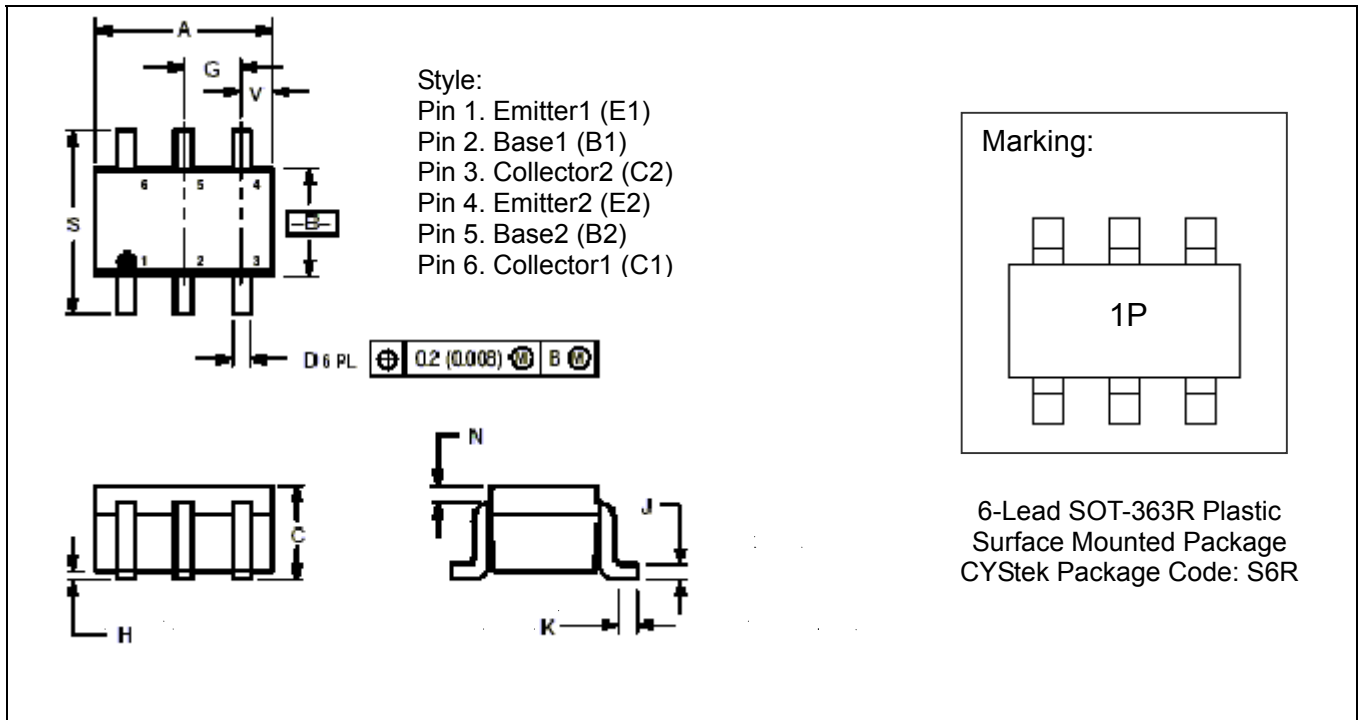
**Reel Dimension**



**Carrier Tape Dimension**



**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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