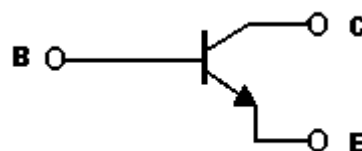
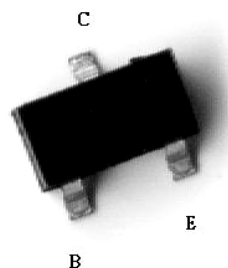


High Frequency NPN Switching Transistor

Description:

- High transition frequency, $f_T=500\text{MHz}(\text{min})$
- High current, $I_{C(\text{max})}=500\text{mA}$
- Low saturation voltage, $V_{CE(\text{SAT})}=0.3\text{V}(\text{max})$
- Pb-free lead plating and halogen-free package

SOT-23



B : Base
 C : Collector
 E : Emitter

Ordering Information

Device	Package	Shipping
KWN2369N	SOT-23 (Pb-free lead plating and halogen-free package)	3000 pcs / Tape & Reel

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V _{CB0}	40	V
Collector-Emitter Voltage	V _{CEO}	15	V
Emitter-Base Voltage	V _{EBO}	4.5	V
Collector Current (DC)	I _C	500	mA
Power Dissipation	P _d	225	mW
Thermal Resistance, Junction to Ambient	R _{thJA}	556	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-65~+150	°C

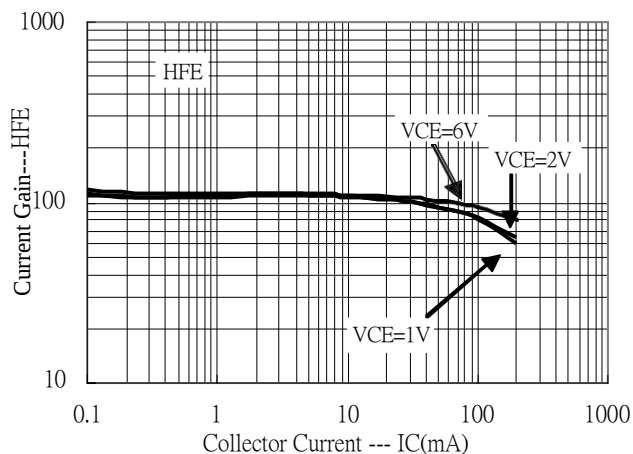
Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CB0}	40	-	-	V	I _C =50μA
BV _{CEO}	15	-	-	V	I _C =1mA
BV _{EBO}	4.5	-	-	V	I _E =50μA
I _{CB0}	-	-	100	nA	V _{CB} =40V
I _{EBO}	-	-	100	nA	V _{EB} =4.5V
*V _{CE(sat)} 1	-	-	250	mV	I _C =10mA, I _B =1mA
*V _{CE(sat)} 2	-	-	300	mV	I _C =10mA, I _B =0.3mA
*V _{CE(sat)} 3	-	-	600	mV	I _C =100mA, I _B =10mA
*V _{BE(sat)} 1	700	-	850	mV	I _C =10mA, I _B =1mA
*V _{BE(sat)} 2	-	-	1.5	V	I _C =100mA, I _B =1mA
*h _{FE1}	40	-	120	-	V _{CE} =1V, I _C =10mA
*h _{FE2}	20	-	-	-	V _{CE} =2V, I _C =100mA
f _T	500	-	-	MHz	V _{CE} =10V, I _C =10mA, f=100MHz
C _{ob}	-	-	4	pF	V _{CB} =5V, f=1MHz

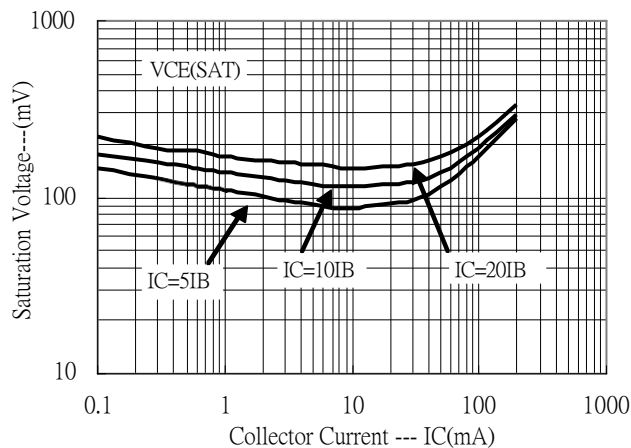
*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

Typical Characteristics

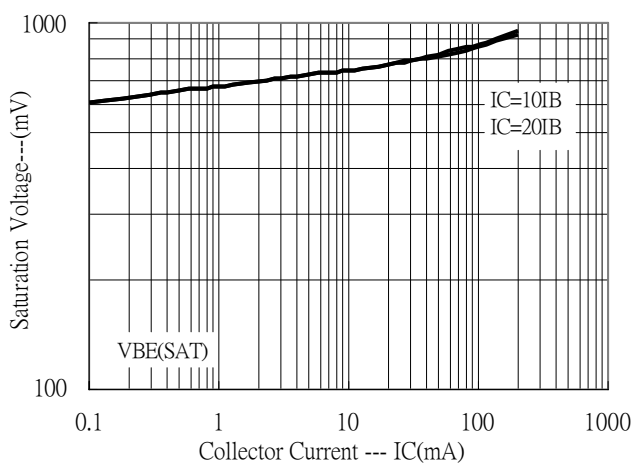
Current Gain vs Collector Current



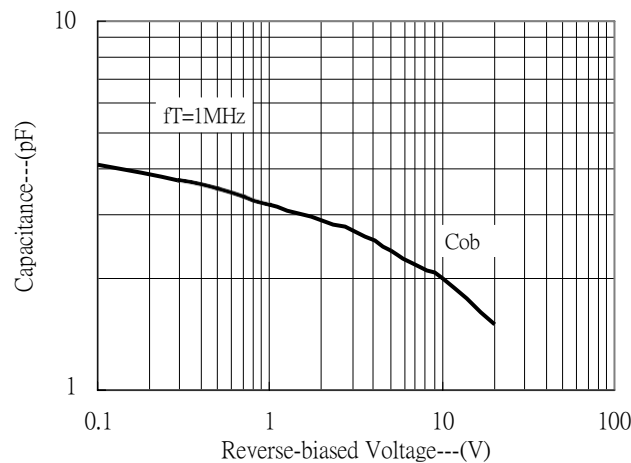
Saturation Voltage vs Collector Current



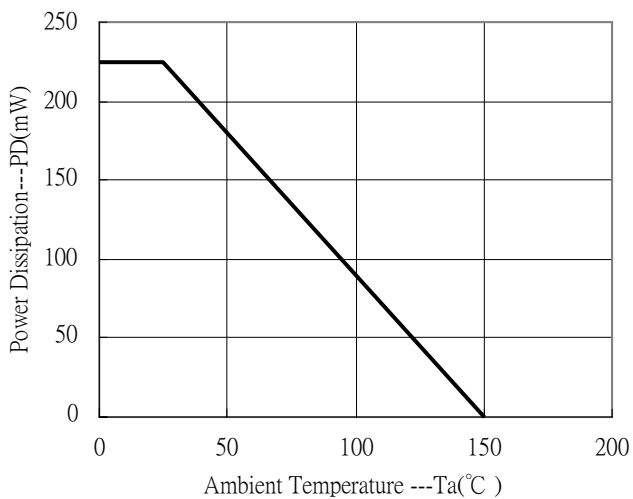
Saturation Voltage vs Collector Current



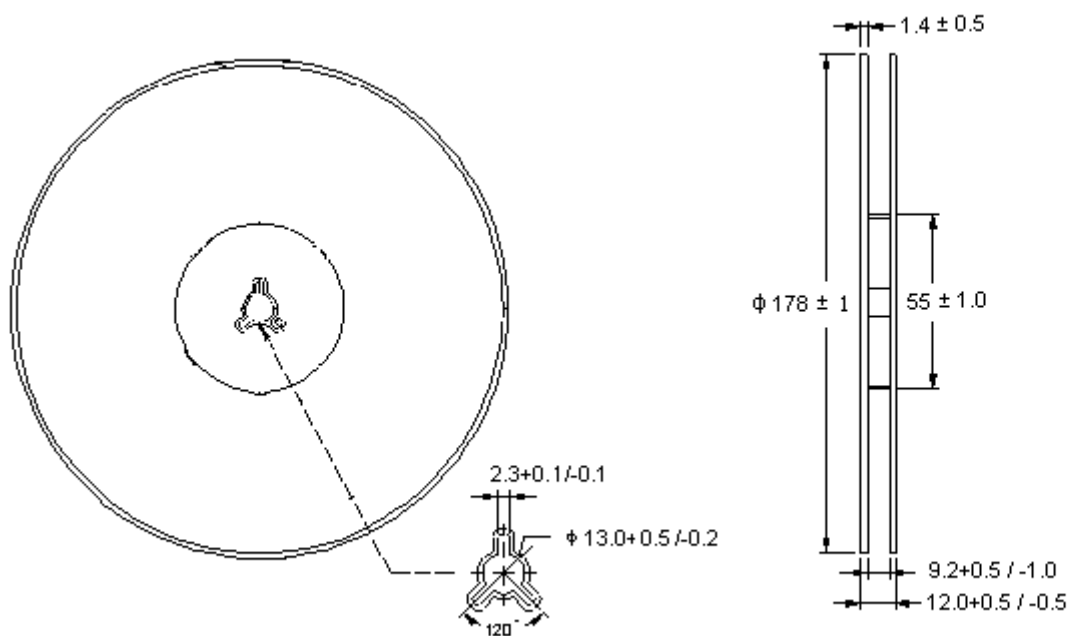
Capacitance Characteristics



Power Derating Curve

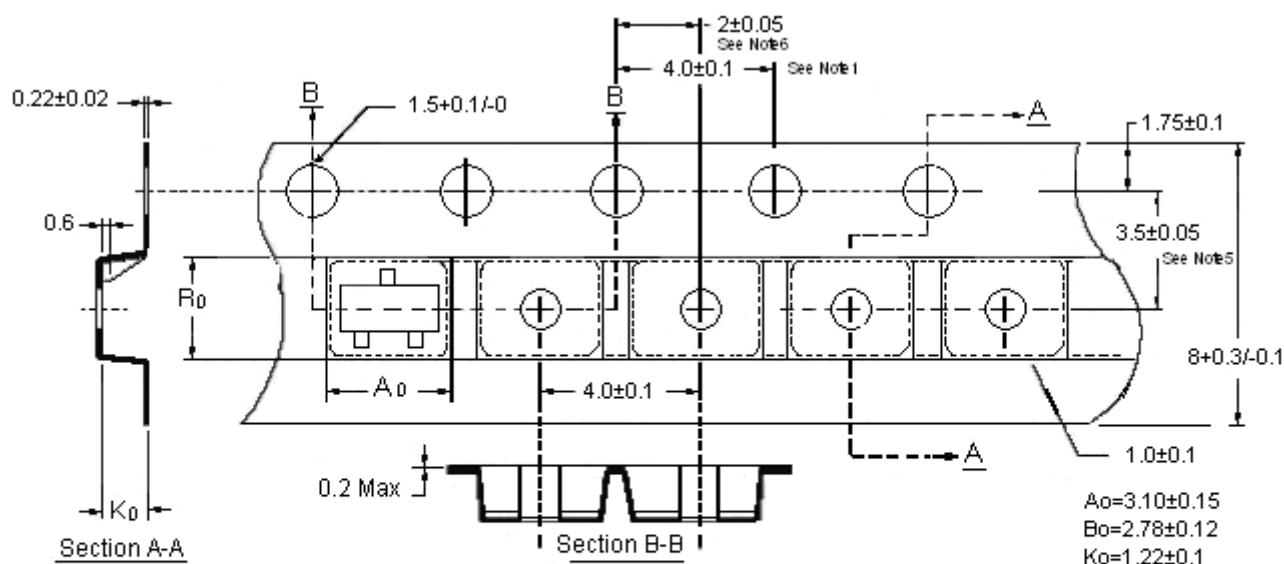


Reel Dimension



Unit: millimeter

Carrier Tape Dimension

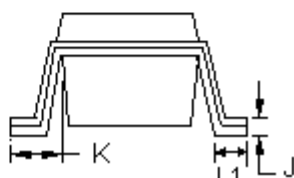
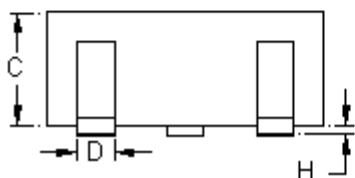
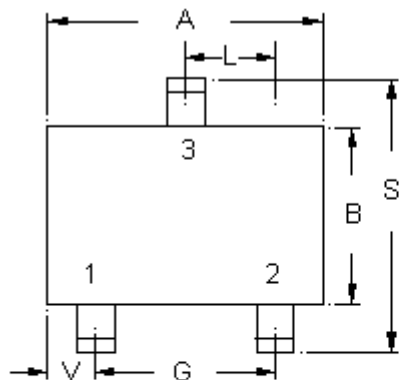


Notes:

1. 10 sprocket hole pitch cumulative tolerance ± 0.2 .
2. Camber not to exceed 1mm in 100mm.
3. Material : conductive Black Polystyrene.
4. A_0 & B_0 measured on a plane 0.3mm above the bottom of the pocket.
5. K_0 measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
6. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.

Unit : millimeter

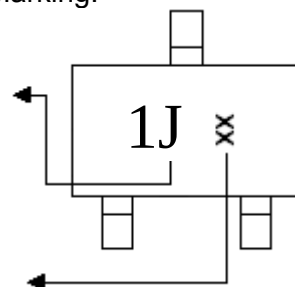
SOT-23 Dimension



Product Code

Date Code: Year+Month
 Year: Last digit of Christian year, EX : 4→2015, 5→2015
 6→2016, ...etc.
 Month: 1→1, 2→2, . . .
 9→9, A→10, B→11, C→12

Marking:



3-Lead SOT-23 Plastic
 Surface Mounted Package

Style : Pin 1.Base 2.Emitter 3.Collector

*:Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0032	0.0079	0.08	0.20
B	0.0472	0.0669	1.20	1.70	K	0.0118	0.0266	0.30	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1161	2.10	2.95
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0000	0.0040	0.00	0.10	L1	0.0118	0.0197	0.30	0.50