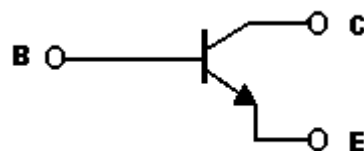
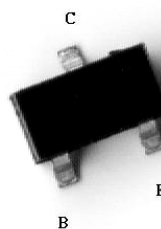


High Voltage NPN Epitaxial Planar Transistor

Features:

- High breakdown voltage. ($BV_{CEO} \geq 400V$)
- Low saturation voltage
- Pb-free lead plating and halogen-free package

SOT-23



B : Base
 C : Collector
 E : Emitter

Ordering Information

Device	Package	Shipping
KWC4505	SOT-23 (Pb-free lead plating and halogen-free package)	3000 pcs / tape & reel

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V _{CB0}	400	V
Collector-Emitter Voltage	V _{CEO}	400	V
Emitter-Base Voltage	V _{EBO}	6	V
Collector Current	I _C	300	mA
Power Dissipation	P _d	0.225	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~+150	°C

Thermal Data

Parameter	Symbol	Value	Unit
Thermal Resistance, Junction-to-case, max	R _{th,j-c}	185	°C/W
Thermal Resistance, Junction-to-ambient, max	R _{th,j-a}	556	

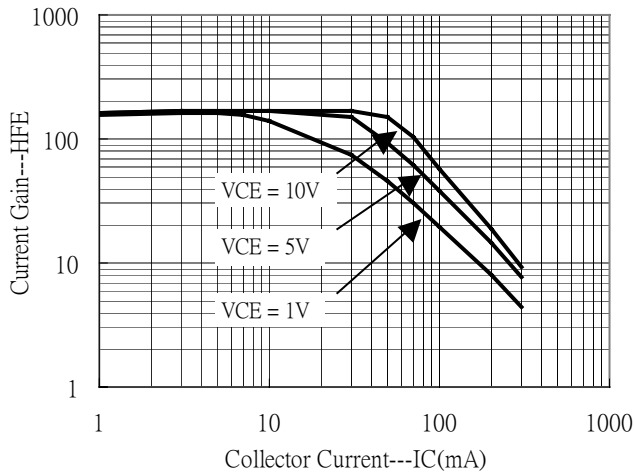
Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CB0}	400	-	-	V	I _C =50μA, I _E =0
BV _{CEO}	400	-	-	V	I _C =1mA, I _B =0
BV _{EBO}	6	-	-	V	I _E =50μA, I _C =0
I _{CB0}	-	-	100	nA	V _{CB} =400V, I _E =0
I _{CER}	-	-	10	nA	V _{CE} =300V, R _{EB} =4kΩ
I _{EBO}	-	-	100	nA	V _{EB} =6V, I _C =0
*V _{CE(sat)}	-	-	0.5	V	I _C =10mA, I _B =1mA
*V _{BE(sat)}	-	-	1.5	V	I _C =10mA, I _B =1mA
h _{FE}	100	-	270	-	V _{CE} =10V, I _C =10mA
f _T	-	20	-	MHz	V _{CE} =10V, I _C =10mA, f=10MHz
Cob	-	7	-	pF	V _{CB} =10V, f=1MHz

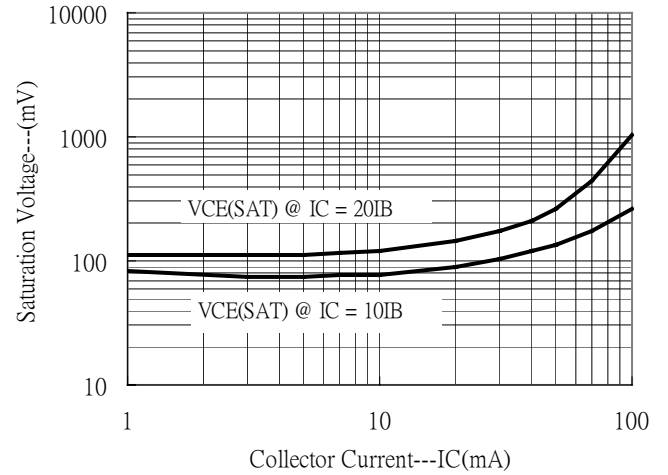
*Pulse Test : Pulse Width ≤380μs, Duty Cycle≤2%

Typical Characteristics

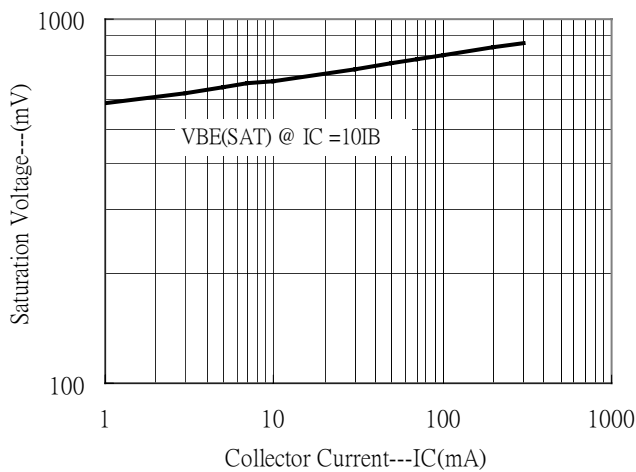
Current Gain vs Collector Current



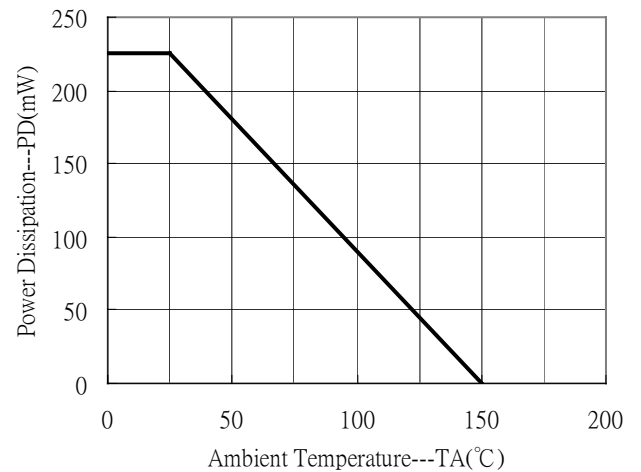
Saturation Voltage vs Collector Current



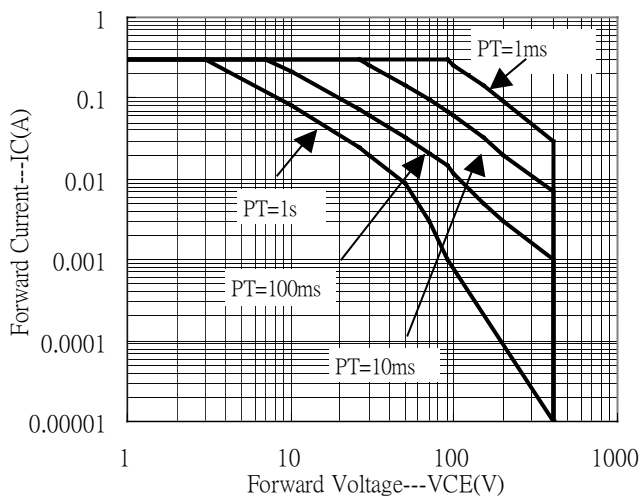
Saturation Voltage vs Collector Current



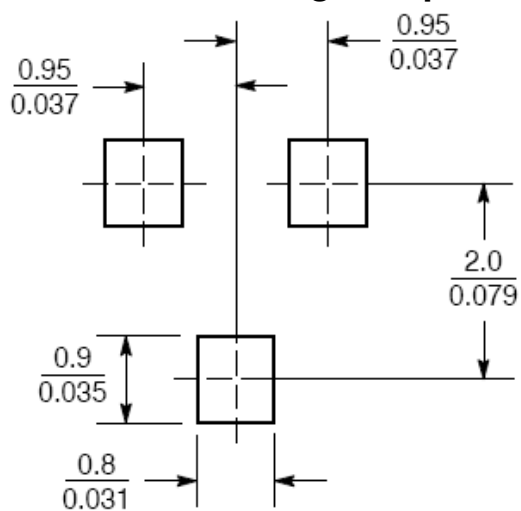
Power Derating Curve



Safe Operating Area

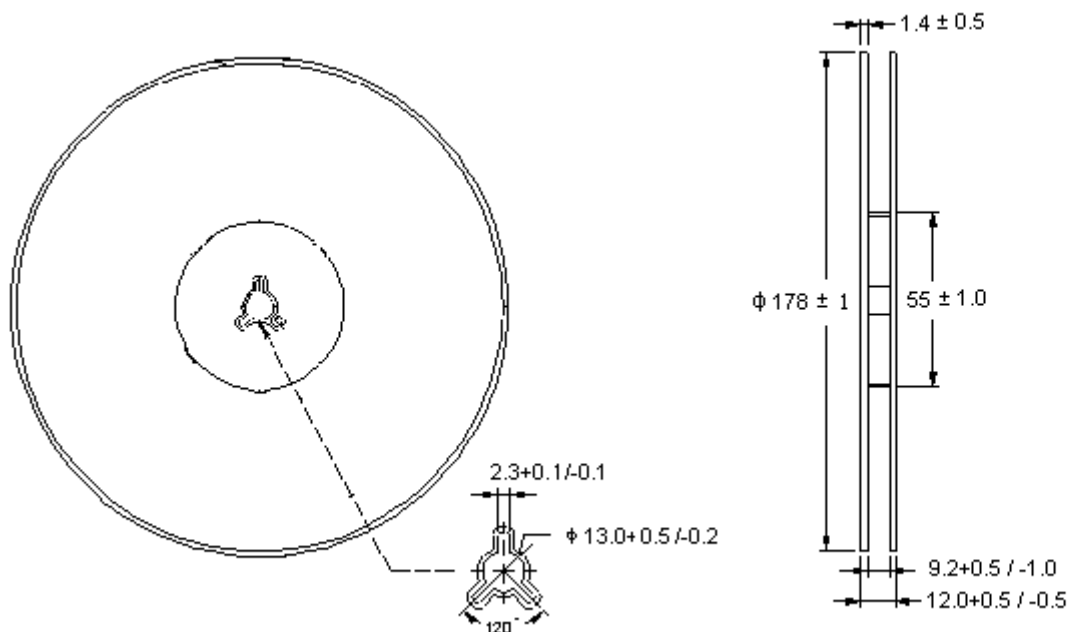


Recommended Soldering Footprint



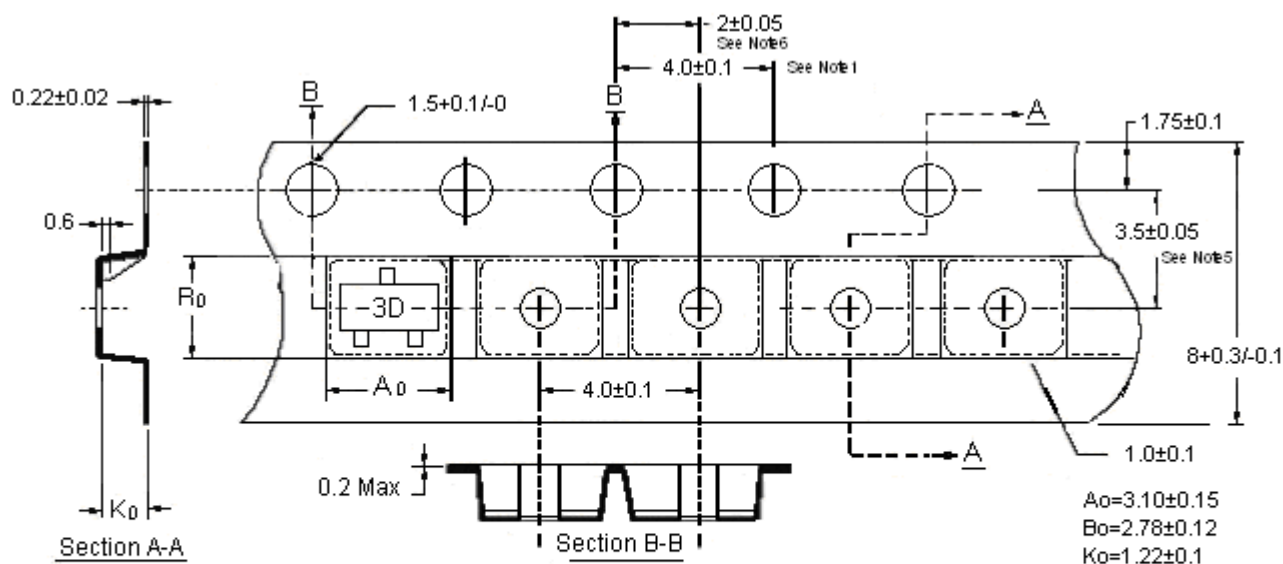
Unit : $\frac{\text{mm}}{\text{inches}}$

Reel Dimension

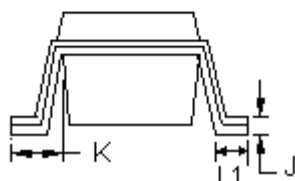
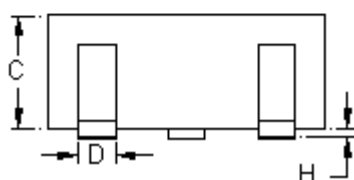
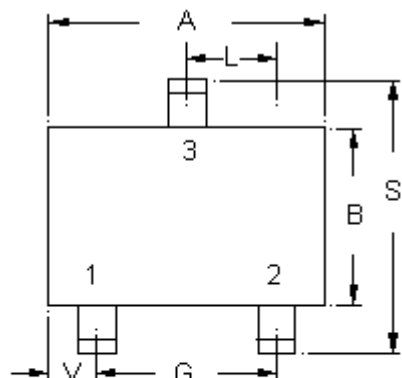


Unit: millimeter

Carrier Tape Dimension



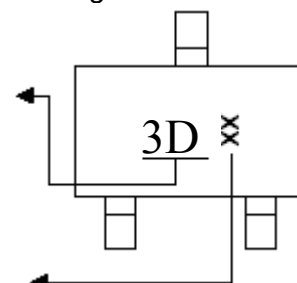
SOT-23 Dimension



Product Code

Date Code: Year+Month
 Year: 3→2003, 4→2004
 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	0.0551	1.20	1.40	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	0.1004	2.10	2.55
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