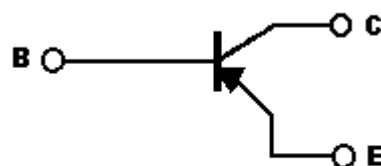
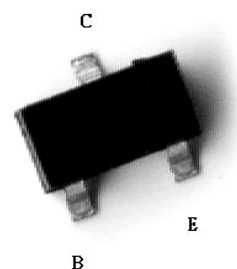


PNP Epitaxial Planar Transistor

Features:

- Large current capability
- Low collector-to-emitter saturation voltage
- High speed switching
- Ultra small package facilitates miniaturization in end products
- High allowable power dissipation
- Pb-free lead plating and halogen-free package

SOT-23



B : Base
 C : Collector
 E : Emitter

Ordering Information

Device	Package	Shipping
KWA1542	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 _{CBO}	-30	V
Collector-Emitter Voltage		V _{CEO}	-20	V
Emitter-Base Voltage		V _{EBO}	-5	V
Collector Current	DC	I _C	-3	A
	Pulse	I _{CP}	-5	
Base Current		I _B	-600	mA
Power Dissipation		P _d	225	mW
			0.9 (Note)	W
Junction Temperature		T _j	150	°C
Storage Temperature		T _{stg}	-55~+150	°C

Note : When device mounted on a ceramic board (600mm²×0.8mm)

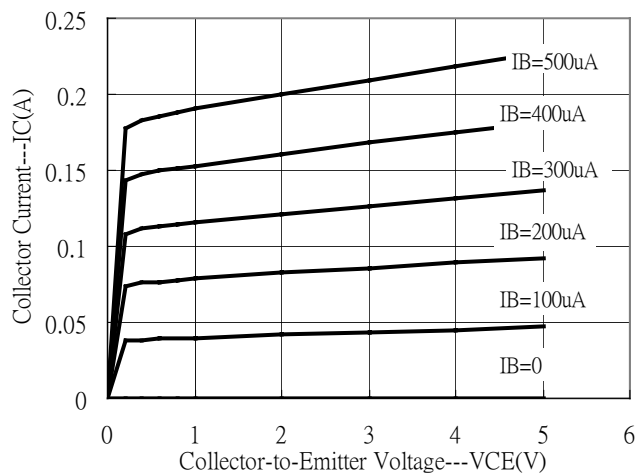
Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	-30	-	-	V	I _C =-10μA, I _E =0
BV _{CEO}	-20	-	-	V	I _C =-1mA, I _B =0
BV _{EBO}	-5	-	-	V	I _E =-10μA, I _C =0
I _{CBO}	-	-	-100	nA	V _{CB} =-30V, I _E =0
I _{EBO}	-	-	-100	nA	V _{EB} =-4V, I _C =0
*V _{CE(sat)} 1	-	-	-300	mV	I _C =-1.5A, I _B =-30mA
*V _{CE(sat)} 1	-	-	-200	mV	I _C =-1.5A, I _B =-75mA
*V _{BE(sat)}	-	-	-1.2	V	I _C =-1.5A, I _B =-30mA
*h _{FE}	250	-	560	-	V _{CE} =-2V, I _C =-500mA
f _T	-	380	-	MHz	V _{CE} =-10V, I _C =-500mA
Cob	-	25	-	pF	V _{CB} =-10V, I _E =0A, f=1MHz
ton	-	50	-	ns	V _{CC} =-12V, R _L =24Ω, I _C =20I _{B1} =-20I _{B2} =-500mA
tstg	-	270	-	ns	
tf	-	25	-	ns	

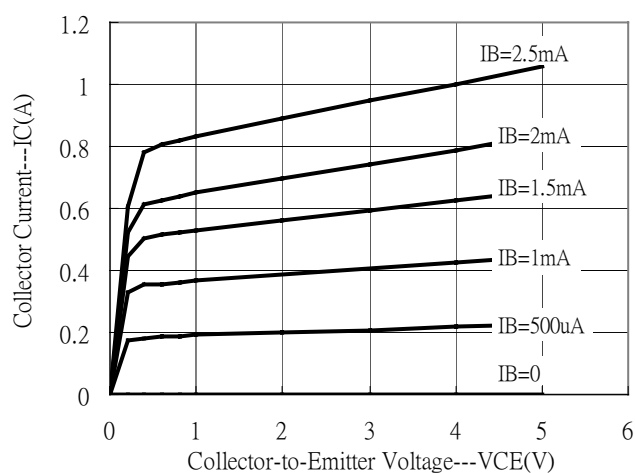
*Pulse Test : Pulse Width ≤380μs, Duty Cycle≤2%

Typical Characteristics

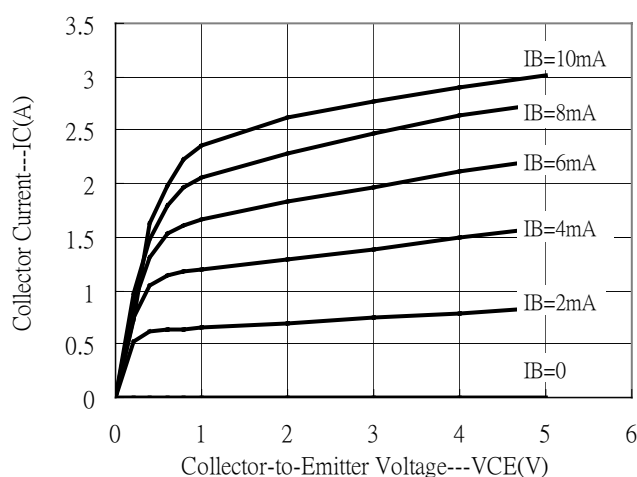
Output Characteristics



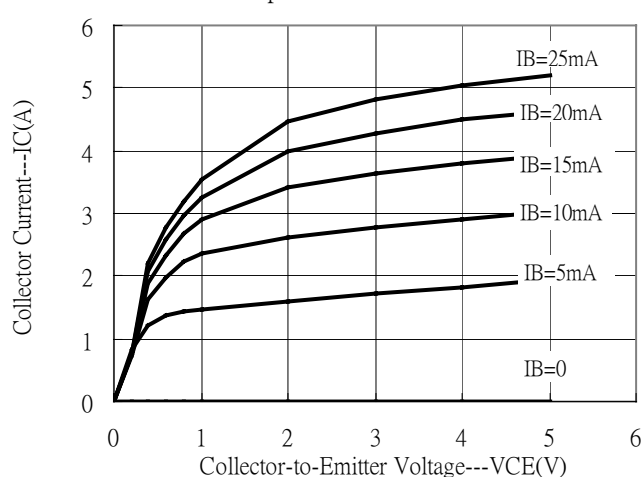
Output Characteristics



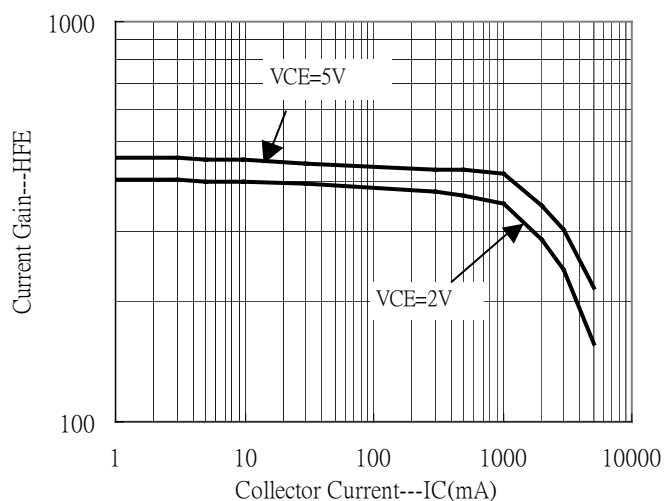
Output Characteristics



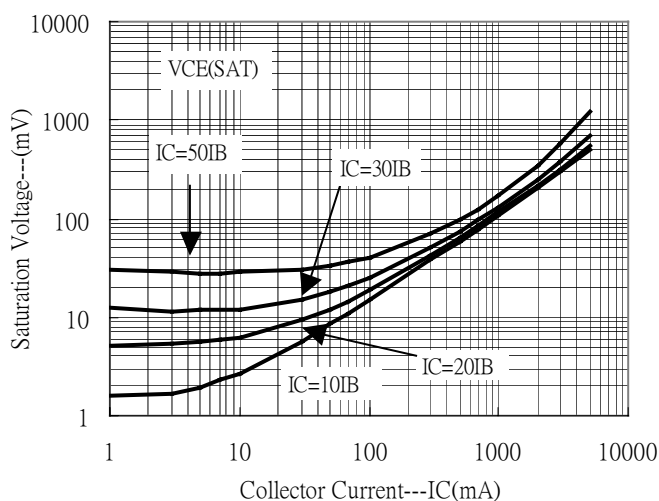
Output Characteristics



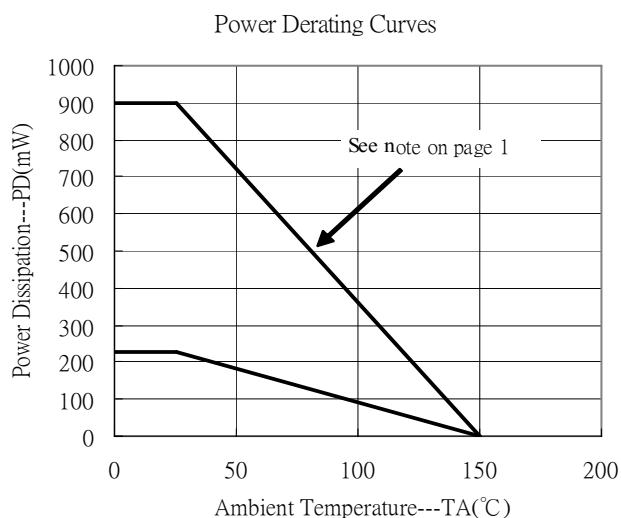
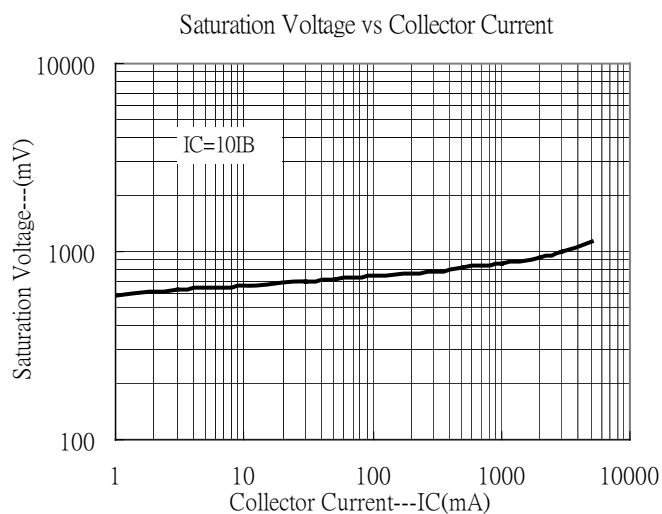
Current Gain vs Collector Current



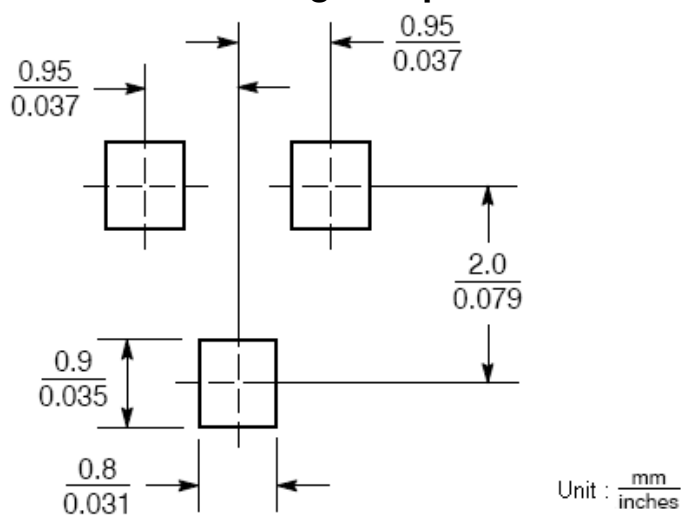
Saturation Voltage vs Collector Current



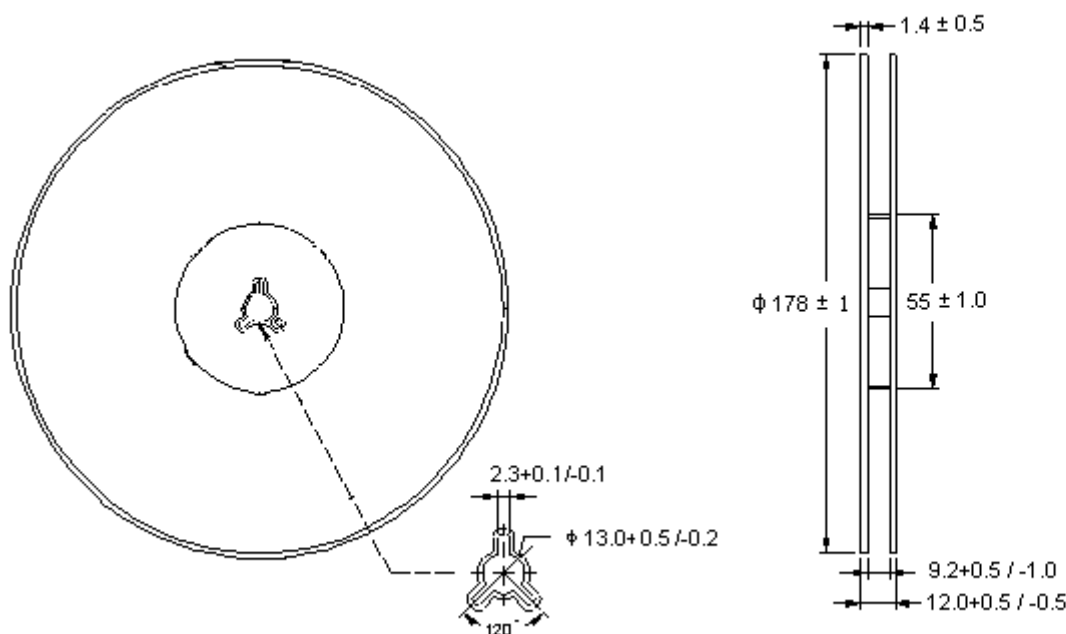
Typical Characteristics(Cont.)



Recommended Soldering Footprint

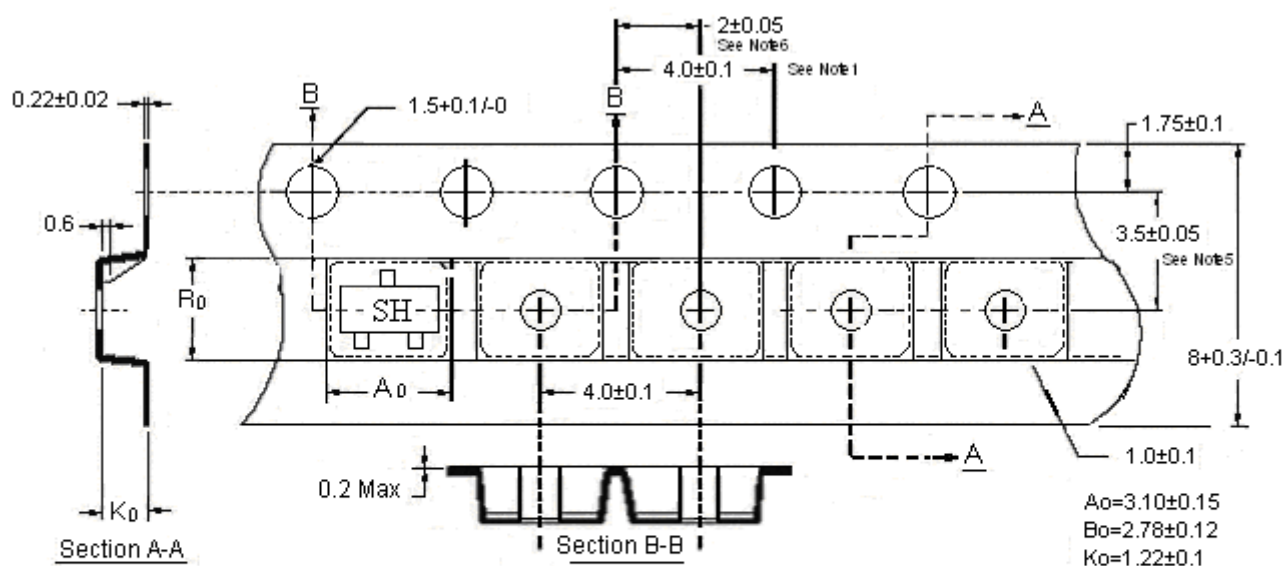


Reel Dimension



Unit: millimeter

Carrier Tape Dimension

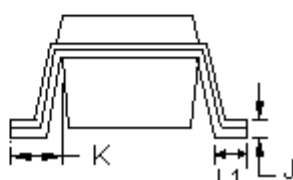
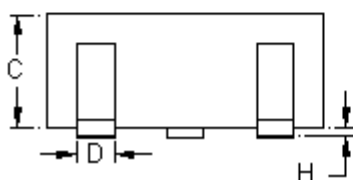
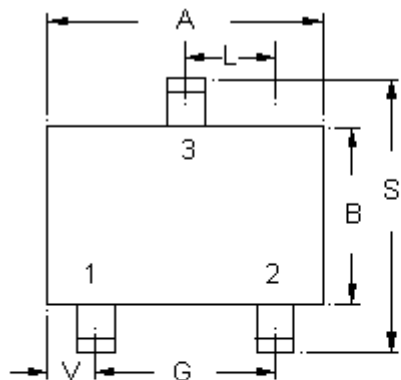


Notes:

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

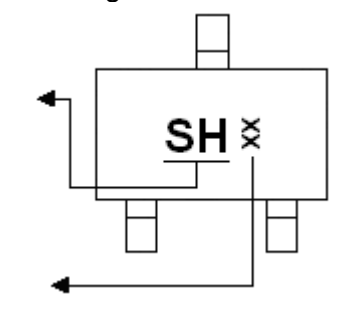
SOT-23 Dimension



Product Code

Date Code: Year+Month
 Year: 5→2015, 6→2016
 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