Low Vcesat PNP Epitaxial Planar Transistor

Features

- Low V_{CE}(sat)
- Excellent current gain characteristics
- Complementary to KJD1760
- Pb-free lead plating and halogen-free package

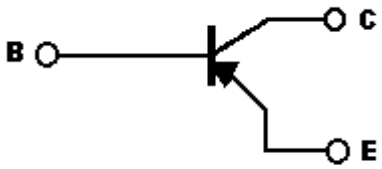
Outline

TO-252(DPAK)

B C E

Symbol

KJB1184



B：Base
C：Collector
E：Emitter

Ordering Information

Device	Package	Shipping
KJB1184	TO-252 (RoHS compliant and halogen-free package)	2500 pcs / Tape & Reel

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-6	V
Collector Current(DC)	I_C	-3	A
Collector Current(Pulse)	I_{CP}	-7 *1	
Power Dissipation (T_A=25℃)	Pd(T_A=25℃)	1	W
Power Dissipation (T_C=25℃)	Pd(T_C=25℃)	15 *2	
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	125	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	8.33 *2	
Operating Junction and Storage Temperature Range	Tj,Tstg	-55~+150	°C

Note : *1. Single Pulse Pw=10ms

*2 . Printed circuit board, 1.7mm thick, collector copper plating 10mm*10mm or larger.

Characteristics (Ta=25°C)

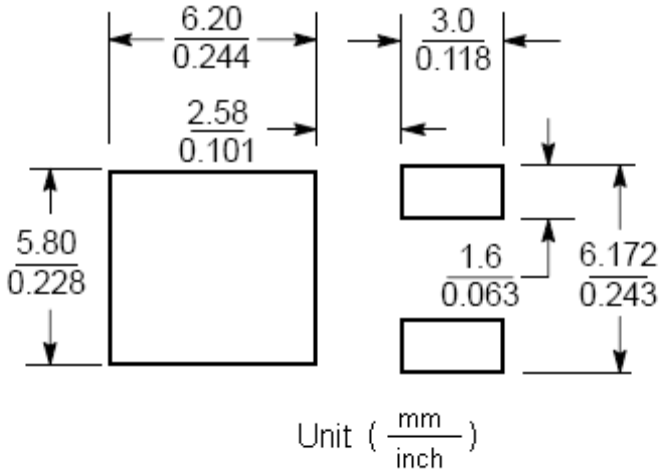
Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV_{CBO}	-60	-	-	V	I_C=-50μA, I_E=0
BV_{CEO}	-50	-	-	V	I_C=-1mA, I_B=0
BV_{EBO}	-6	-	-	V	I_E=-50μA, I_C=0
I_{CBO}	-	-	-1	μA	V_{CB}=-40V, I_E=0
I_{EBO}	-	-	-1	μA	V_{EB}=-4V, I_C=0
*$V_{CE(sat)}$	-	-0.26	-0.5	V	I_C=-2A, I_B=-0.1A
*$V_{BE(sat)}$	-	-0.96	-1.2	V	I_C=-2A, I_B=-0.1A
*$h_{FE}1$	120	-	-	-	V_{CE}=-2V, I_C=-20mA
*$h_{FE}2$	180	-	560	-	V_{CE}=-3V, I_C=-500mA
*$h_{FE}3$	80	-	-	-	V_{CE}=-2V, I_C=-1A
f_T	-	80	-	MHz	V_{CE}=-5V, I_C=-0.1A, f=100MHz
Cob	-	35	-	pF	V_{CB}=-10V, f=1MHz

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

Classification Of $h_{FE}2$

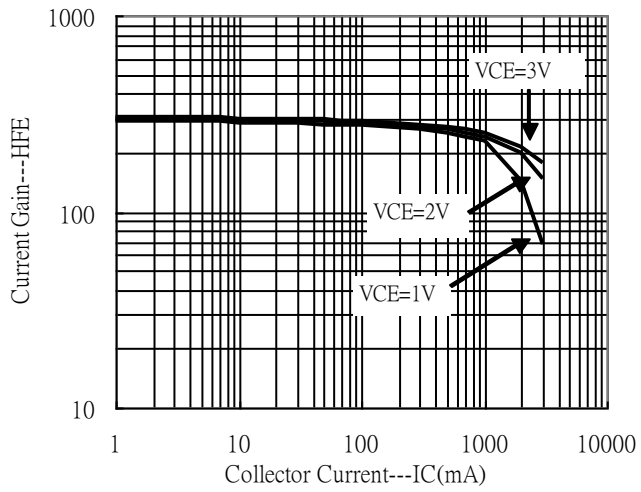
Rank	R	S
Range	180~390	270~560

Recommended soldering footprint

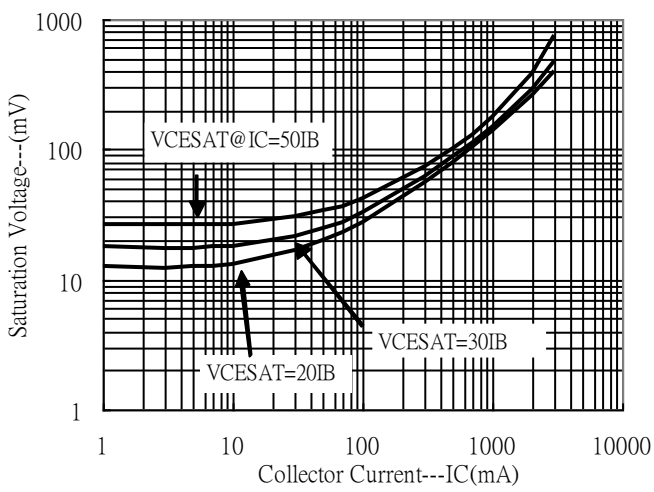


Typical Characteristics

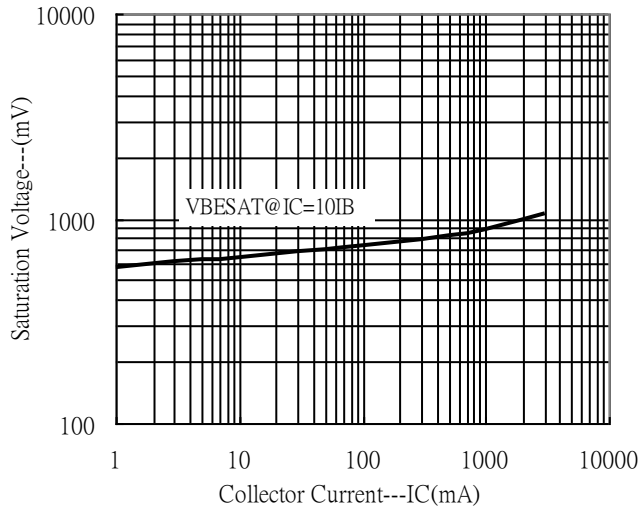
Current Gain vs Collector Current



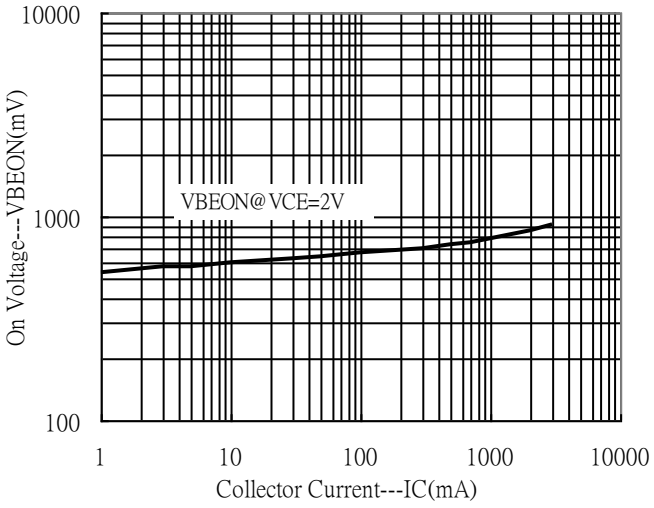
Saturation Voltage vs Collector Current



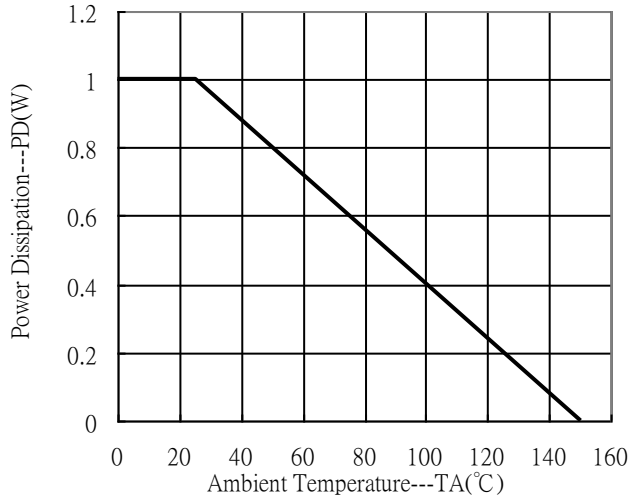
Saturation Voltage vs Collector Current



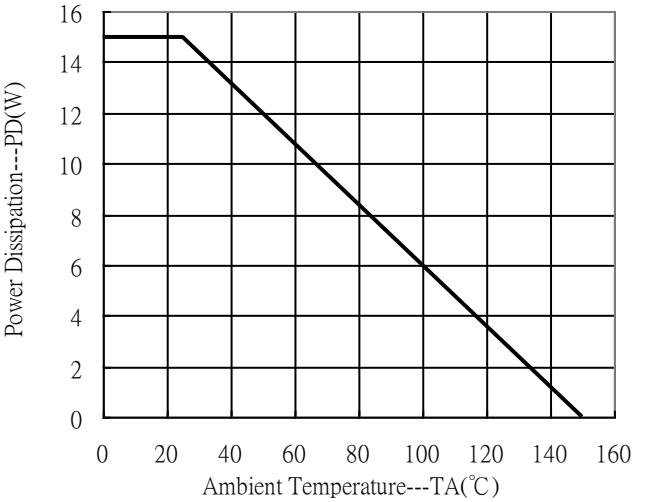
On Voltage vs Collector Current



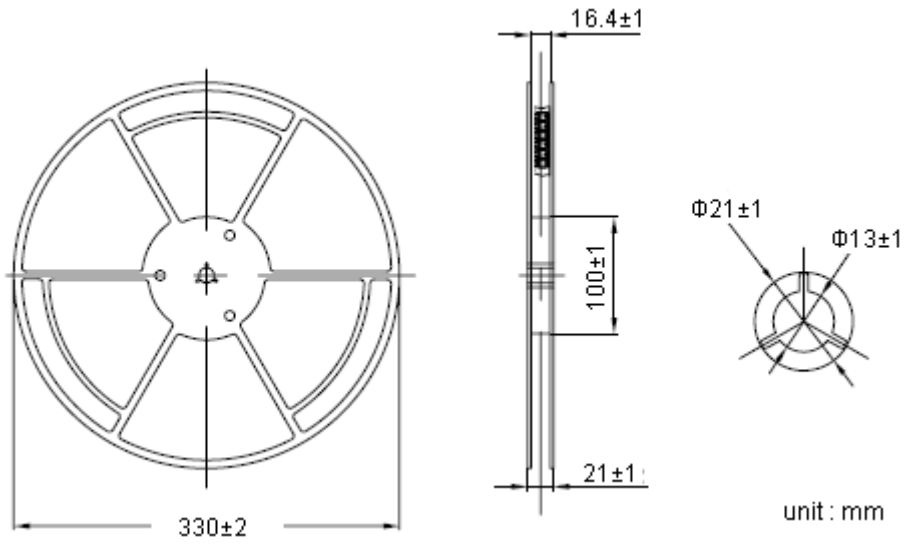
Power Derating Curve



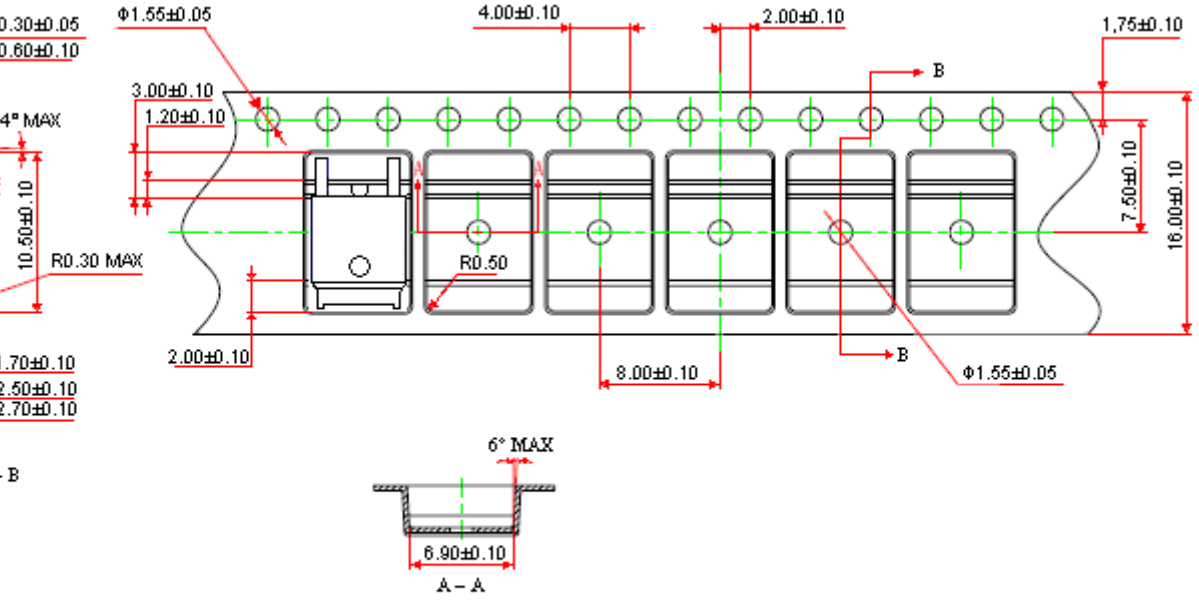
Power Derating Curve



Reel Dimension

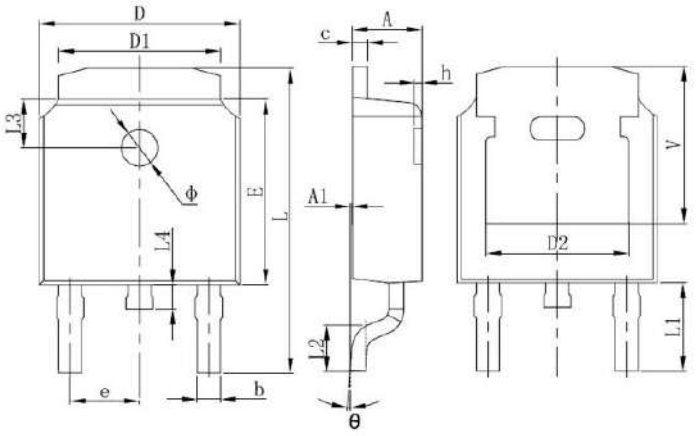


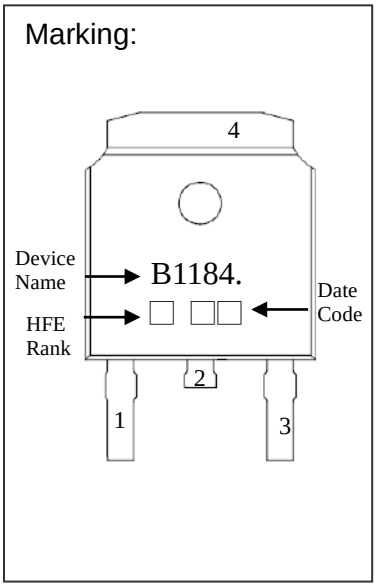
Carrier Tape Dimension



Notes:
1. 10 sprocket hole pitch cumulative tolerance ±0.2.
2. Camber not to exceed 1mm in 100mm.
3. Material: conductive black polystyrene, antistatic coated : 10^{5} Ω/□~ 10^{11} Ω/□ unit : mm

TO-252 Dimension





3-Lead TO-252 Plastic Surface Mount Package

Style: Pin 1.Base 2.Collector 3.Emitter 4.Collector

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.087	0.094	2.200	2.400	e	0.086	0.094	2.186	2.386
A1	0.000	0.005	0.000	0.127	e1	0.172	0.188	4.372 [4]	4.772
B	0.039	0.048	0.990	1.210	H	0.163 REF		4.140 REF	
b	0.026	0.034	0.660	0.860	K	0.190 REF		4.830 REF	
b1	0.026	0.034	0.660	0.860	L	0.386	0.409	9.800	10.400
C	0.018	0.023	0.460	0.580	L1	0.114 REF		2.900 REF	
C1	0.018	0.023	0.460	0.580	L2	0.055	0.067	1.400	1.700
D	0.256	0.264	6.500	6.700	L3	0.024	0.039	0.600	1.000
D1	0.201	0.215	5.100	5.460	P	0.026 REF		0.650 REF	
E	0.236	0.244	6.000	6.200	V	0.211 REF		5.350 REF	