

General Purpose NPN Epitaxial Planar Transistor

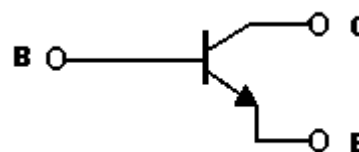
Features:

- High breakdown voltage, $BV_{CEO} \geq 200V$
- Large continuous collector current capability
- Low collector saturation voltage
- Pb-free lead plating and halogen-free package

TO-252(DPAK)



BV_{CEO}	200V
I_C	1A



Ordering Information

Device	Package	Shipping
KJC2881	TO-252 (RoHS compliant package)	2500 pcs / Tape & Reel

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-Base Voltage	V _{CB0}	300	V
Collector-Emitter Voltage	V _{CEO}	200	V
Emitter-Base Voltage	V _{EB0}	6	V
Collector Current	I _C	1	A
Base Current	I _B	0.2	A
Power Dissipation @T _A =25°C	P _D	1	W
Power Dissipation @T _C =25°C		10	W
Operating Junction and Storage Temperature Range	T _j ; T _{stg}	150	°C

Thermal Data

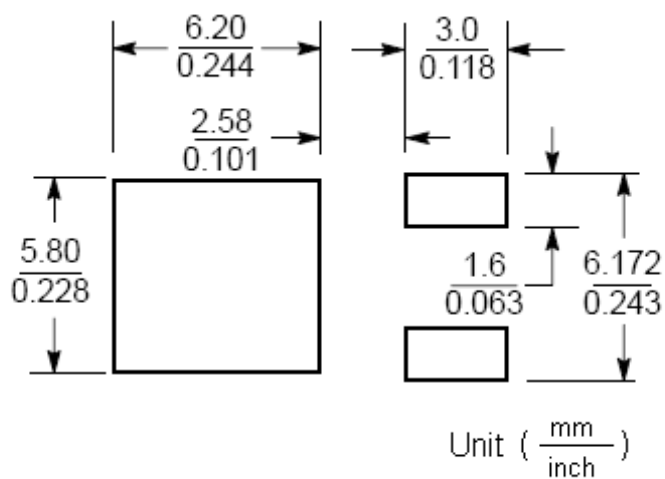
Parameter	Symbol	Value	Unit
Thermal Resistance, Junction-to-case, max	R _{th,j-c}	12.5	°C/W
Thermal Resistance, Junction-to-ambient, max	R _{th,j-a}	125	°C/W

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CB0}	300	-	-	V	I _C =10μA
BV _{CEO}	200	-	-	V	I _C =10mA
BV _{EB0}	6	-	-	V	I _E =10μA
I _{CB0}	-	-	100	nA	V _{CB} =300V
I _{EB0}	-	-	100	nA	V _{EB} =6V
*V _{CE(sat)}	-	0.2	0.4	V	I _C =500mA, I _B =50mA
*V _{CE(sat)}	-	-	0.6	V	I _C =700mA, I _B =35mA
*V _{BE(sat)}	-	-	1	V	I _C =500mA, I _B =50mA
*V _{BE(on)}	-	-	1	V	V _{CE} =5V, I _C =500mA
*h _{FE} 1	120	-	-	-	V _{CE} =5V, I _C =50mA
*h _{FE} 2	160	-	320	-	V _{CE} =5V, I _C =100mA
*h _{FE} 3	30	-	-	-	V _{CE} =5V, I _C =700mA
f _T	-	120	-	MHz	V _{CE} =5V, I _C =100mA
Cob	-	-	30	pF	V _{CB} =10V, I _E =0A, f=1MHz

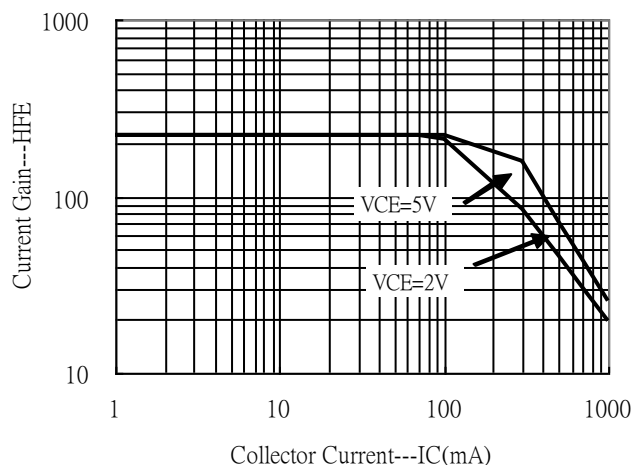
*Pulse Test: Pulse Width ≤300μs, Duty Cycle≤2%

Recommended soldering footprint

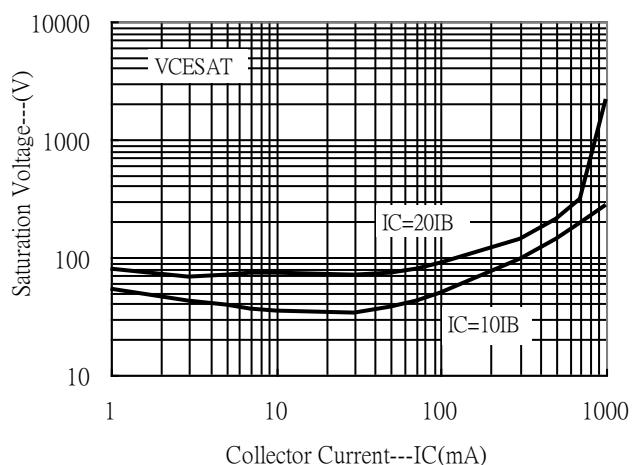


Typical Characteristics

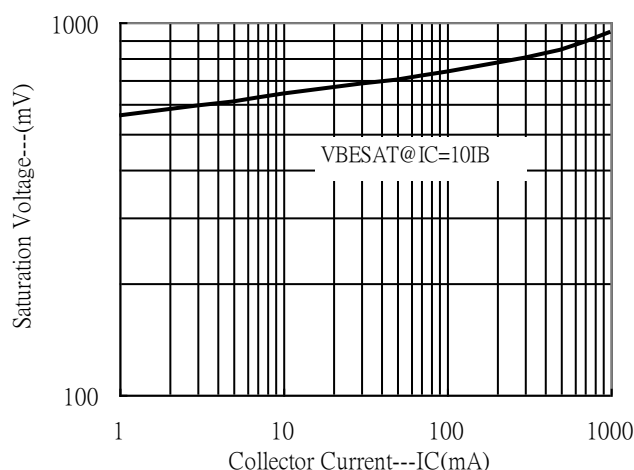
Current Gain vs Collector Current



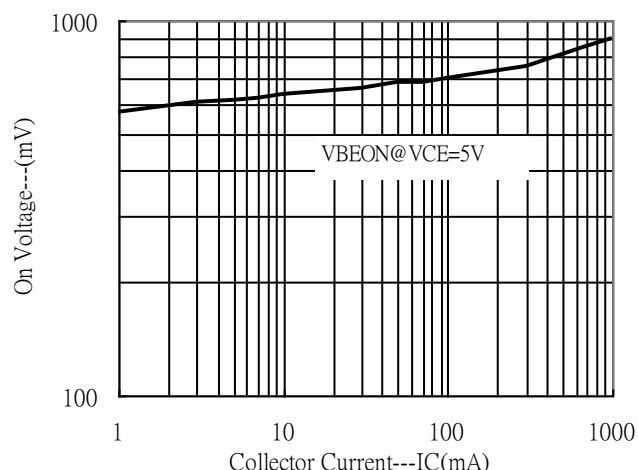
Saturation Voltage vs Collector Current



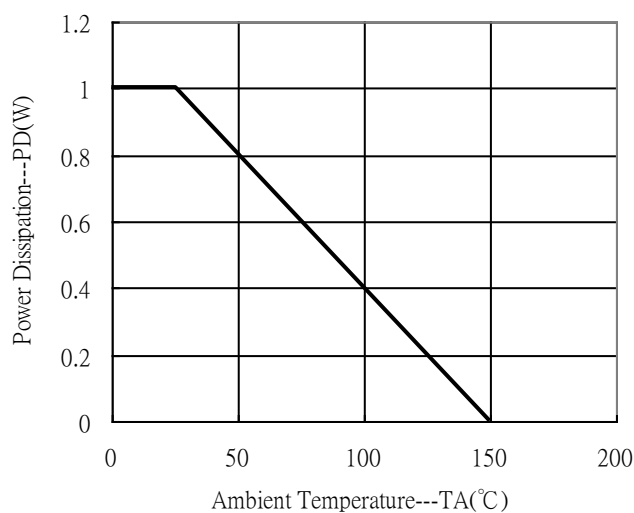
Saturation Voltage vs Collector Current



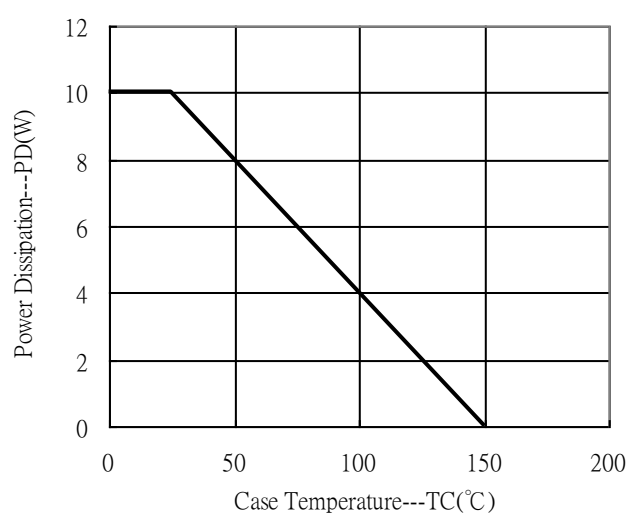
On Voltage vs Collector Current



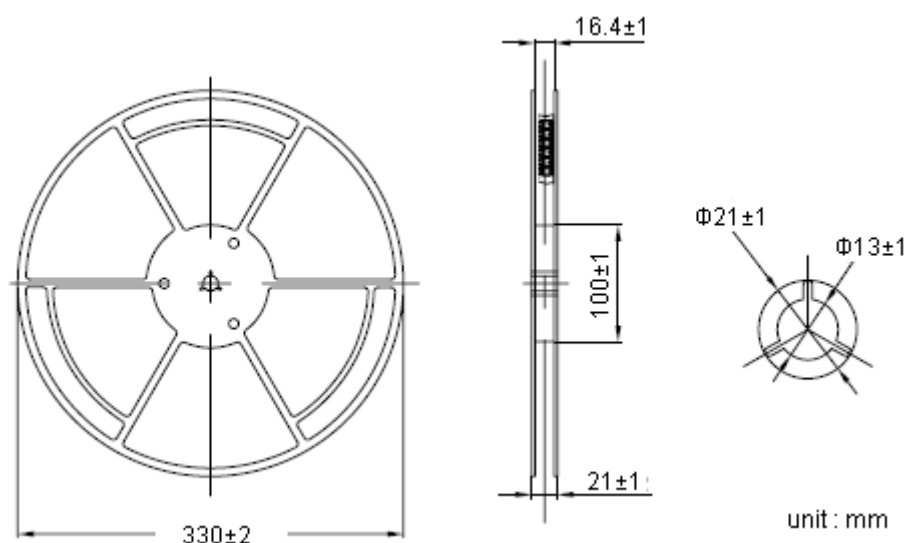
Power Derating Curve



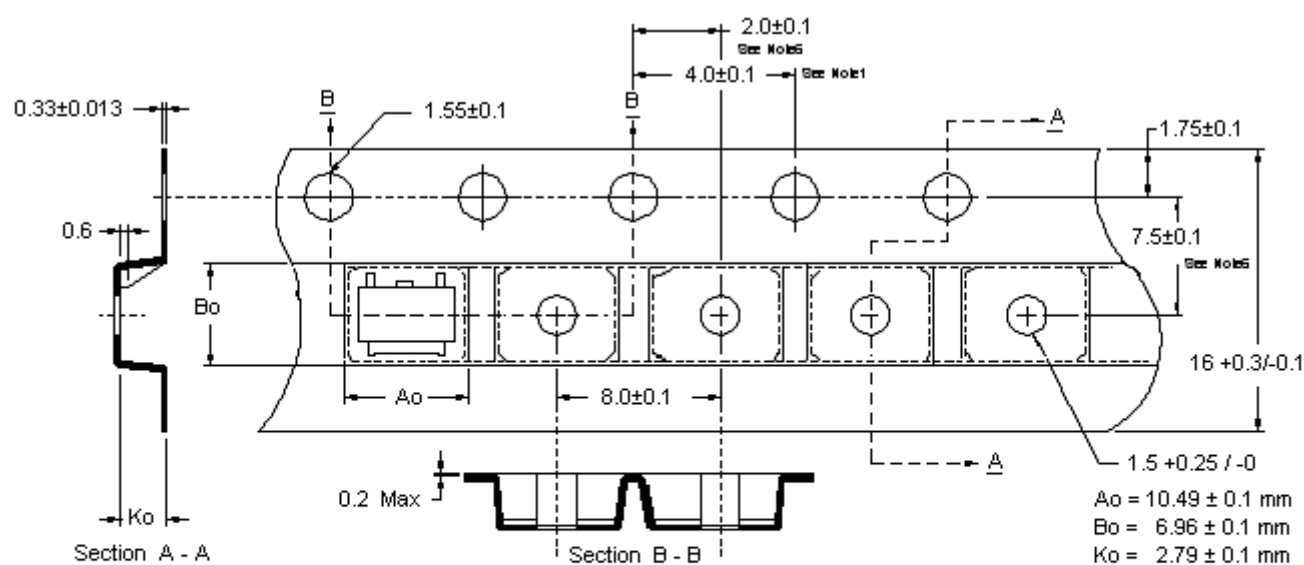
Power Derating Curve



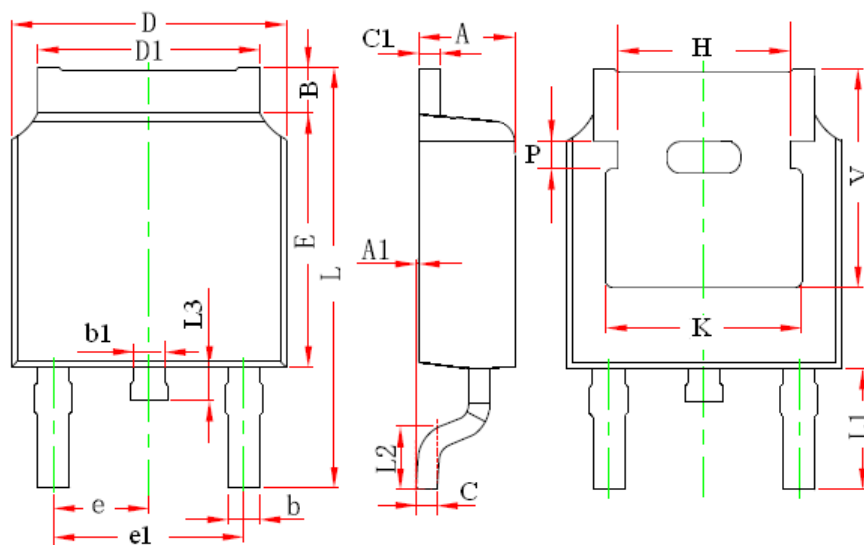
Reel Dimension



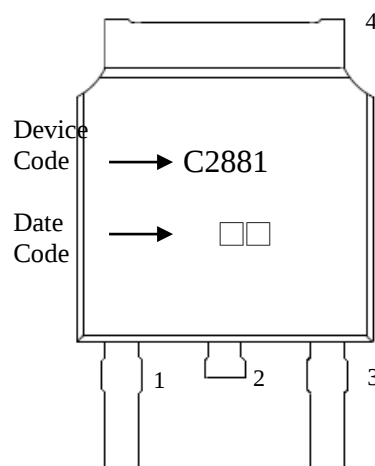
Carrier Tape Dimension



TO-252 Dimension



Marking:



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	4.772
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