

Low Vcesat NPN Epitaxial Planar Transistor

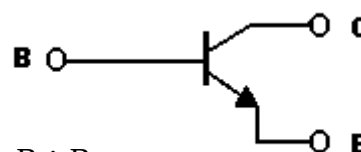
Features:

- Low $V_{CE(sat)}$, typically 0.25V at $I_C / I_B = 2A / 0.2A$
- Excellent current gain characteristics
- Pb-free lead plating and halogen-free package

TO-252(DPAK)



BV_{CEO}	50V
I_C	3A



B : Base
 C : Collector
 E : Emitter

Ordering Information

Device	Package	Shipping
KJ882	TO-252 (Pb-free lead plating package)	2500 pcs / tape & reel

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V _{CBO}	50	V
Collector-Emitter Voltage	V _{CEO}	50	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C (DC)	3	A
	I _C (Pulse)	7 *1	A
Power Dissipation	P _d (Ta=25°C)	1	W
	P _d (Tc=25°C)	10	
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~+150	°C

Note : *1. Single Pulse Pw ≤ 350us, Duty ≤ 2%.

Thermal Performance

Parameter	Symbol	Limit	Unit
Thermal Resistance, Junction-to-Ambient, max	R _{θJA}	125	°C/W
Thermal Resistance, Junction-to-Case, max	R _{θJC}	12.5	

Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CBO}	50	-	-	V	I _C =50μA, I _E =0
BV _{CEO}	50	-	-	V	I _C =1mA, I _B =0
BV _{EBO}	5	-	-	V	I _E =50μA, I _C =0
I _{CBO}	-	-	1	μA	V _{CB} =30V, I _E =0
I _{EBO}	-	-	1	μA	V _{EB} =3V, I _C =0
*V _{CE(sat)}	-	0.25	0.5	V	I _C =2A, I _B =0.2A
*V _{BE(sat)}	-	-	2	V	I _C =2A, I _B =0.2A
*h _{FE1}	150	-	-	-	V _{CE} =2V, I _C =20mA
*h _{FE2}	180	-	560	-	V _{CE} =2V, I _C =1A
f _T	-	90	-	MHz	V _{CE} =5V, I _C =0.1A, f=100MHz
C _{ob}	-	13	-	pF	V _{CB} =10V, f=1MHz

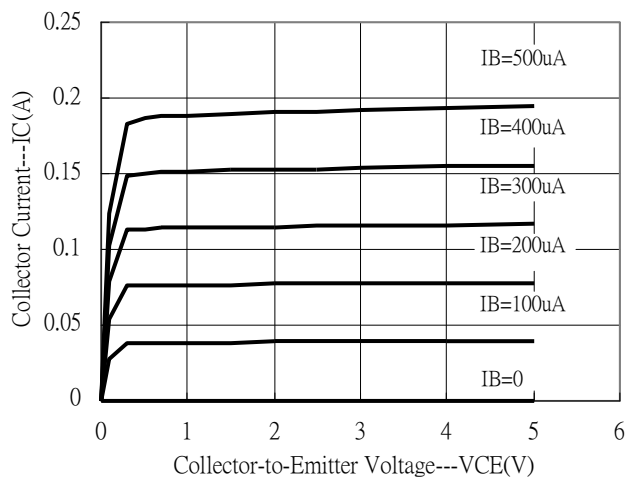
*Pulse Test : Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

Classification Of h_{FE2}

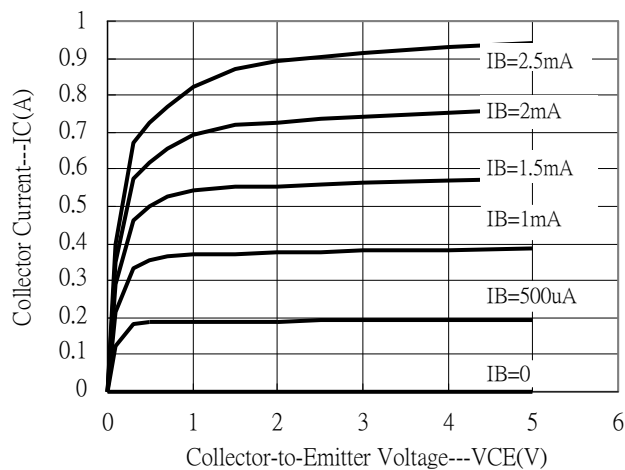
Rank	P	E
Range	180~390	270~560

Typical Characteristics

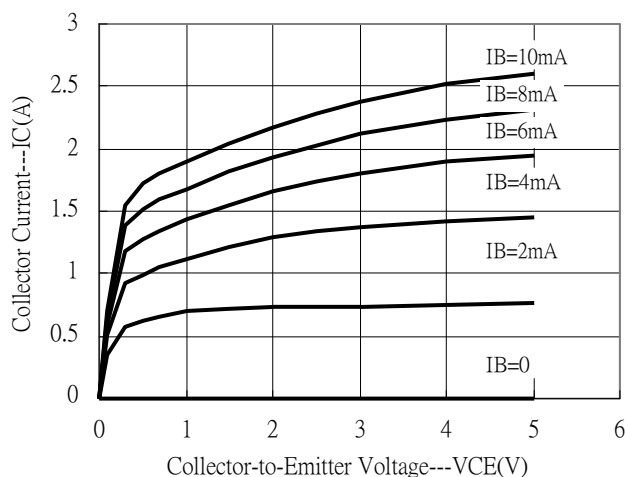
Emitter Grounded Output Characteristics



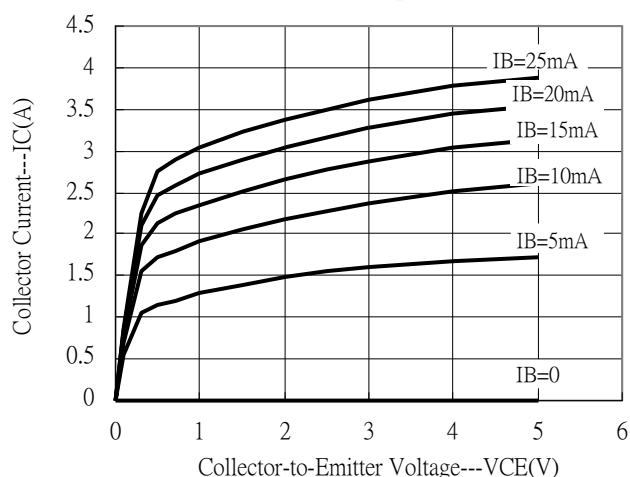
Emitter Grounded Output Characteristics



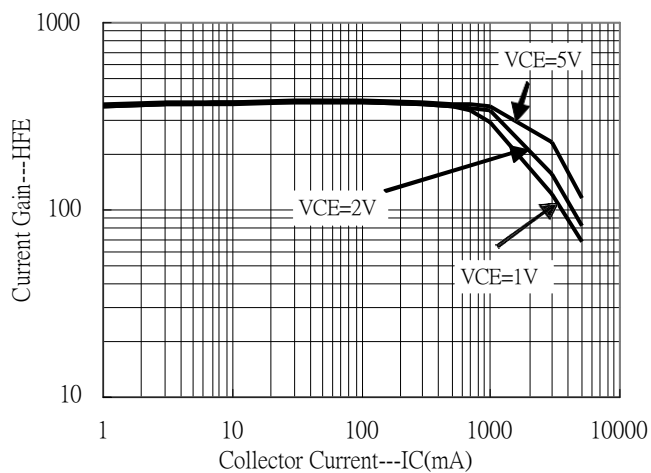
Emitter Grounded Output Characteristics



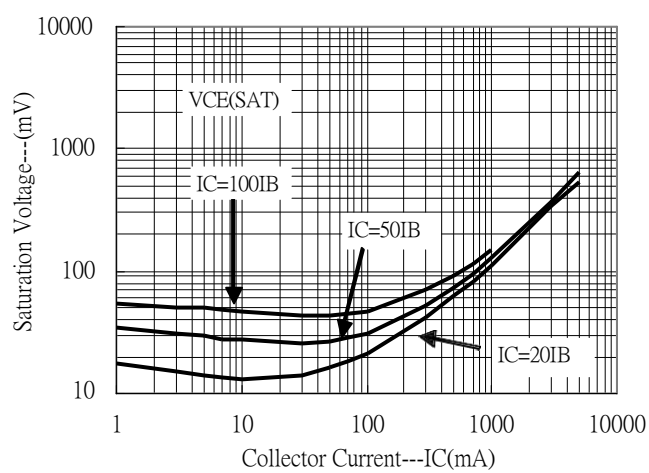
Emitter Grounded Output Characteristics



Current Gain vs. Collector Current

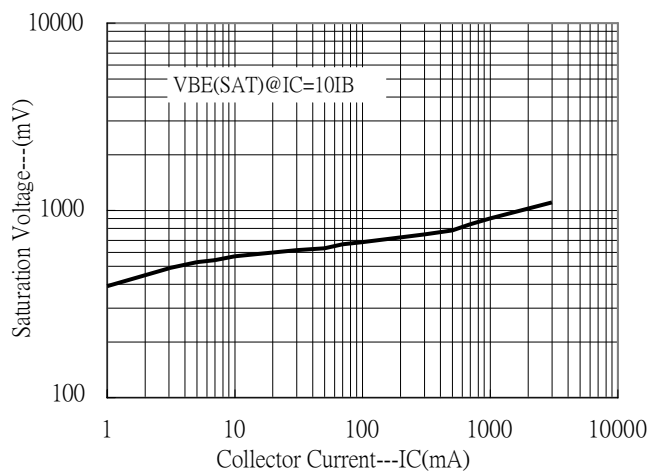


Saturation Voltage vs. Collector Current

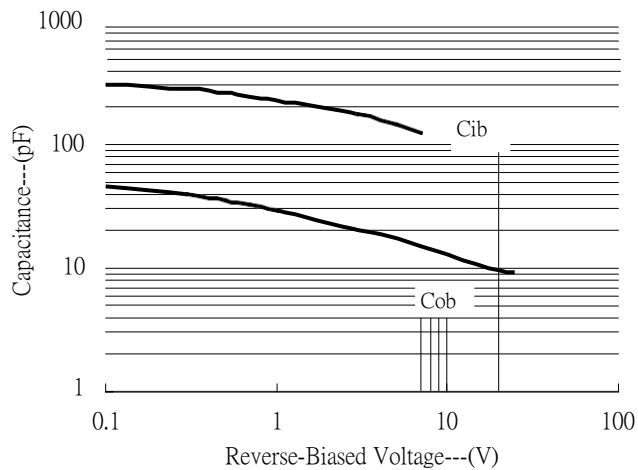


Typical Characteristics(Cont.)

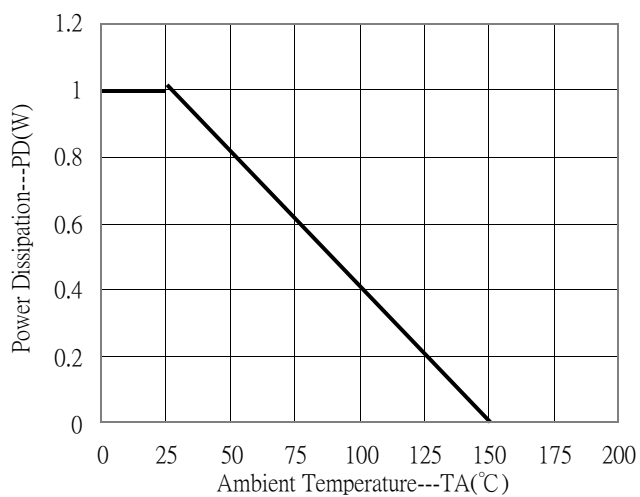
Saturation Voltage vs Collector Current



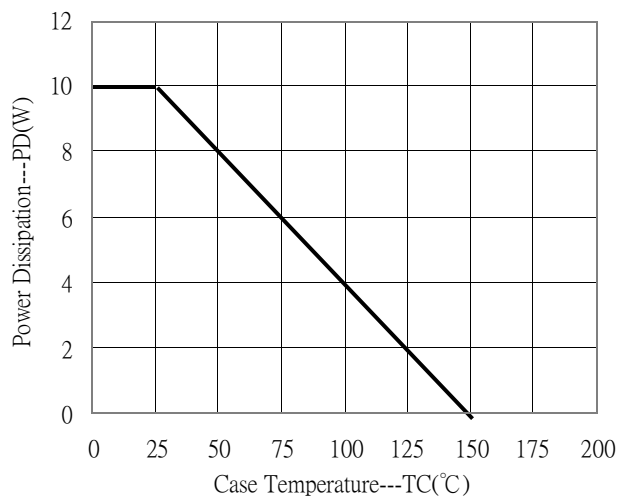
Capacitance vs Reverse-Biased Voltage



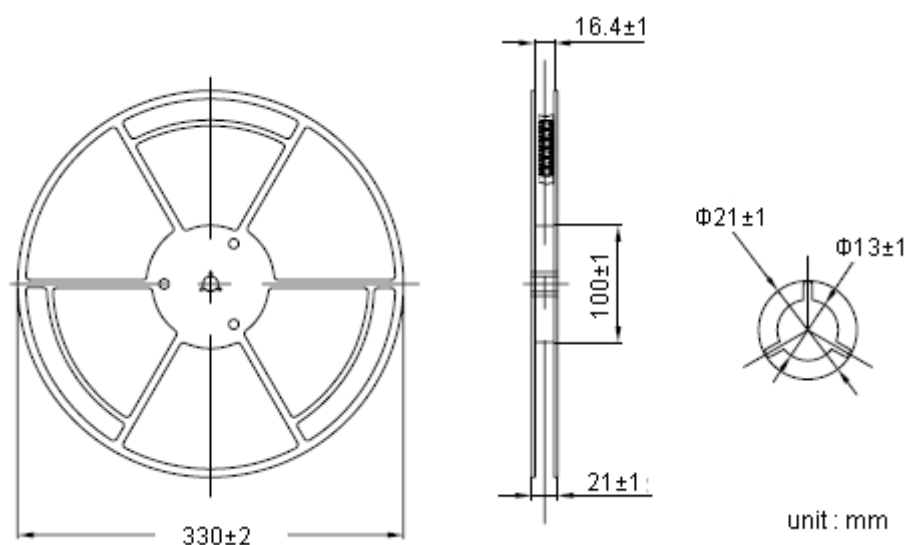
Power Derating Curve



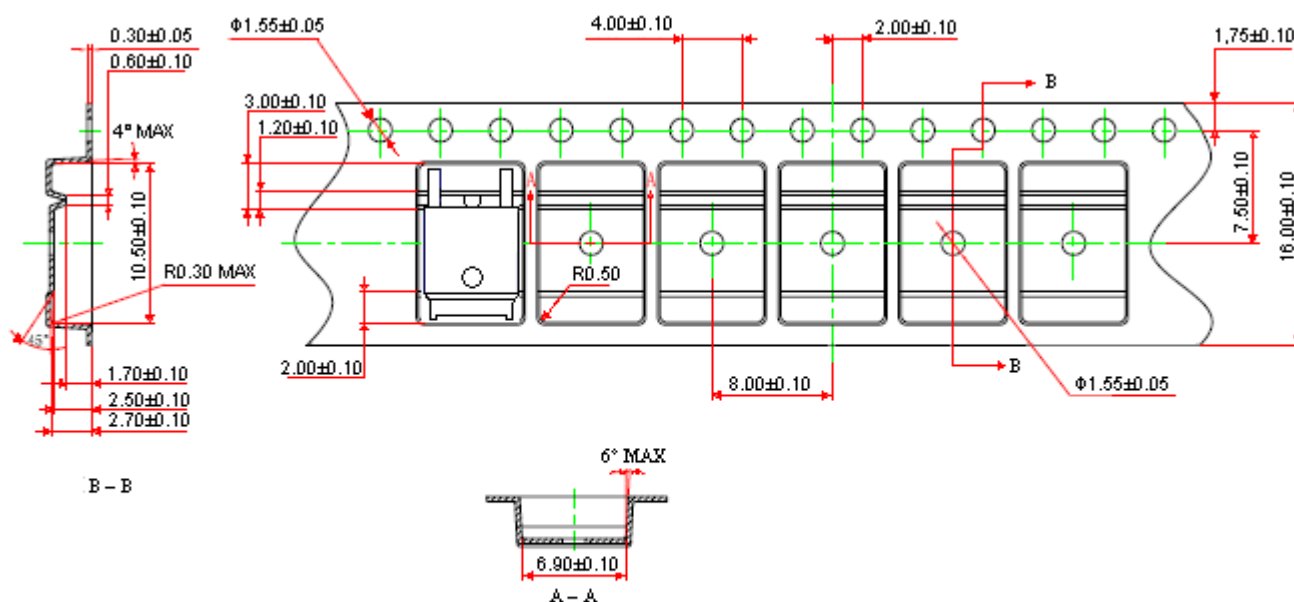
Power Derating Curve



Reel Dimension



Carrier Tape Dimension

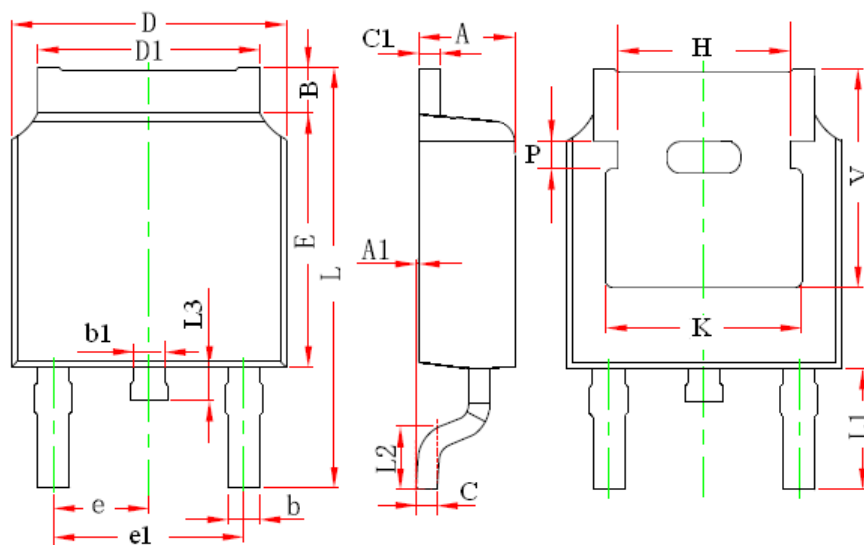


Notes:

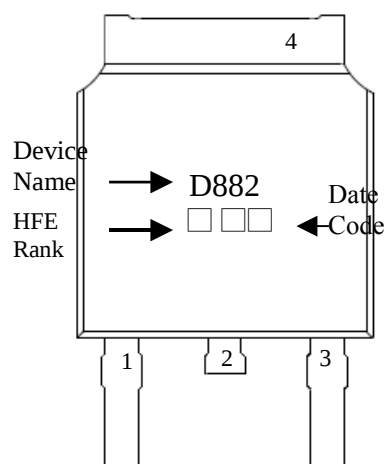
1. 10 sprocket hole pitch cumulative tolerance ± 0.2 .
2. Camber not to exceed 1mm in 100mm.
3. Material: conductive black polystyrene, antistatic coated : $10^5 \Omega/\square \sim 10^{11} \Omega/\square$

unit : mm

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