

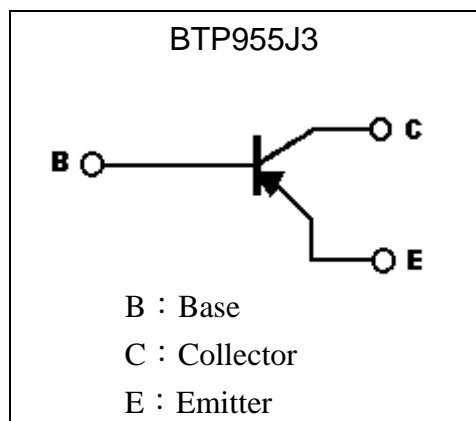
PNP Epitaxial Planar High Current (High Performance) Transistor

BTP955J3

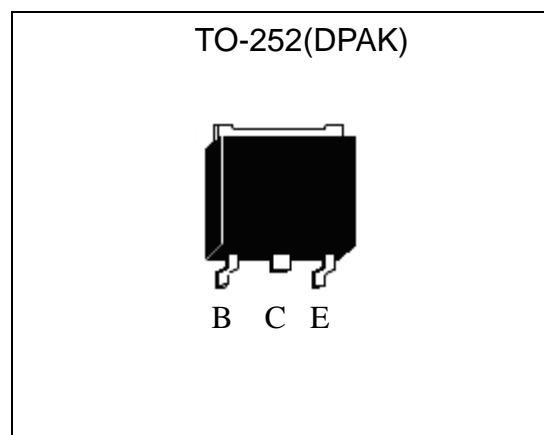
Features

- 4 Amps continuous current, up to 10 Amps peak current
- Very low saturation voltage
- Excellent gain characteristics specified up to 3 Amps
- Ptot=3Watts
- Extremely low equivalent on resistance, $R_{CE(SAT)}=90m\Omega$ at 3A
- Pb-free package

Symbol

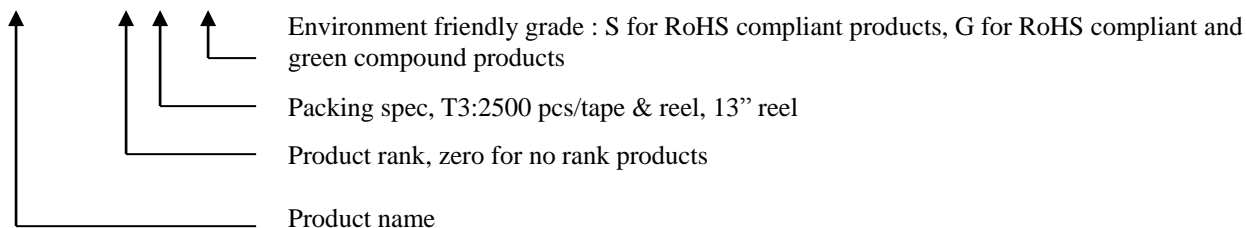


Outline



Ordering Information

Device	Package	Shipping
BTP955J3-0-T3-G	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 _{CB0}	-120	V
Collector-Emitter Voltage	V _{CEO}	-100	V
Emitter-Base Voltage	V _{EBO}	-6	V
Continuous Collector Current	I _C	-4	A
Peak Collector Current	I _{CP}	-10 (Note 1)	A
Base Current	I _B	-1 (Note 2)	A
Power Dissipation	Pd	@T _A =25°C	1.75
		@T _C =25°C	20
Operating and Storage Temperature Range	T _j ; T _{stg}	-55 ~ +150	°C

Note : 1. Single Pulse , Pw ≤ 380μs, Duty ≤ 2%.
 2. When mounted on a PCB with the minimum pad size.

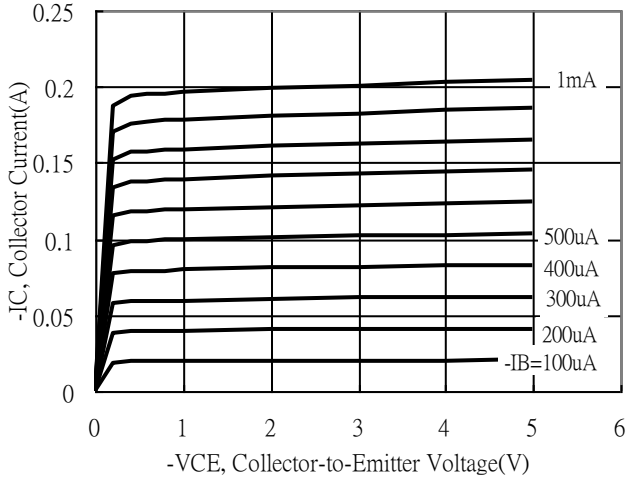
Characteristics (Ta=25°C, unless otherwise specified)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BV _{CB0}	-120	-	-	V	I _C =-100μA
BV _{CER}	-100	-	-	V	I _C =-1μA, R _{BE} ≤1kΩ
*BV _{CEO}	-100	-	-	V	I _C =-10mA
BV _{EBO}	-6	-	-	V	I _E =-100μA
IC _{B0}	-	-	-50	nA	V _{CB} =-100V
IC _{ER}	-	-	-50	nA	V _{CE} =-100V, R _{BE} ≤1kΩ
IE _{B0}	-	-	-10	nA	V _{EB} =-6V
*V _{CE(sat)1}	-	-40	-60	mV	I _C =-100mA, I _B =-5mA
*V _{CE(sat)2}	-	-70	-120	mV	I _C =-500mA, I _B =-50mA
*V _{CE(sat)3}	-	-110	-150	mV	I _C =-1A, I _B =-100mA
*V _{CE(sat)4}	-	-270	-370	mV	I _C =-3A, I _B =-300mA
*V _{BE(sat)}	-	-930	-1110	mV	I _C =-3A, I _B =-300mA
*V _{BE(on)}	-	-830	-950	mV	V _{CE} =-5V, I _C =-3A
h _{FE1}	100	200	-	-	V _{CE} =-5V, I _C =-10mA
h _{FE2}	100	200	300	-	V _{CE} =-5V, I _C =-1A
*h _{FE3}	75	140	-	-	V _{CE} =-5V, I _C =-3A
*h _{FE4}	-	10	-	-	V _{CE} =-5V, I _C =-10A
f _T	-	110	-	MHz	V _{CE} =-10V, I _C =-100mA, f=50MHz
C _{ob}	-	40	-	pF	V _{CB} =-20V, f=1MHz
ton	-	68	-	ns	I _C =-1A, I _{B1} =-100mA, I _{B2} =100mA, V _{CC} =-50V
toff	-	1030	-	ns	

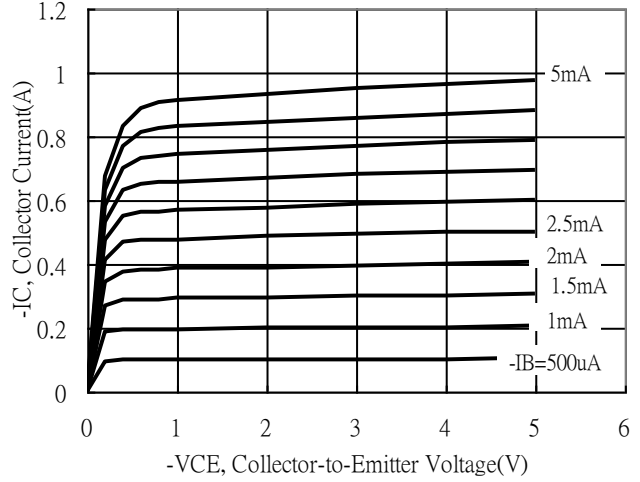
*Pulse Test: Pulse Width ≤ 380μs, Duty Cycles ≤ 2%

Typical Characteristics

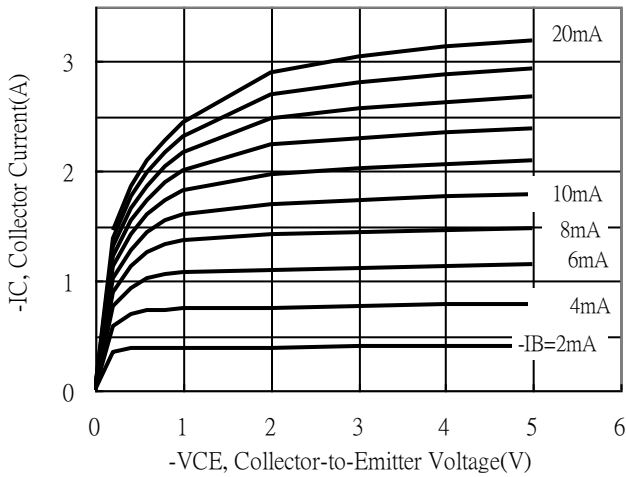
Emitter Grounded Output Characteristics



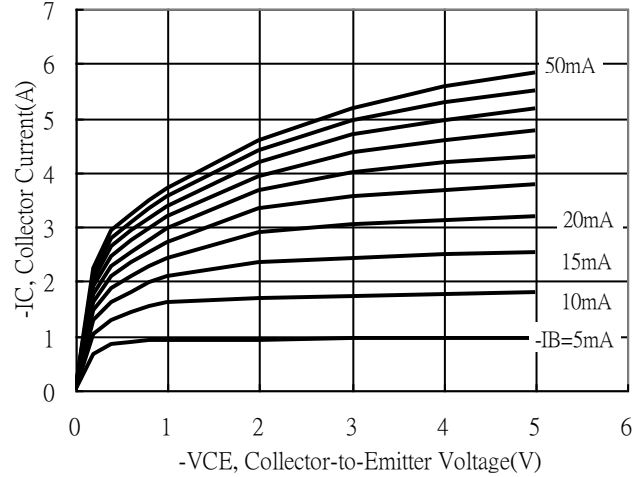
Emitter Grounded Output Characteristics



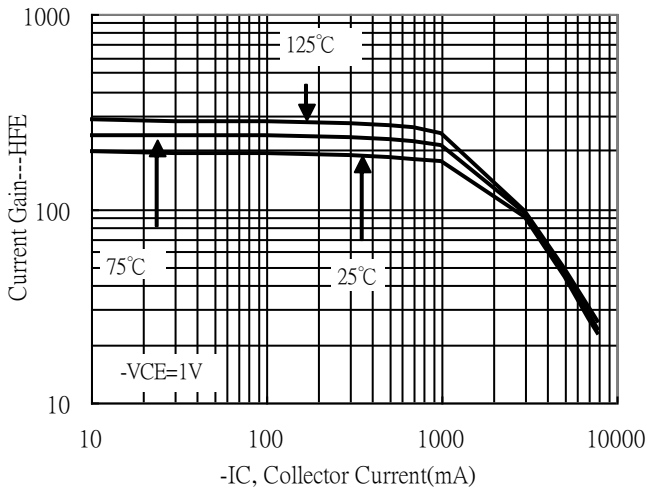
Emitter Grounded Output Characteristics



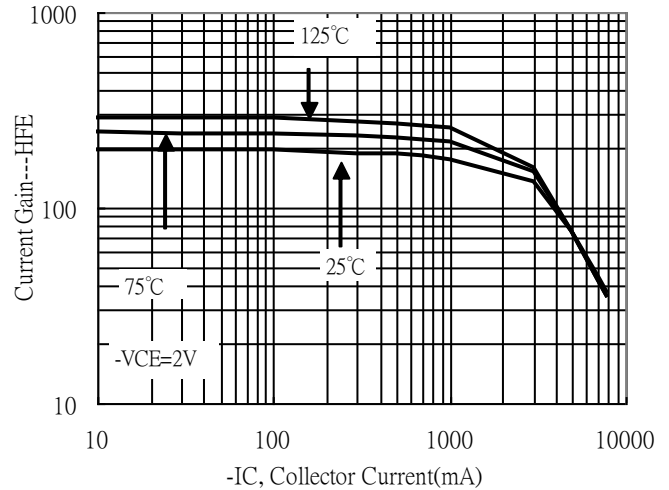
Emitter Grounded Output Characteristics



Current Gain vs Collector Current



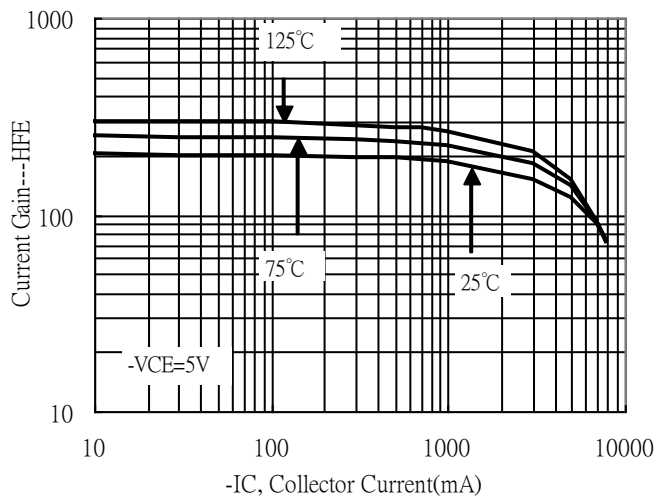
Current Gain vs Collector Current



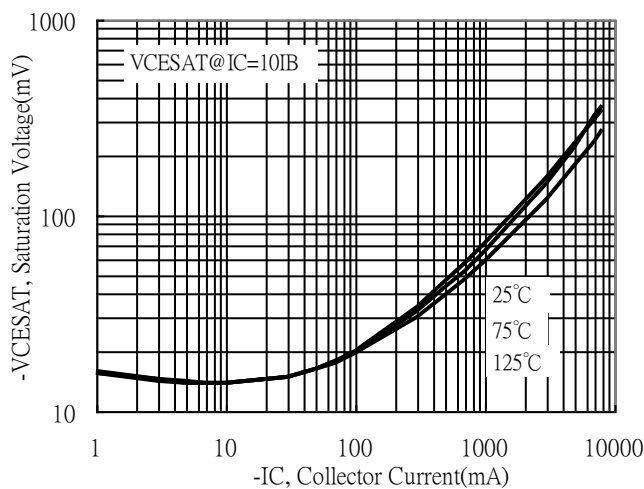


Typical Characteristics(Cont.)

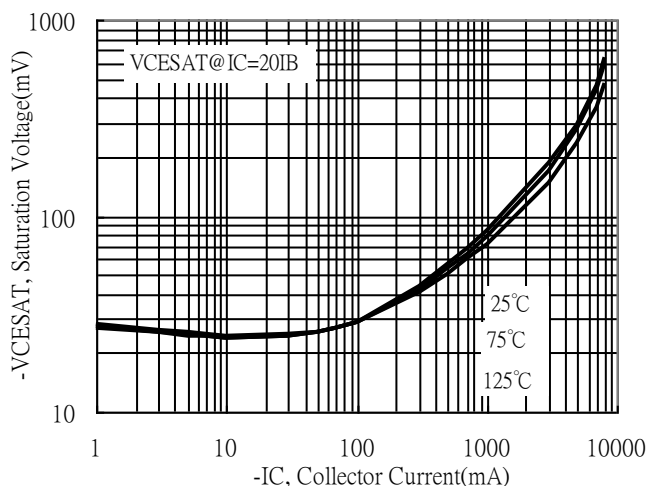
Current Gain vs Collector Current



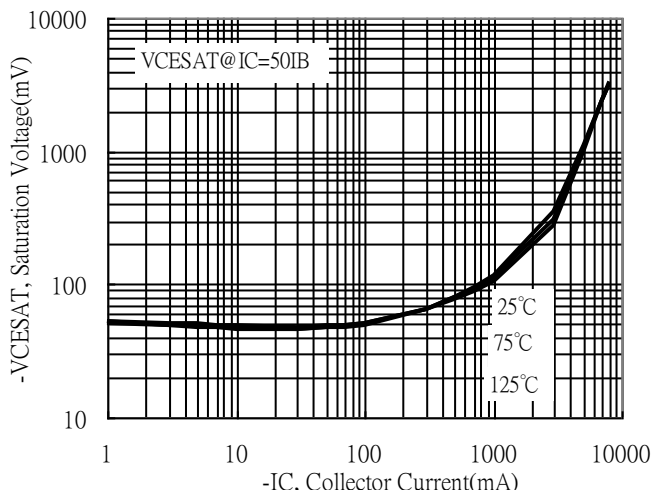
Saturation Voltage vs Collector Current



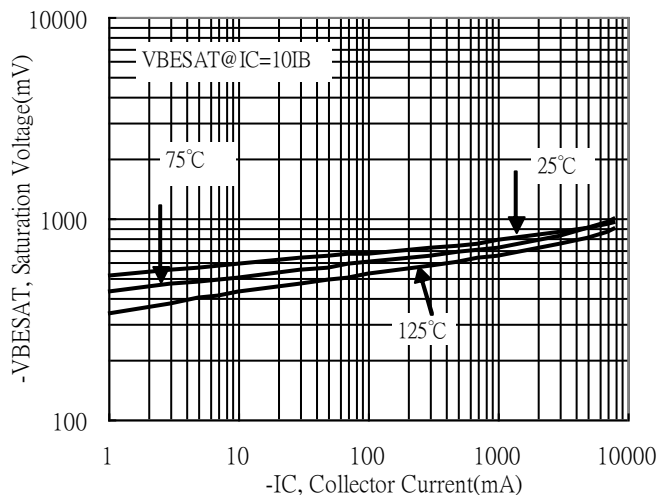
Saturation Voltage vs Collector Current



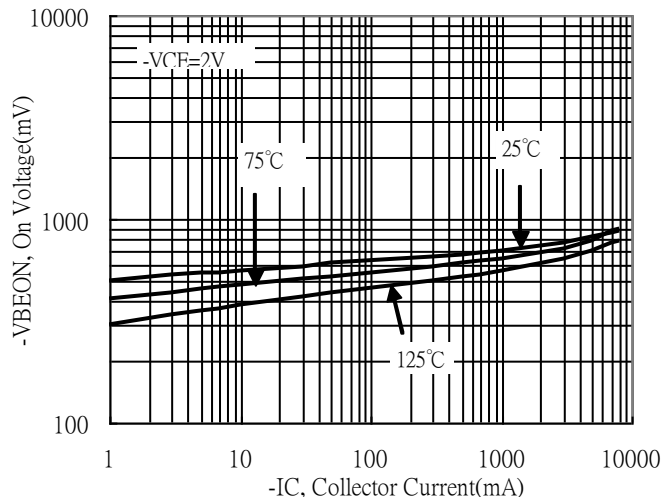
Saturation Voltage vs Collector Current



Saturation Voltage vs Collector Current

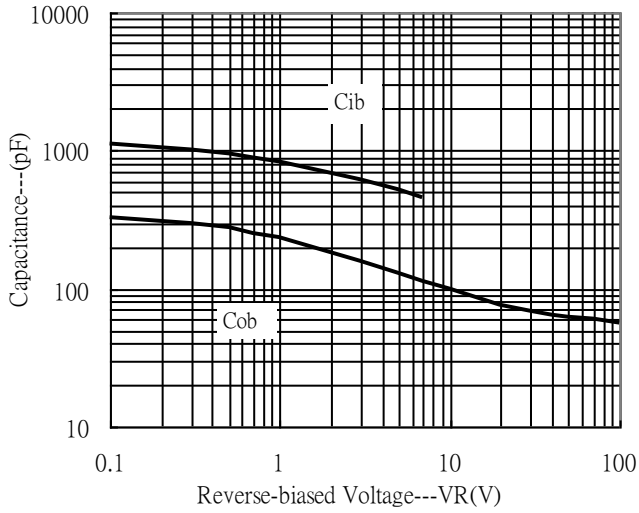


On Voltage vs Collector Current

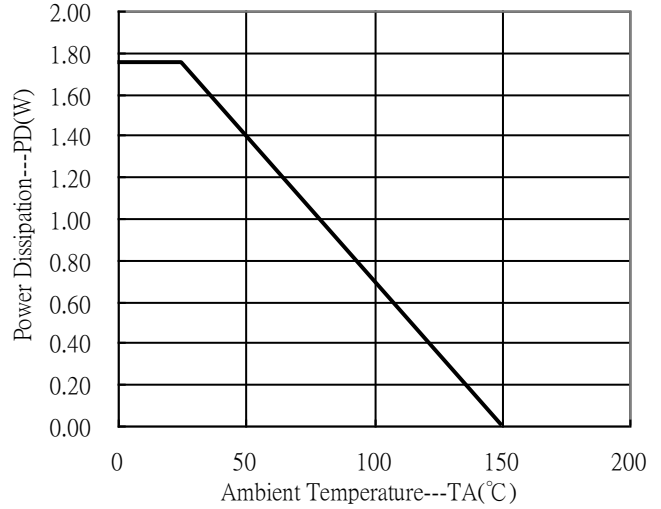


Typical Characteristics(Cont.)

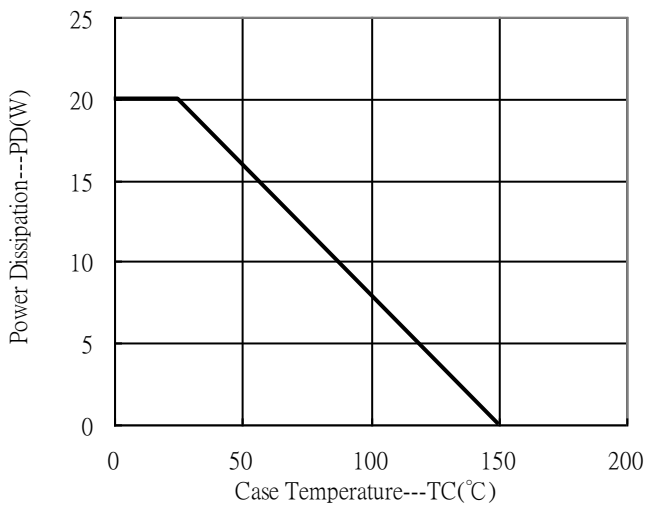
Capacitance vs Reverse-biased Voltage



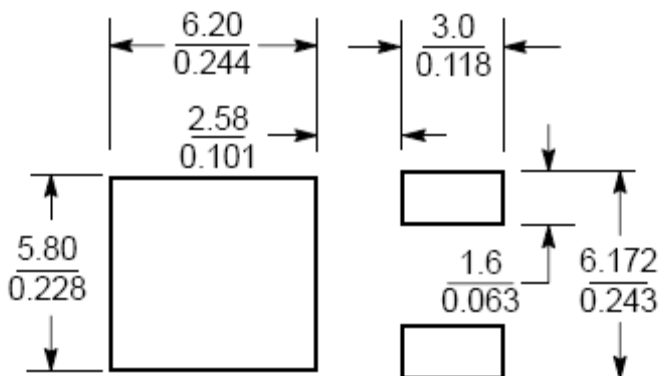
Power Derating Curve



Power Derating Curve

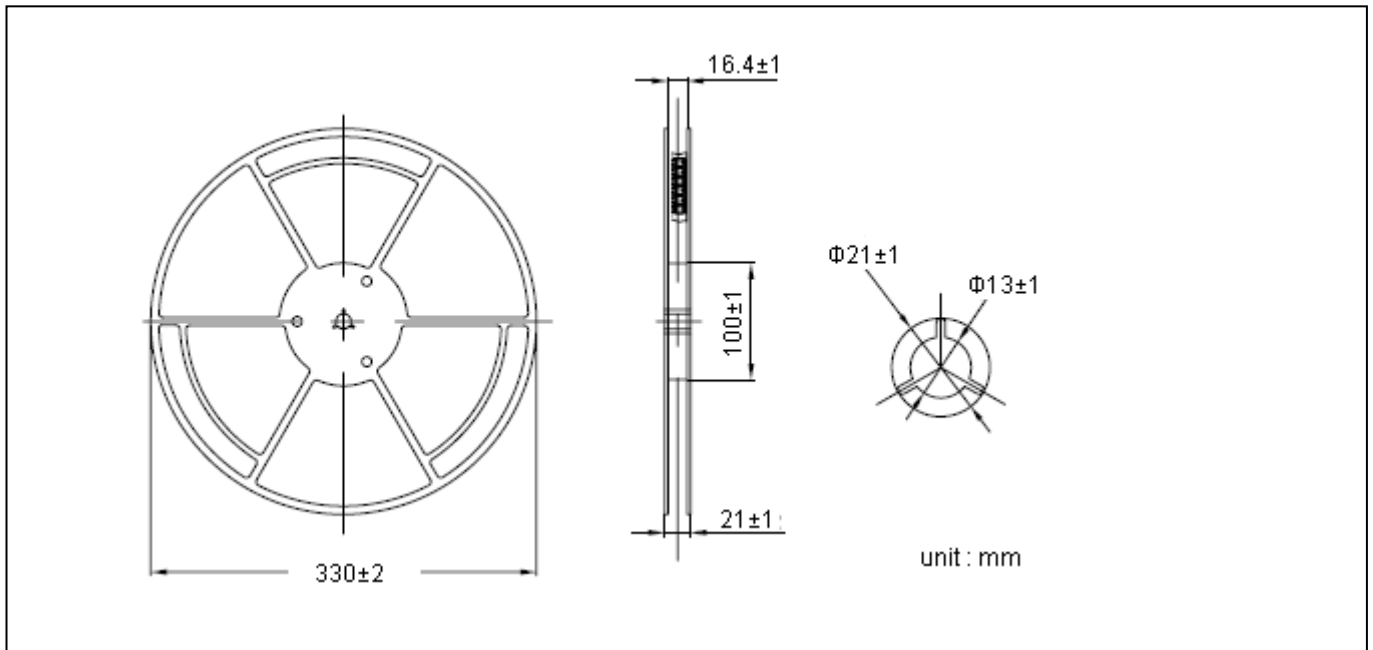


Recommended soldering footprint

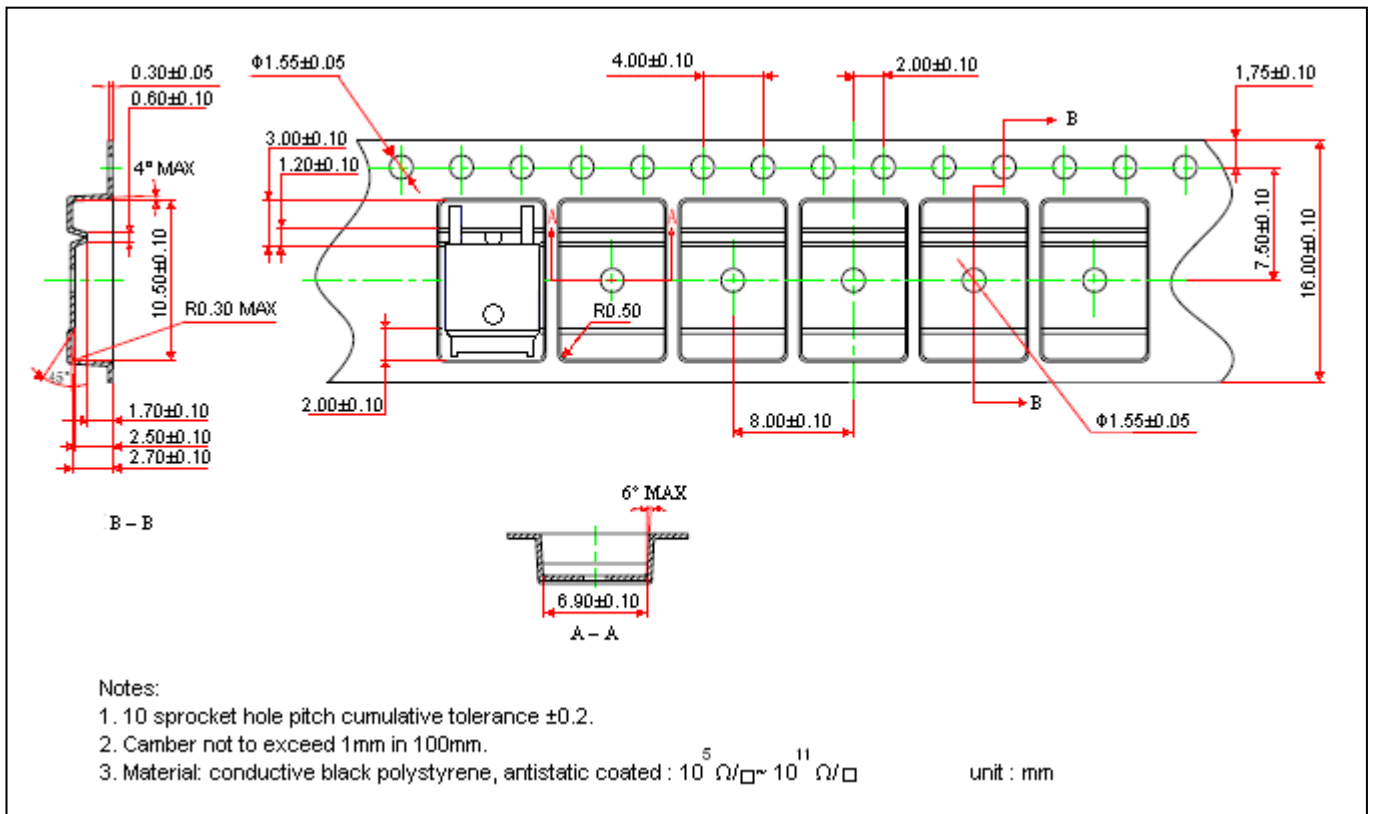


Unit ($\frac{\text{mm}}{\text{inch}}$)

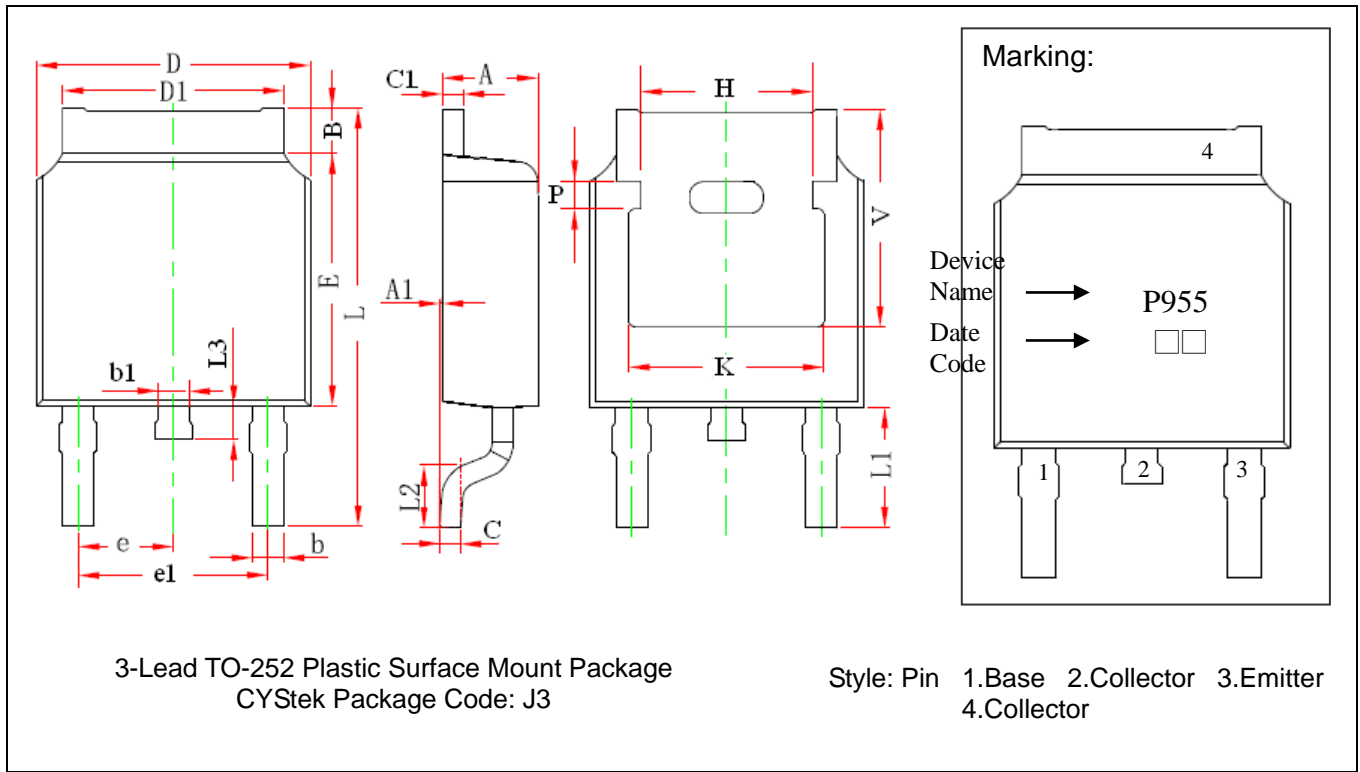
Reel Dimension



Carrier Tape Dimension



TO-252 Dimension



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

Notes: 1.Controlling dimension: millimeters.
 2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead : Pure tin plated.
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0.

Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of CYStek.
- CYStek reserves the right to make changes to its products without notice.
- CYStek **semiconductor products are not warranted to be suitable for use in Life-Support Applications, or systems.**
- CYStek assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.