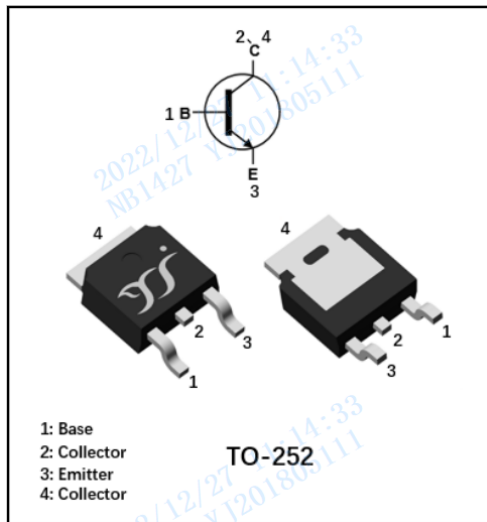


## NPN Transistor



### Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1

### Applications

- Complement to MJD127
- High DC Current Gain

### Mechanical Data

- Package: TO-252
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Unit Weight: 0.32g

### ■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Value
Device marking code			MJD122
Collector-base voltage	$V_{CBO}$	V	100
Collector-emitter voltage	$V_{CEO}$	V	100
Emitter-base voltage	$V_{EBO}$	V	5
Collector current	$I_C$	A	8
Power dissipation (*)	$P_D$	W	1.5
Thermal resistance, junction-to-ambient (*)	$R_{thJA}$	°C/W	83.3
Junction temperature	$T_j$	°C	-55 to +150
Storage temperature	$T_{STG}$	°C	-55 to +150

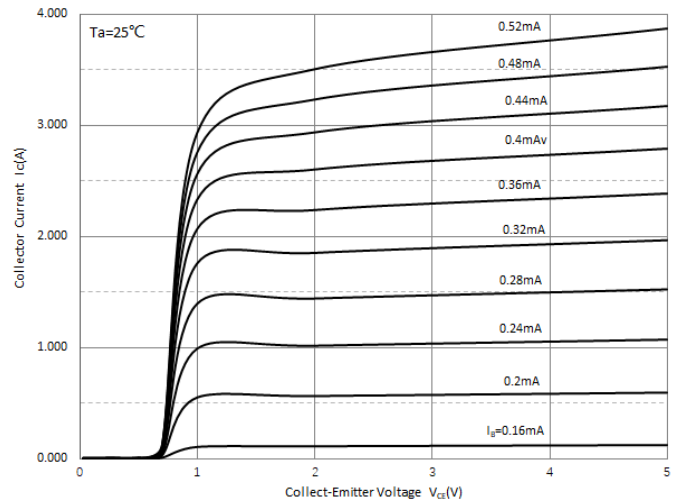
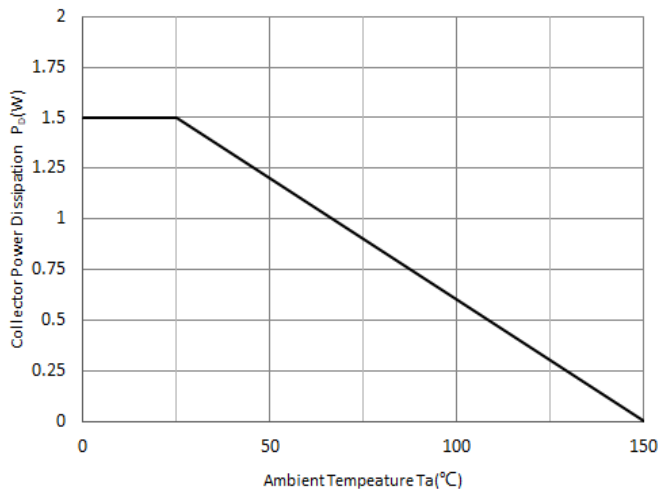
(\*) Device mounted on FR-4 PCB(25.4\*25.4\*1.1mm)mounting pad.



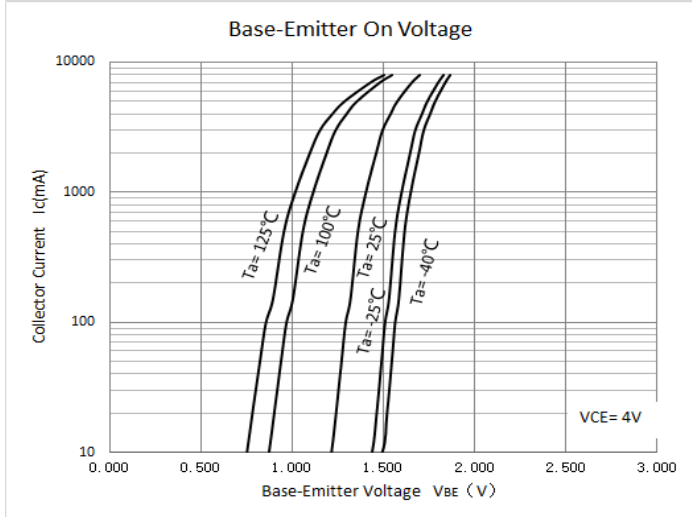
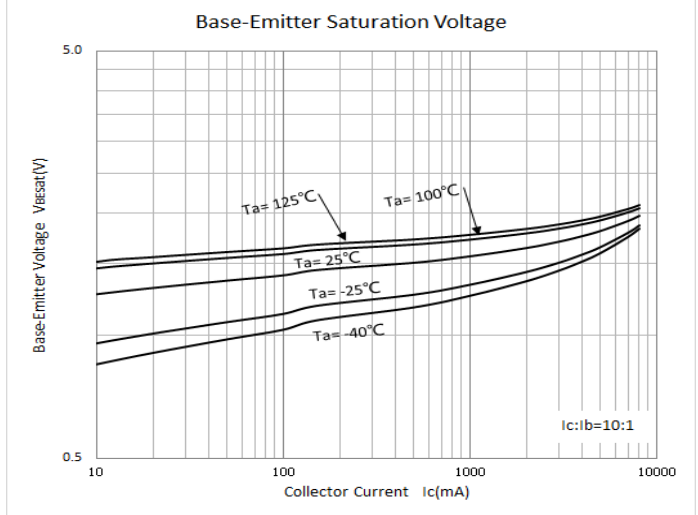
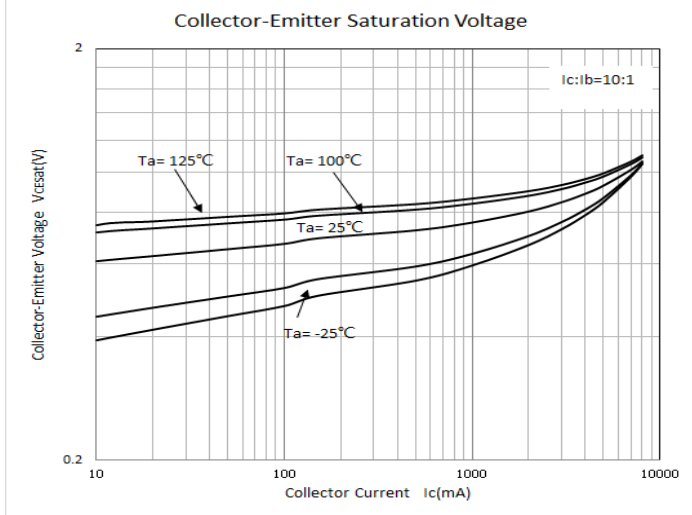
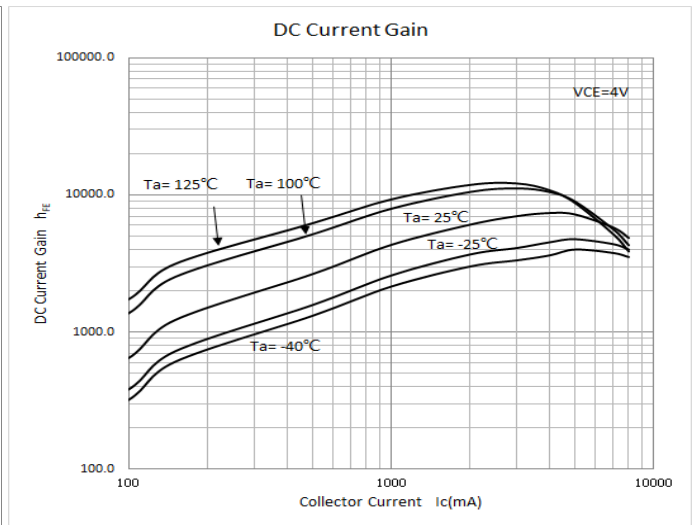
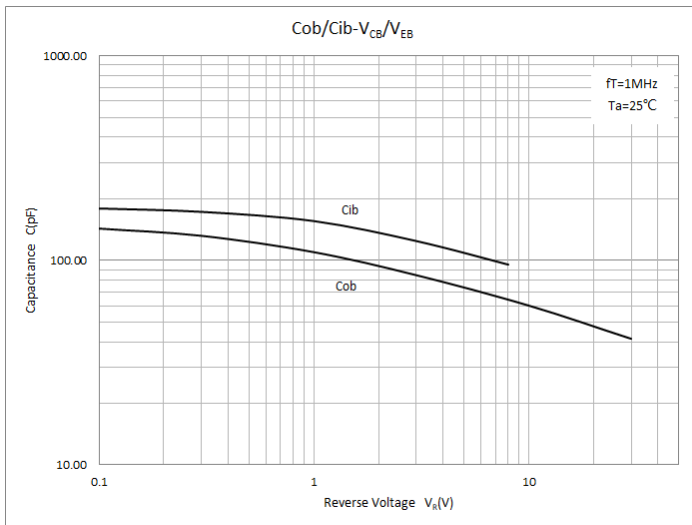
## ■ Electrical Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	$I_C = 1mA, I_E = 0$	100		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	$I_C = 30mA, I_B = 0$	100		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E = 3mA, I_C = 0$	5		
Collector-base cut-off current	$I_{CBO}$	uA	$V_{CB} = 100V$			10
Collector cutoff current	$I_{CEO}$	uA	$V_{CE} = 50V$			10
Emitter-base cut-off current	$I_{EBO}$	mA	$V_{EB} = 5V$			2
DC current gain	$h_{FE}$		$V_{CE} = 4V, I_C = 4A$	1000		12000
			$V_{CE} = 4V, I_C = 8A$	100		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C = 4A, I_B = 16mA$			2.0
			$I_C = 8A, I_B = 80mA$			4.0
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	$I_C = 8A, I_B = 80mA$			4.5
Base-Emitter Voltage	$V_{BE}$	V	$V_{CE} = 4V, I_C = 4A$			2.8
Collector-base output capacitance	Cob	pF	$V_{CB} = 10V, I_E = 0A, f = 1MHz$		60	

## ■ Characteristics(Typical)



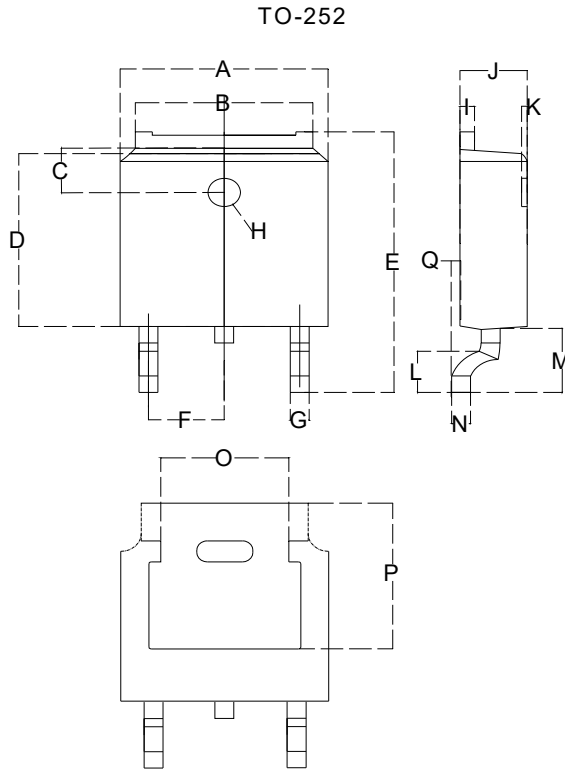
## ■ Characteristics(Typical)



## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MJD122	F1	2500	2500	25000	13"Reel

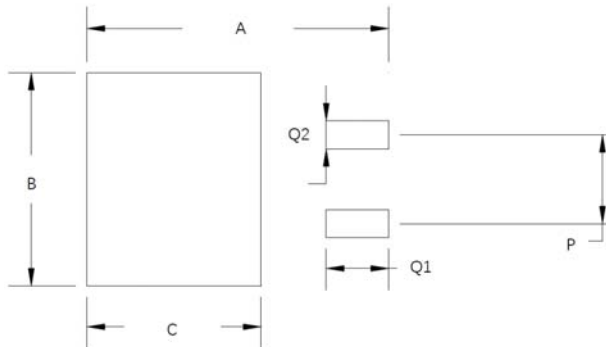
## ■ TO-252 Package information



Dimensions in millimeters

TO-252		
Dim	Min	Max
A	6.500	6.700
B	5.100	5.460
C	1.400	1.800
D	6.000	6.200
E	10.000	10.400
F	2.166	2.366
G	0.660	0.860
H	Φ 1.050	Φ 1.350
I	0.460	0.580
J	2.200	2.400
K	0	0.300
L	0.890	2.290
M	2.730	3.080
N	0.430	0.580
O	4.20	4.95
P	5.15	5.45
Q	0	0.2

## ■ Suggested Pad Layout



Dim	Millimeters
A	11.4
B	6.74
C	6.23
P	4.56
Q1	2.28
Q2	1.52



---

**Disclaimer**

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, life-saving, lifesustaining, or military, Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.