

Pb Free Plating Product

## NJW0302G



150 Watt Silicon Epitaxial Planar PNP Power Transistor

### DESCRIPTION

- With TO-3PB package
- Complement to type NJW0281G

### APPLICATIONS

- Power amplifier applications
- Recommended for 100W high fidelity audio frequency amplifier output stage

### PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector; connected to mounting base
3	Base

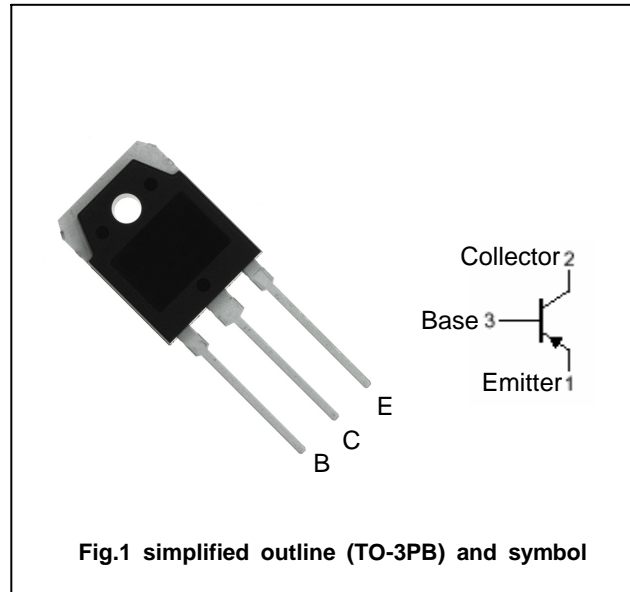


Fig.1 simplified outline (TO-3PB) and symbol

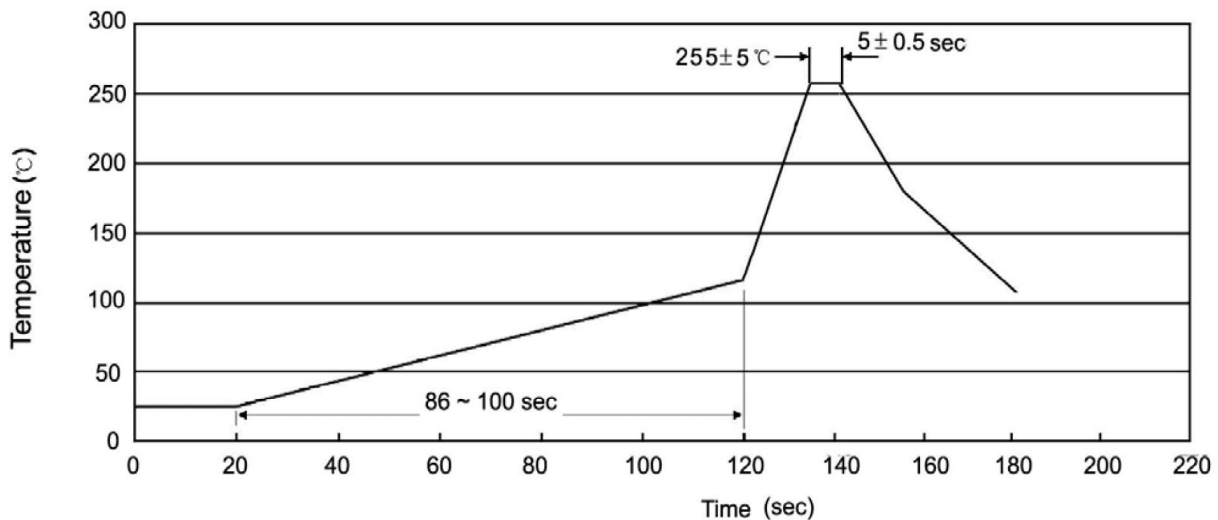
### Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	$V_{CBO}$	-230	V
Collector to Emitter Voltage	$V_{CEO}$	-230	V
Emitter to Base Voltage	$V_{EBO}$	-5	V
Collector Current - Continuous	$I_C$	-15	A
Peak Collector Current	$I_{CP}$	-30	A
Base Current	$I_B$	-1.5	A
Collector Power Dissipation	$P_{C(TC=25^\circ C)}$	150	W
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	-55 ~ 150	°C

**Electrical Characteristics(Ta=25°C)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	$V_{CEO}$	$I_C=-50mA$ $I_B=0$	-230			V
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-230V$ $I_E=0$			-5.0	$\mu A$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-5.0V$ $I_C=0$			-5.0	$\mu A$
DC Current Gain	$h_{FE(1)}$	$V_{CE}=-5.0V$ $I_C=-1.0A$	55		160	
	$h_{FE(2)}$	$V_{CE}=-5.0V$ $I_C=-7.0A$	35	60		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-8.0A$ $I_B=-0.8A$		-1.5	-3.0	V
Base to Emitter Voltage	$V_{BE}$	$V_{CE}=-5.0V$ $I_C=-7.0A$		-1.0	-1.5	V
Transition Frequency	$f_T$	$I_C=-1.0A$ $V_{CE}=-5.0V$		30		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$		360		pF

**Temperature Profile for Dip Soldering(Pb-Free)**



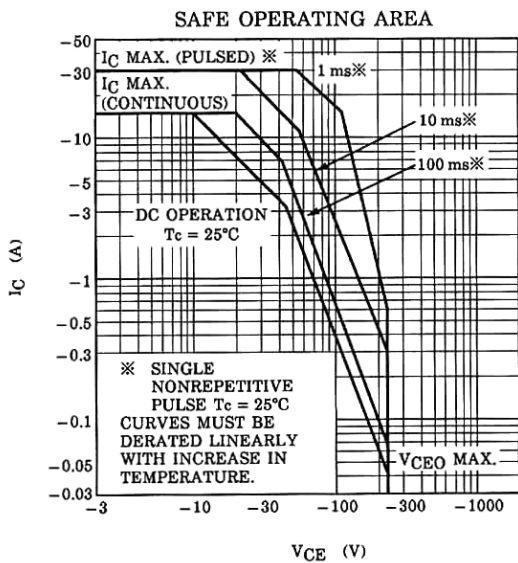
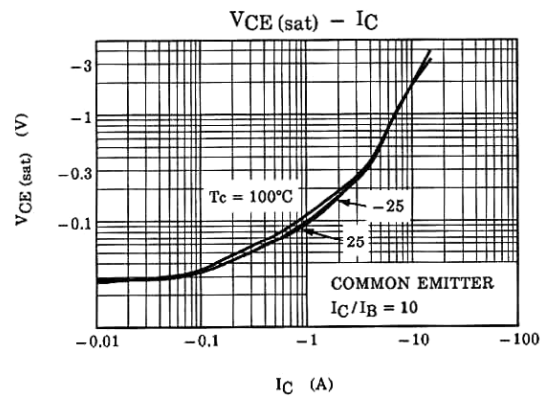
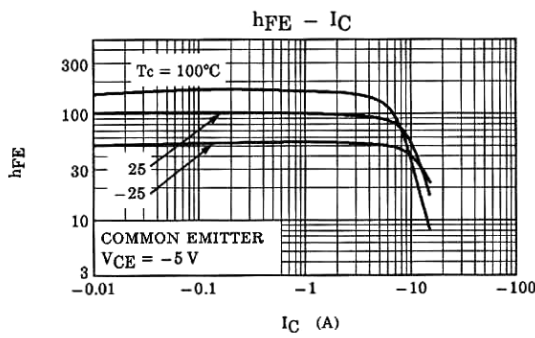
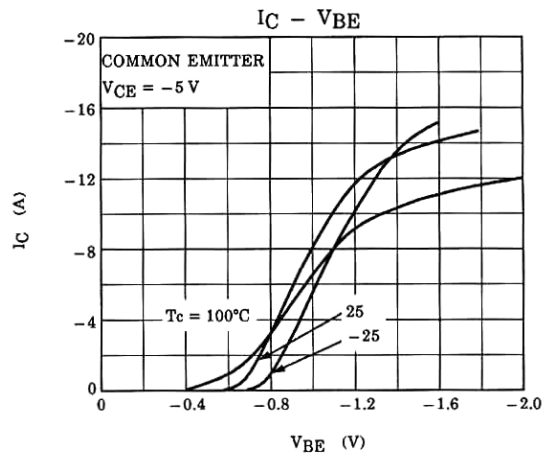
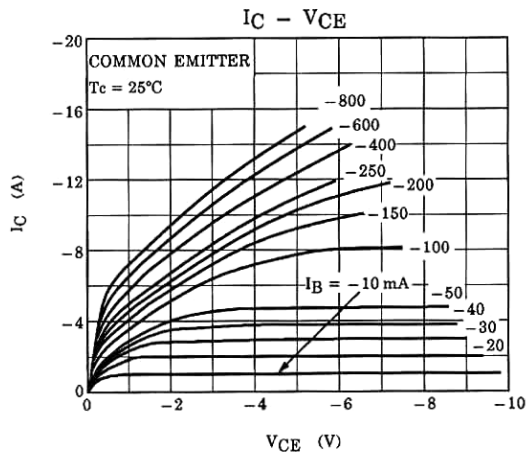
Note:

- 1.Preheating:25~150°C, Time:60~90sec.
- 2.Peak Temp.:255±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

**Resistance to Soldering Heat Test Conditions**

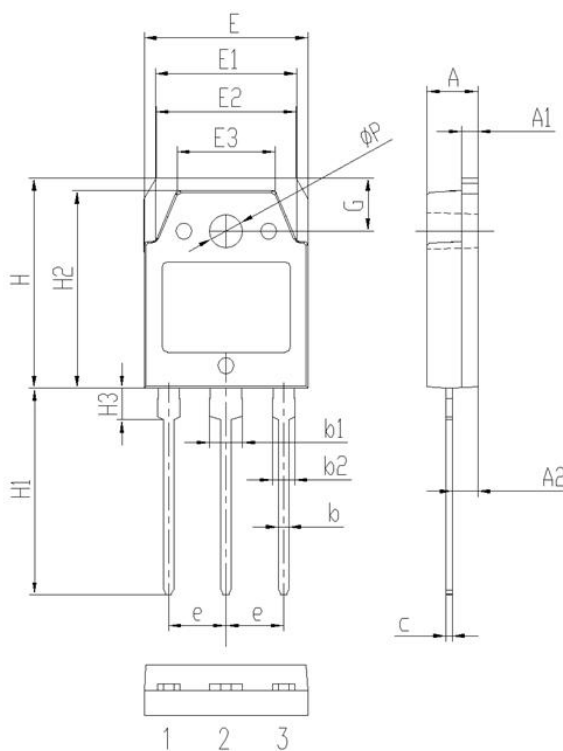
Temp.:270±5°C      Time:10±1 sec

Electrical Characteristic Curve



**Package Information**

TO-3PB Package Outline



Symbol	Dimensions(millimeters)	
	Min.	Max.
A	4.60	5.00
A1	1.30	1.70
A2	2.20	2.60
b	0.80	1.20
b1	2.90	3.30
b2	1.90	2.30
c	0.40	0.80
e	5.25	5.65
E	15.3	15.7
E1	13.2	13.6
E2	13.1	13.5
E3	9.10	9.50
H	19.7	20.1
H1	19.1	20.1
H2	18.3	18.7
H3	2.80	3.20
G	4.80	5.20
ΦP	3.00	3.40