

Pb Free Plating Product

2SA1943N



150 Watt Silicon Epitaxial Planar PNP Power Transistor

DESCRIPTION

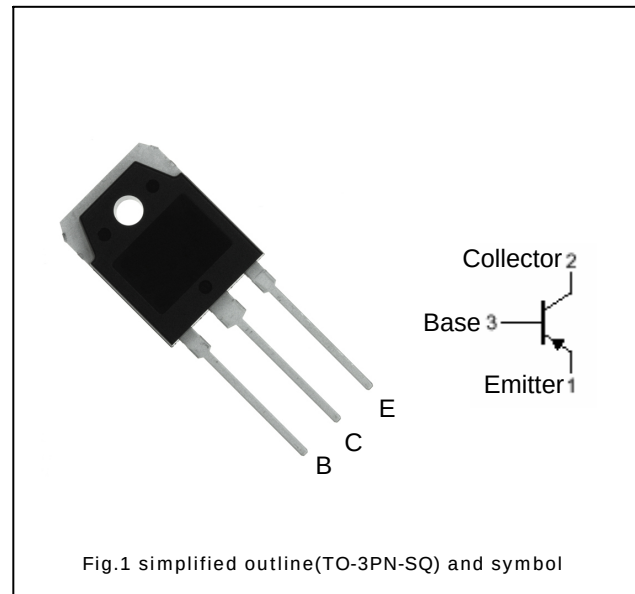
- With TO-3PN-SQ package
- Complement to type 2SC5200N

APPLICATIONS

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

PINNING

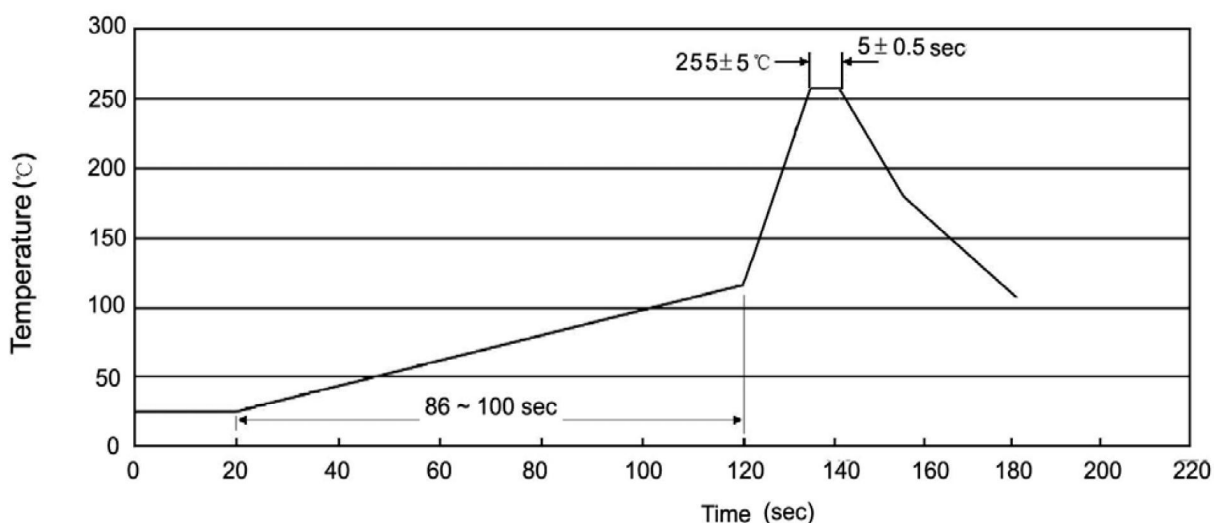
PIN	DESCRIPTION
1	Emitter
2	Collector; connected to mounting base
3	Base

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

Temperature Profile for Dip Soldering(Pb-Free)

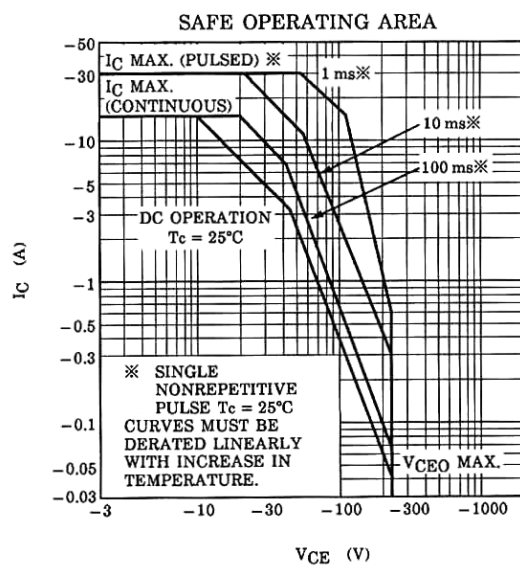
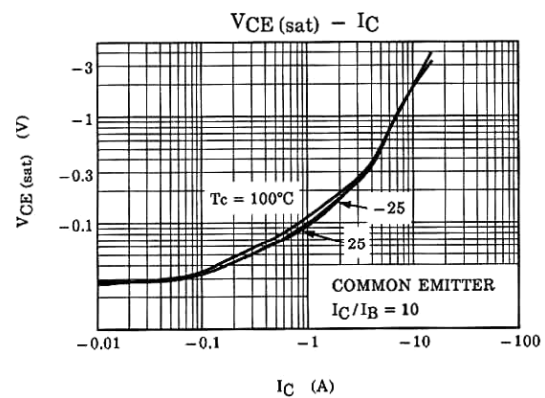
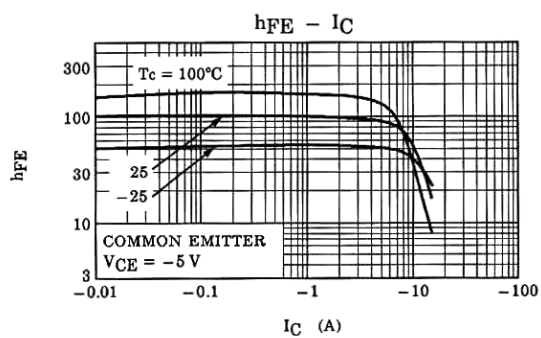
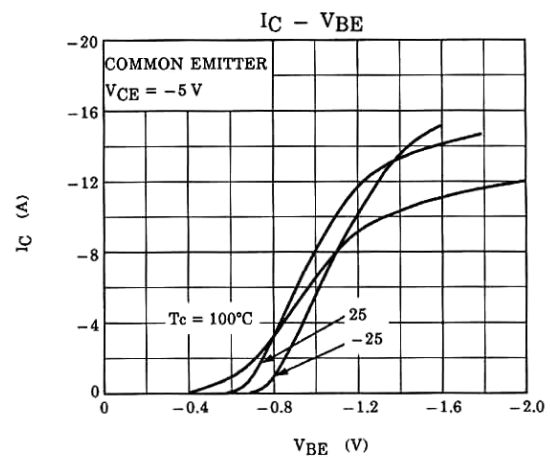
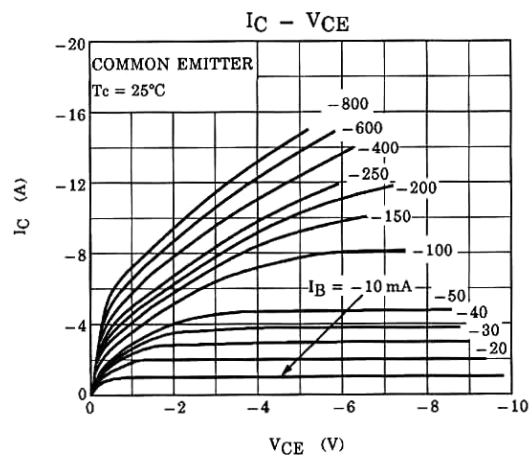
Note:

- 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

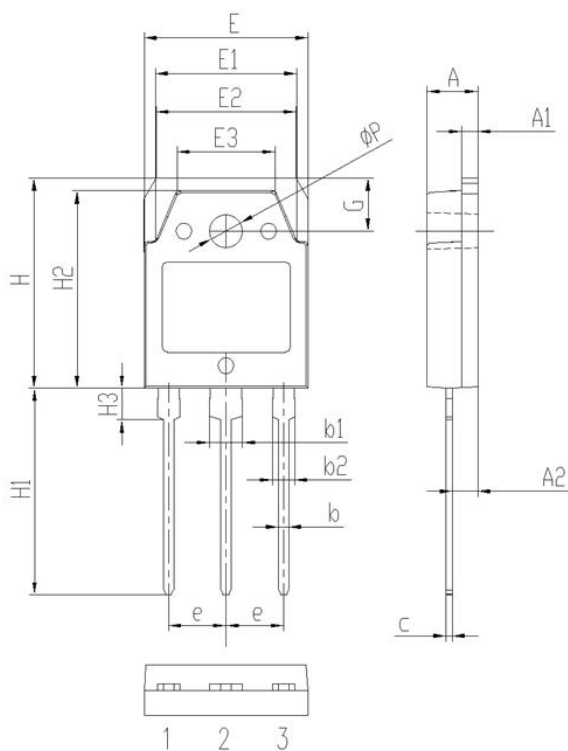
Temp.:270±5°C Time:10±1 sec

Electrical Characteristic Curve



Package Information

TO-3PN-SQ 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