

/ Descriptions

TO-3P NPN Silicon NPN transistor in a TO-3P Plastic Package.

/ Features

70W

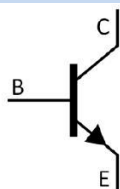
2SA1941

Recommend for 70W high fidelity audio frequency amplifier output stage, Complementary to 2SA1941.

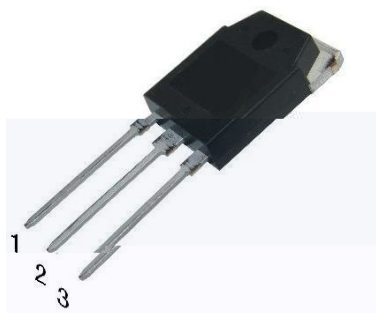
/ Applications

Power amplifier applications.

/ Equivalent Circuit



/ Pinning



PIN1 Base PIN 2 Collector PIN 3 Emitter

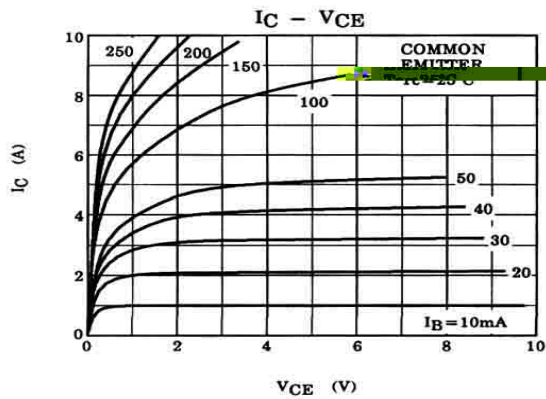
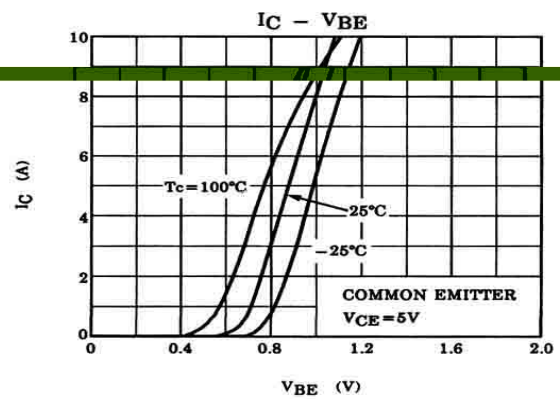
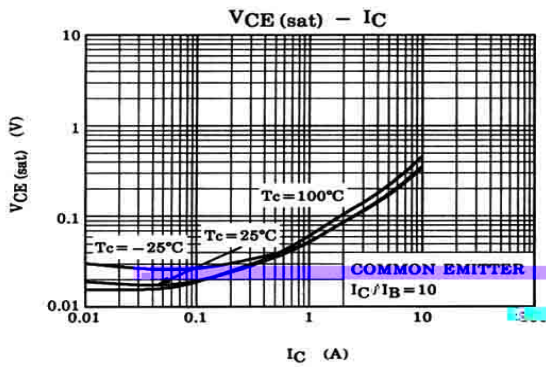
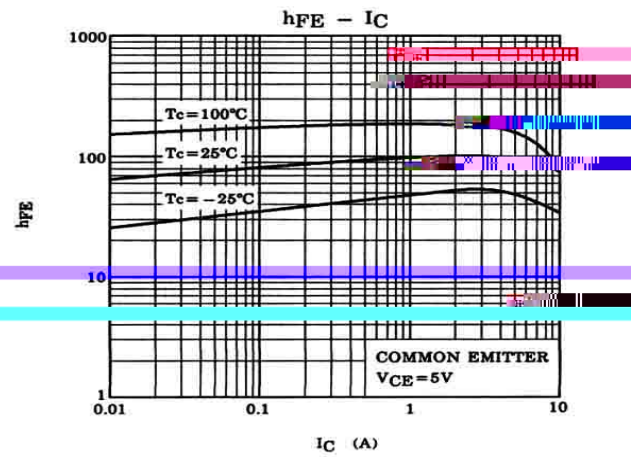
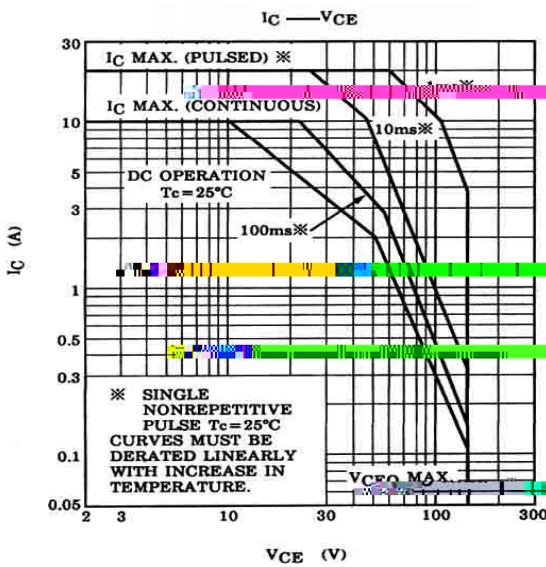
/ h_{FE} Classifications & Marking

h_{FE} Classifications Symbol	R	O
h_{FE} Range	55~110	80~160

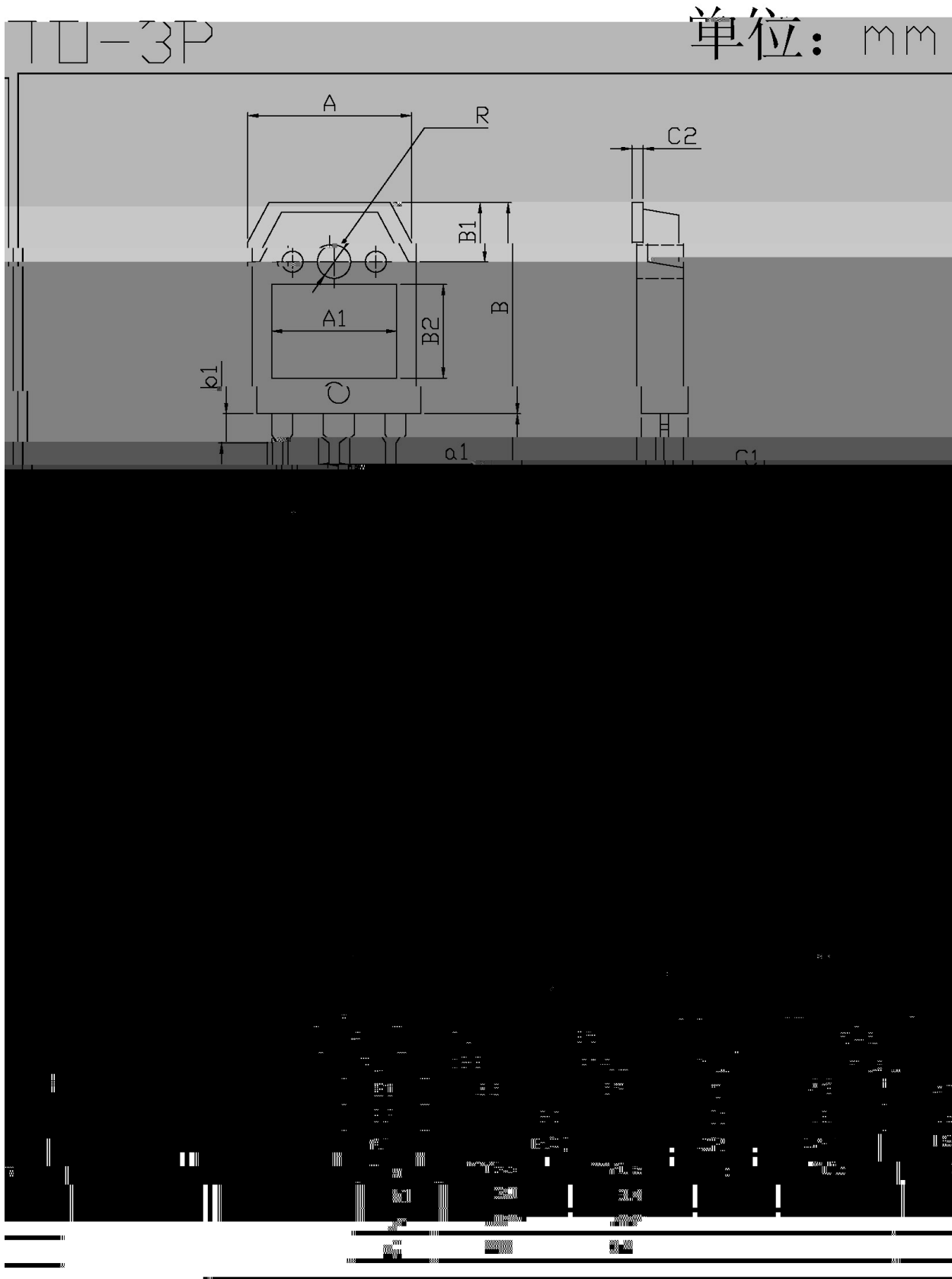
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	140	V
Collector to Emitter Voltage	V_{CEO}	140	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	10	A
Peak Collector Current	I_{CP}	20	A
Base Current	I_B	1.0	A
Collector Power Dissipation	$P_{C(TC=25)}$	100	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	$I_C=50mA$ $I_B=0$	140			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=140V$ $I_E=0$			5.0	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=5.0V$ $I_C=0$			5.0	μA
DC Current Gain	$h_{FE(1)}$	$V_{CE}=5.0V$ $I_C=1.0A$	55		160	
	$h_{FE(2)}$	$V_{CE}=5.0V$ $I_C=5.0A$	35	83		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=7.0A$ $I_B=0.7A$		0.3	2.0	V
Base to Emitter Voltage	V_{BE}	$V_{CE}=5.0V$ $I_C=5.0A$		0.9	1.5	V
Transition Frequency	f_T	$V_{CE}=5.0V$ $I_C=1.0A$		30		MHz

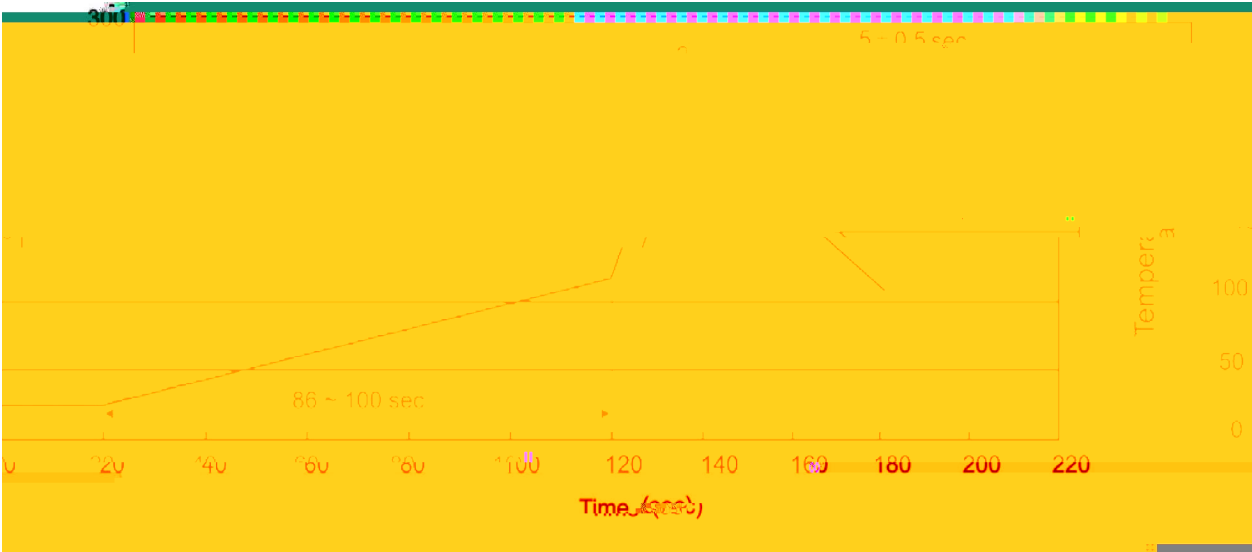
/ Electrical Characteristic Curve



/ Package Dimensions



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



Note:

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

/ Resistance to Soldering Heat Test Conditions

270 ± 5 °C 10 ± 1 sec Temp.: 270 ± 5 °C Time: 10 ± 1 sec

2SC5198Pb312P