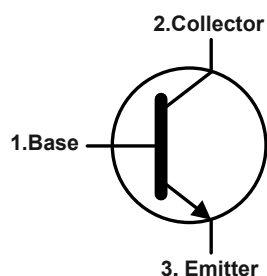


NPN Transistor

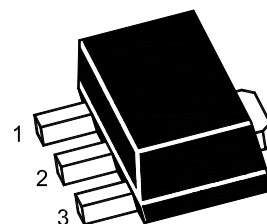
Features

- For low frequency power amplifications

Equivalent Circuit

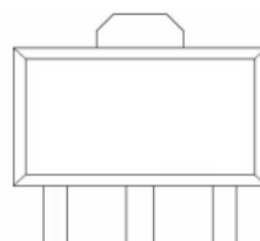


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1.Base 2.Collector 3. Emitter

Marking Code :



Absolute Maximum Ratings

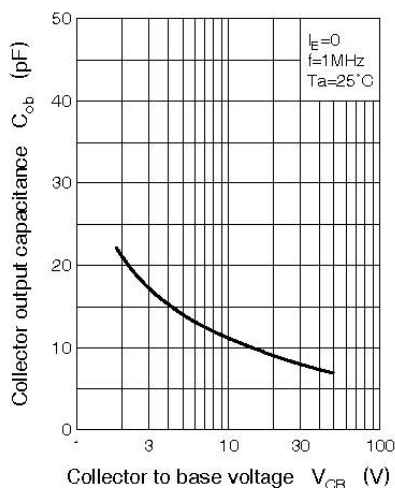
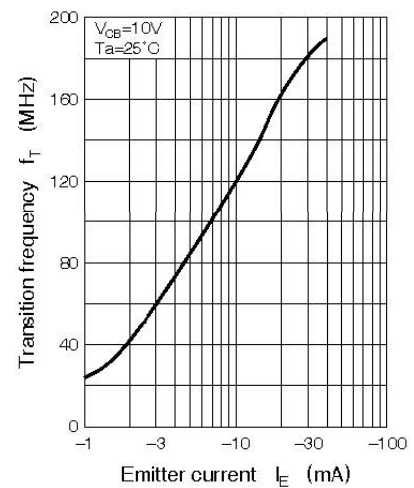
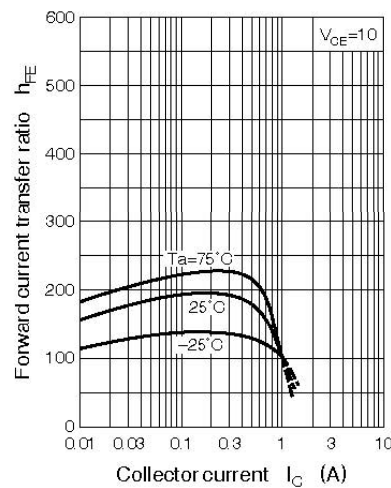
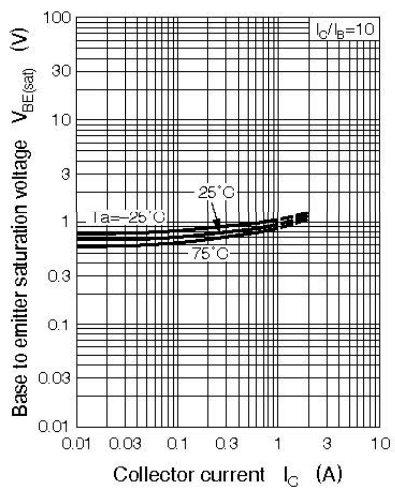
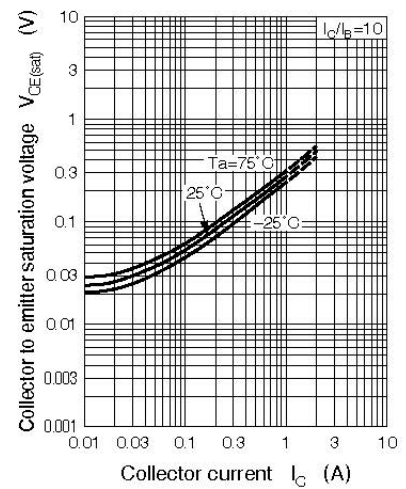
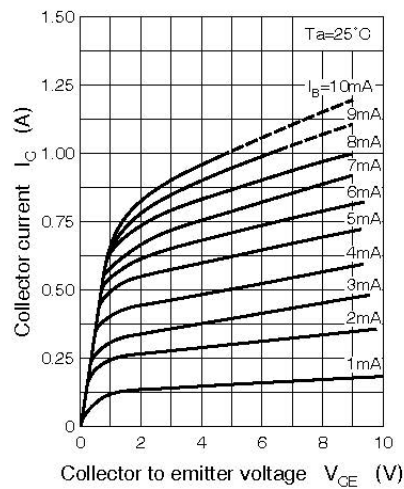
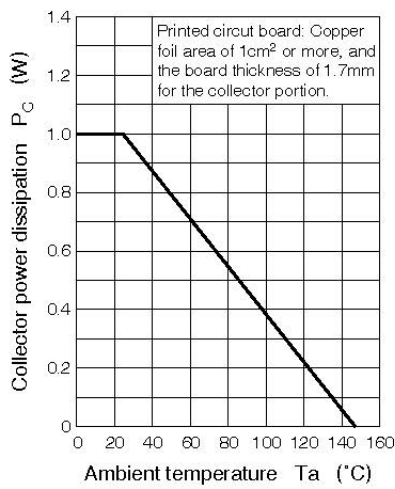
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1	A
Peak Collector Current	I_{CM}	1.5	A
Maximum Power Dissipation	P_D	1	W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Electrical Characteristics (T_A=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V _{CE} = 10 V, I _C = 500 mA Current Gain Group	Q R S H _{FE}	85	--	170	--
		120	--	240	
		170	--	340	
at V _{CE} = 5 V, I _C = 1 A		50	--	--	
Collector Base Cutoff Current at V _{CB} = 20V	I _{CBO}	--	--	100	nA
Emitter Base Cutoff Current at V _{EB} = 5 V	I _{EBO}	--	--	100	nA
Collector Base Breakdown Voltage at I _C = 10 µA	V _{(BR)CBO}	60	--	--	V
Collector Emitter Breakdown Voltage at I _C = 2 mA	V _{(BR)CEO}	50	--	--	V
Emitter Base Breakdown Voltage at I _E = 10 µA	V _{(BR)EBO}	5	--	--	V
Collector Emitter Saturation Voltage at I _C = 500 mA, I _B = 50 mA	V _{CE(sat)}	--	--	0.4	V
Base Emitter Saturation Voltage at I _C = 500 mA, I _B = 50 mA	V _{BE(sat)}	--	--	1.2	V
Transition Frequency at V _{CE} = 10 V, -I _E = 50 mA, f = 200 MHz	F _T	--	200	--	MHz
Output Capacitance at V _{CB} = 10 V, f = 1 MHz	C _{ob}	--	--	20	pF

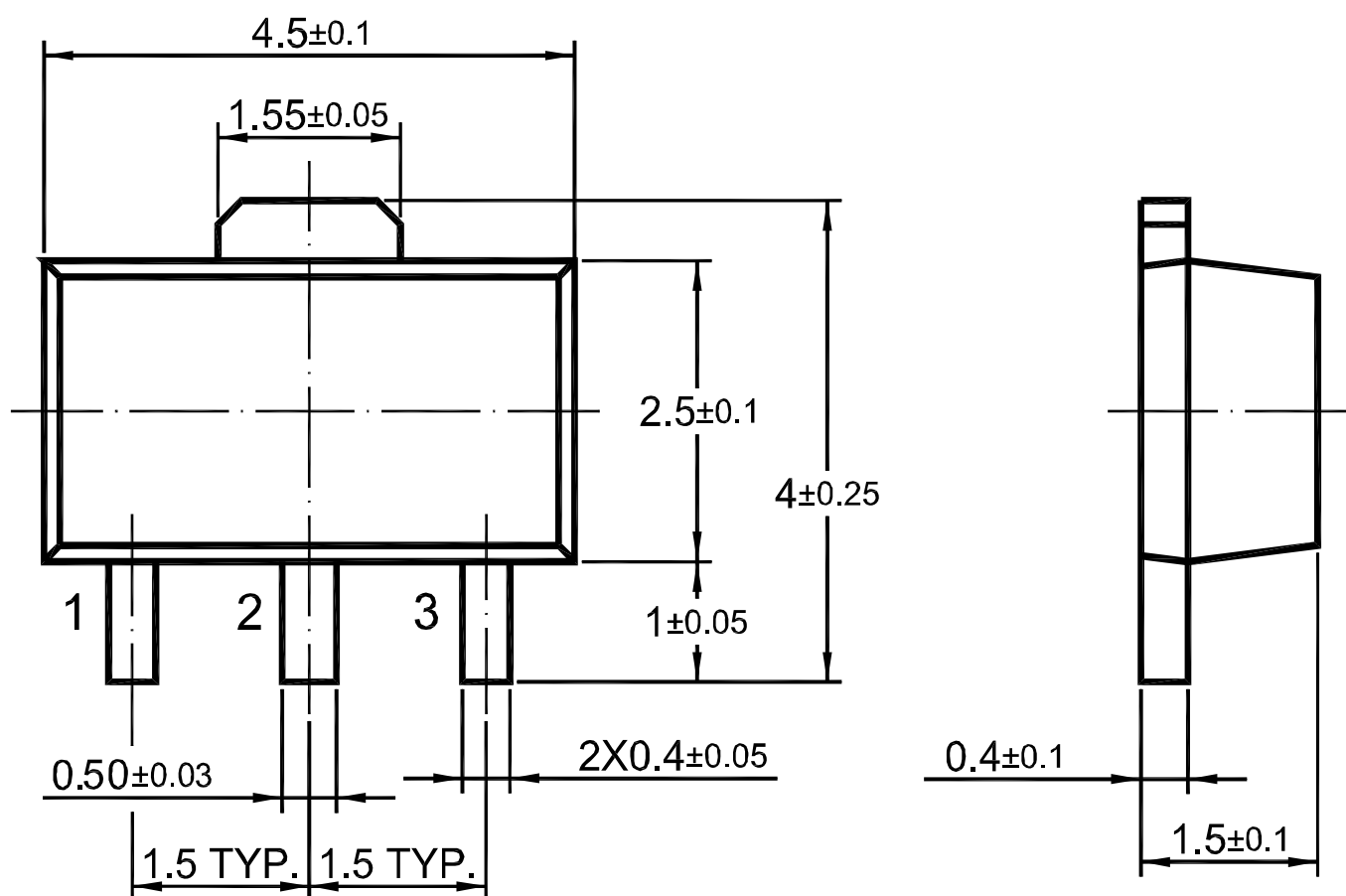
Typical Characteristic Curves



Package Outline

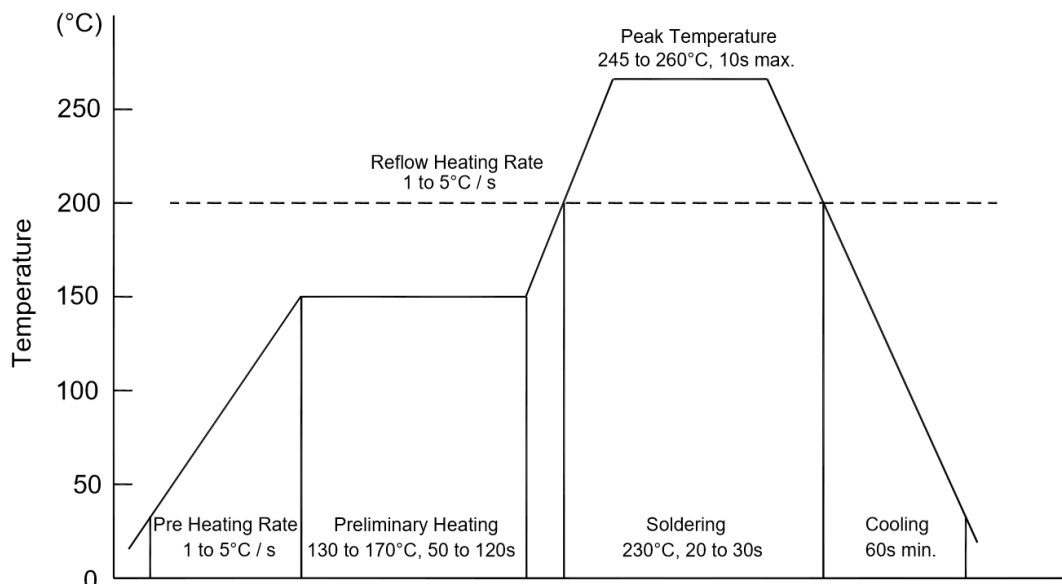
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Dimensions in mm



Conditions of Soldering and Storage

◆ Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters:

- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

◆ Conditions of hand soldering

- Temperature: 370 °C
- Time: 3s max.
- Times: one time

◆ Storage conditions

- **Temperature**
5 to 40 °C
- **Humidity**
30 to 80% RH
- **Recommended period**
One year after manufacturing