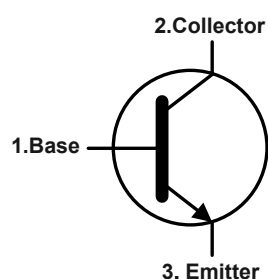


NPN Transistor

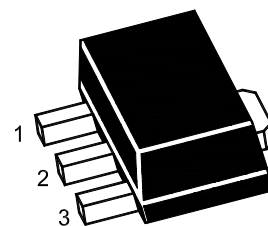
Features

- For switching and amplifier applications
- Low collector saturation voltage
- As Complementary Type of the PNP Transistor 2SB1124 is Recommended

Equivalent Circuit



SOT-89



1.Base 2.Collector 3. Emitter

Marking Code :

2SD1624-R:1624A

2SD1624-S:1624B

2SD1624-T:1624C

Absolute Maximum Ratings

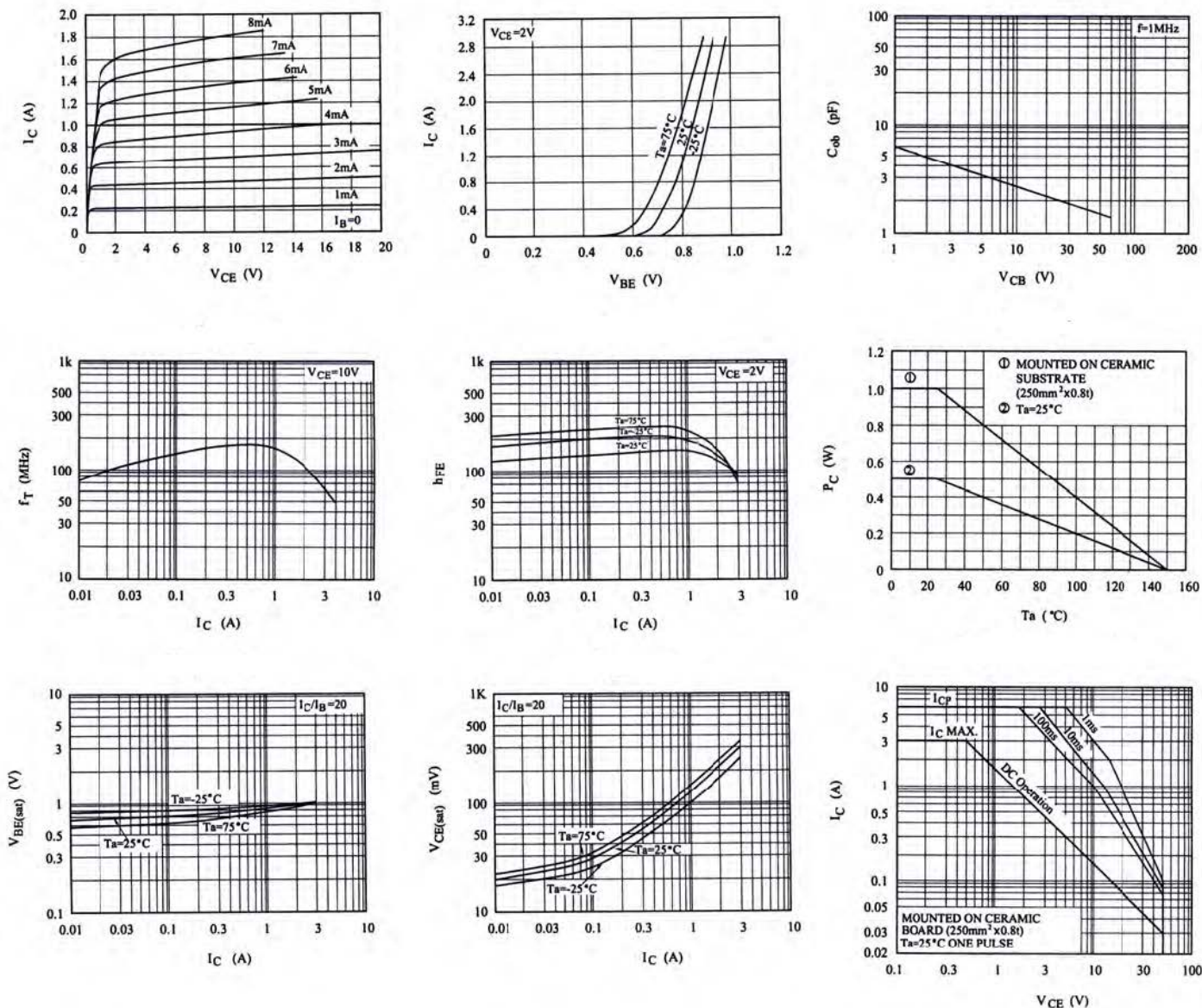
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	3	A
Pulsed Collector Current	I_{CP}	6	A
Maximum Power Dissipation	P_D	500	mW
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} = 2 V, I _C = 100 mA Current Gain Group	R S T H _{FE}	100 140 200 35	-- -- -- --	200 280 400 --	--
Collector Base Cutoff Current at V _{CB} = 40 V	I _{CBO}	--	--	1	μA
Emitter Base Cutoff Current at V _{EB} = 4 V	I _{EBO}	--	--	1	μA
Collector Base Breakdown Voltage at I _C = 10 μA	V _{(BR)CBO}	60	--	--	V
Collector Emitter Breakdown Voltage at I _C = 1 mA	V _{(BR)CEO}	50	--	--	V
Emitter Base Breakdown Voltage at I _E = 10 μA	V _{(BR)EBO}	6	--	--	V
Collector Emitter Saturation Voltage at I _C = 2 A, I _B = 100 mA	V _{CE(sat)}	--	--	0.5	V
Base Emitter Saturation Voltage at I _C = 2 A, I _B = 100 mA	V _{BE(sat)}	--	--	1.2	V
Transition Frequency at V _{CE} = 10 V, I _C = 50 mA	F _T	--	150	--	MHz
Output Capacitance at V _{CB} = 10 V, I _E = 0, f = 1 MHz	C _{ob}	--	25	--	pF

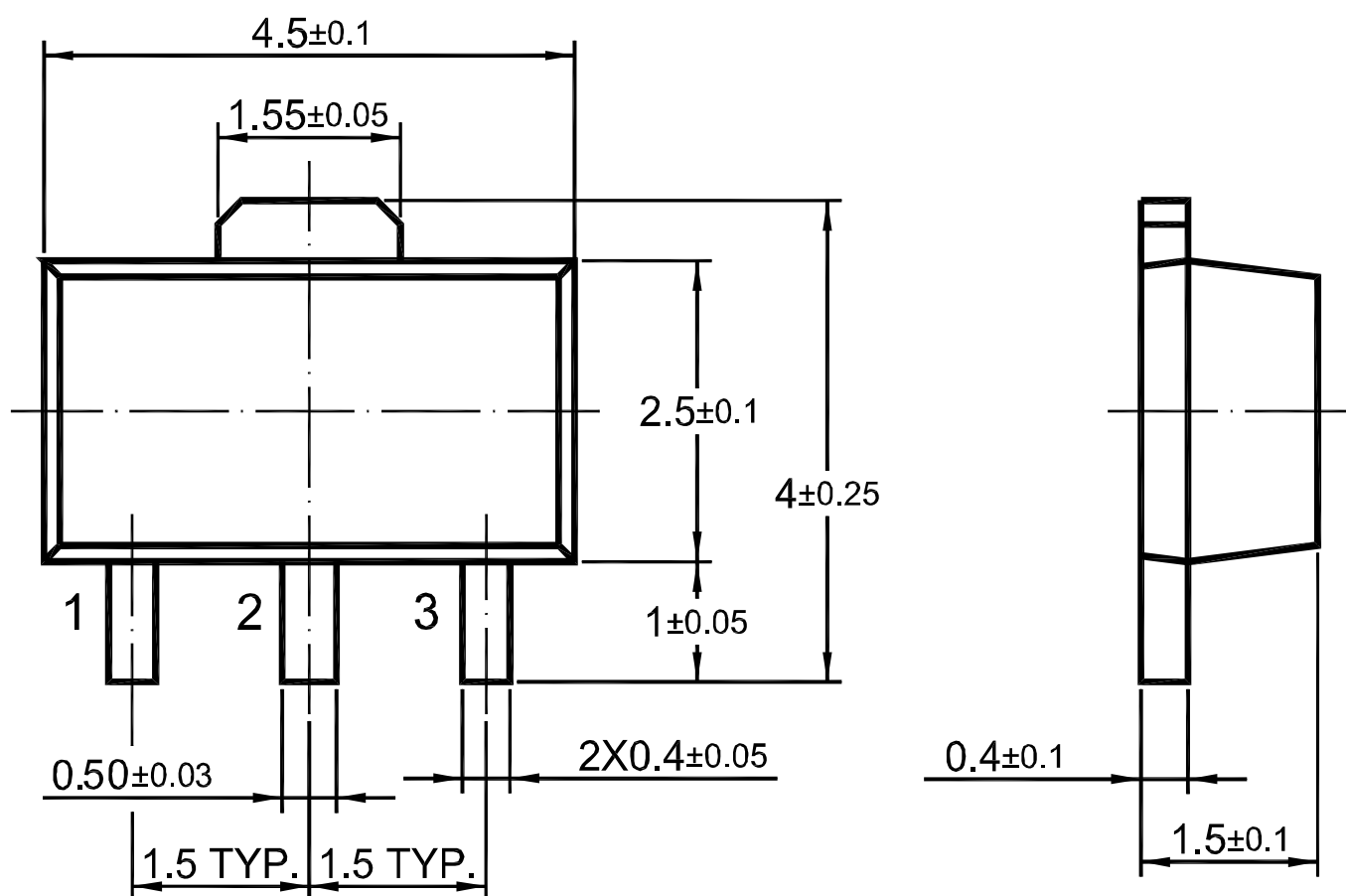
Typical Characteristic Curves



Package Outline

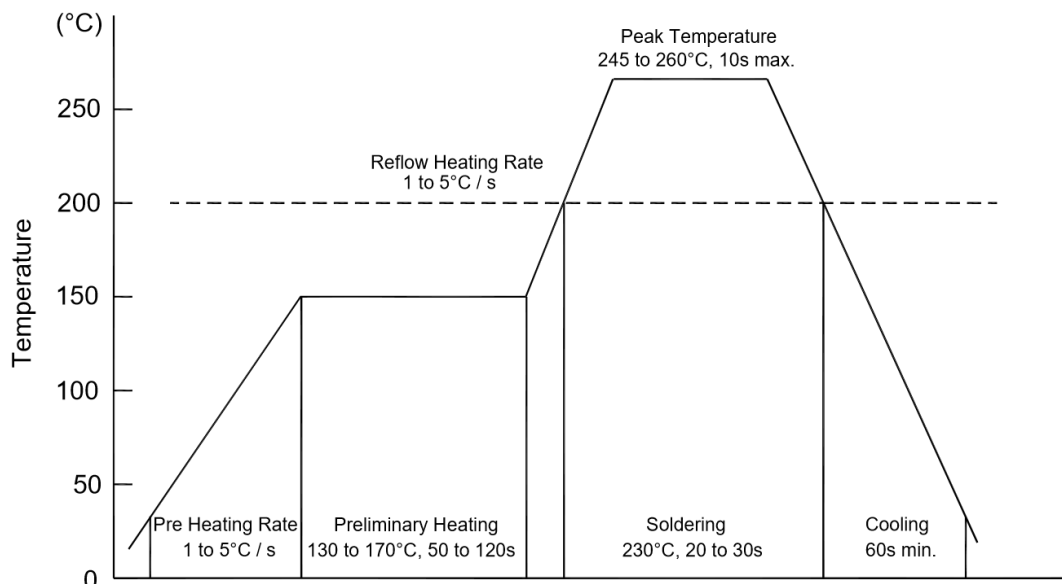
SOT-89

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