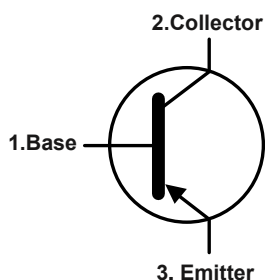


PNP Transistor

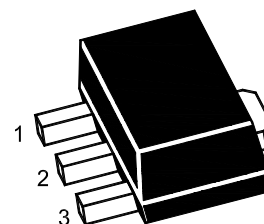
Features

- Low saturation voltage
- Excellent DC current gain

Equivalent Circuit



SOT-89



1.Base 2.Collector 3. Emitter

Marking Code :

2SB1424-Q : AEQ

2SB1424-R : AER

Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	20	V
Collector Emitter Voltage	$-V_{CEO}$	20	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	3	A
Maximum Power Dissipation	P_D	500	mW
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

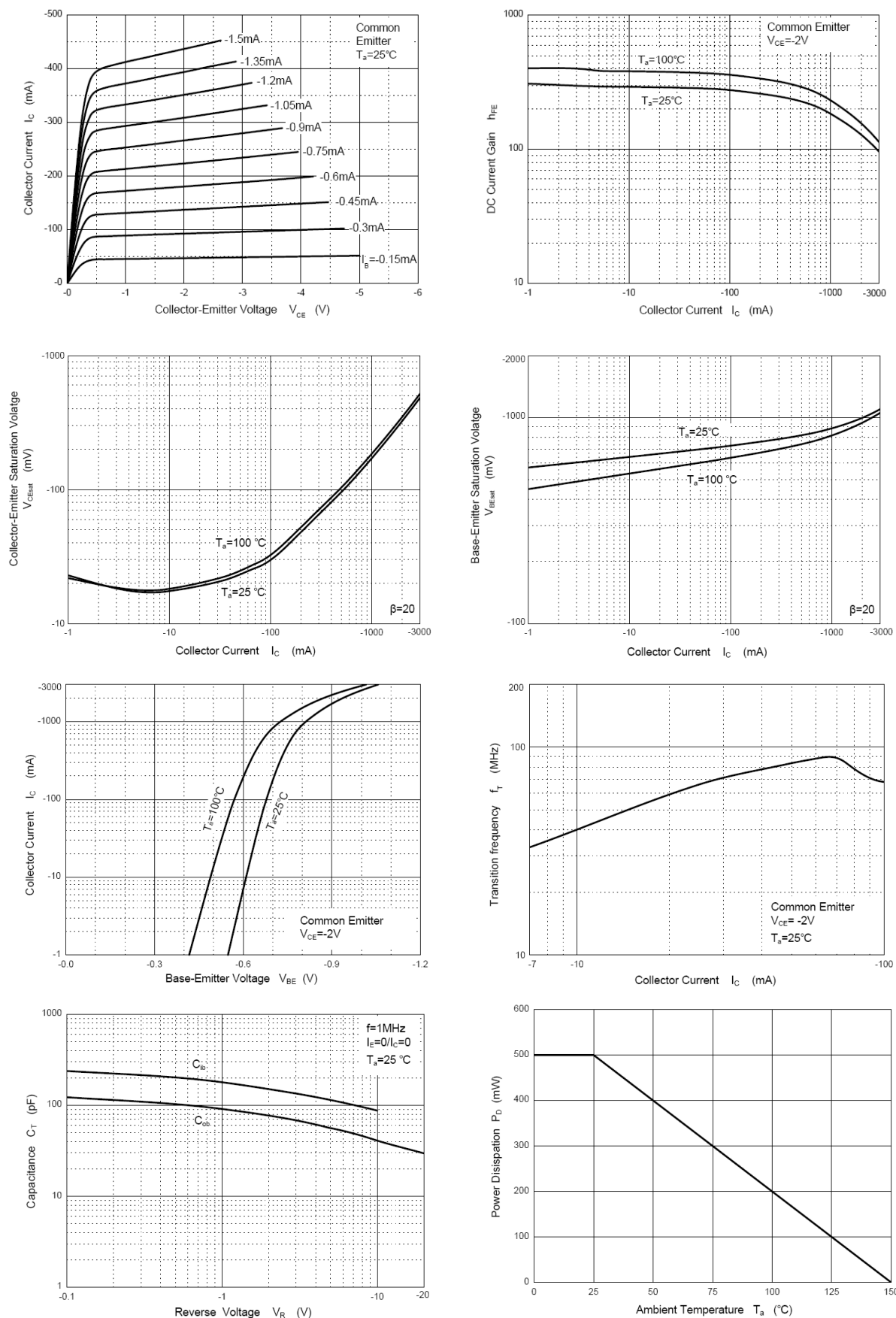
Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	250	°C/W

Electrical Characteristics (T_A=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V _{CE} = -2 V, I _C = -0.1 A Current Gain Group Q R	H _{FE}	120 180	-- --	270 390	--
Collector Base Cutoff Current at V _{CB} = -20V	-I _{CBO}	--	--	0.1	μA
Emitter Base Cutoff Current at V _{EB} = -5 V	-I _{EBO}	--	--	0.1	μA
Collector Base Breakdown Voltage at I _C = -50 μA	-V _{(BR)CBO}	20	--	--	V
Collector Emitter Breakdown Voltage at I _C = -1 mA	-V _{(BR)CEO}	20	--	--	V
Emitter Base Breakdown Voltage at I _E = -50 μA	-V _{(BR)EBO}	6	--	--	V
Collector Emitter Saturation Voltage at I _C = -2 A, I _B = -0.1 A	-V _{CE(sat)}	--	--	0.5	V
Transition Frequency at V _{CE} = -2 V, I _C = -500 mA, f=100 MHz	F _T	--	240	--	MHz
Collector Output Capacitance at V _{CB} = -10 V, I _E = 0, f = 1 MHz	C _{ob}	--	35	--	pF

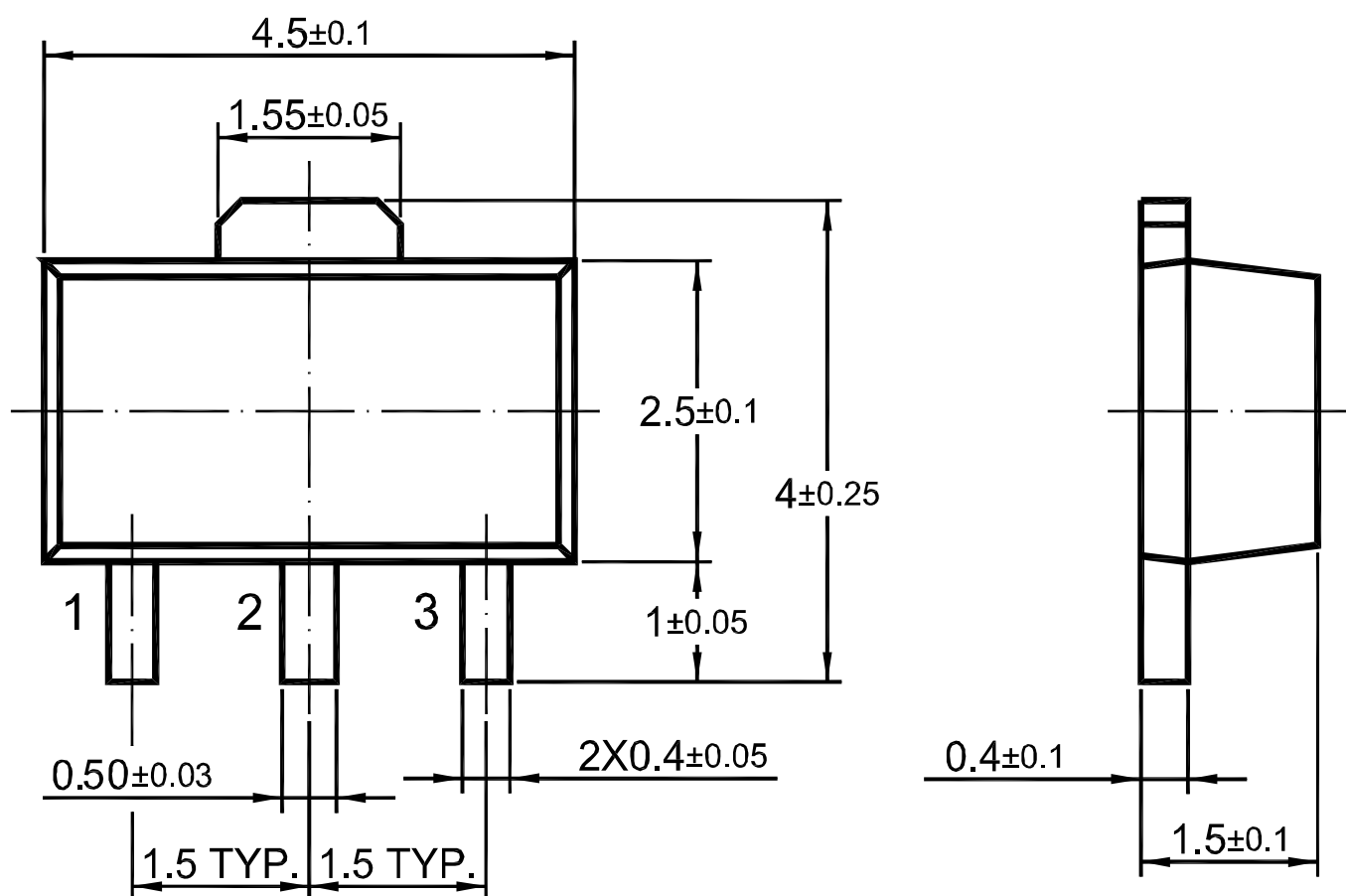
Typical Characteristic Curves



Package Outline

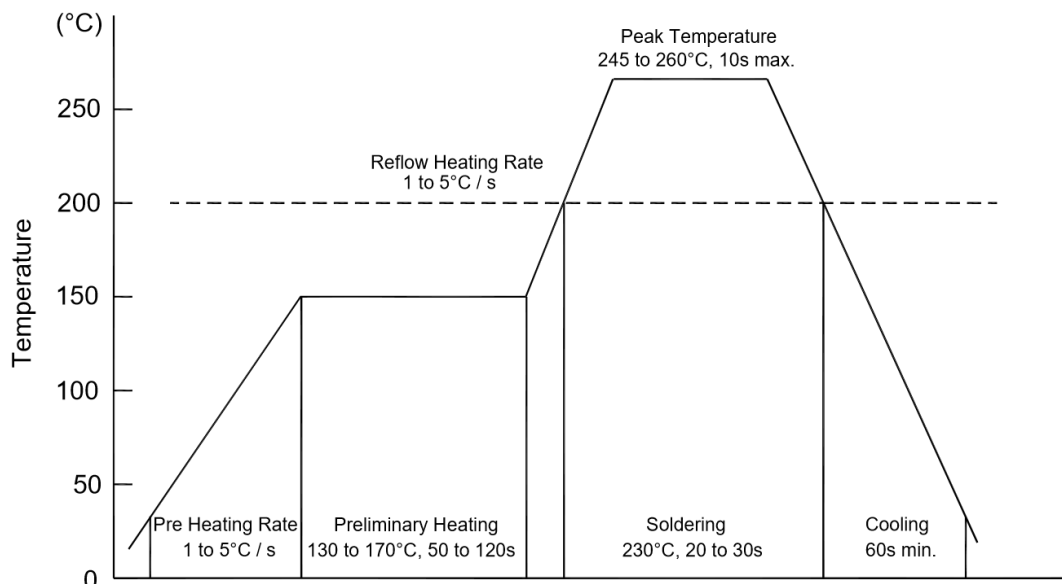
SOT-89

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