

SOT-23 Plastic-Encapsulate Transistors

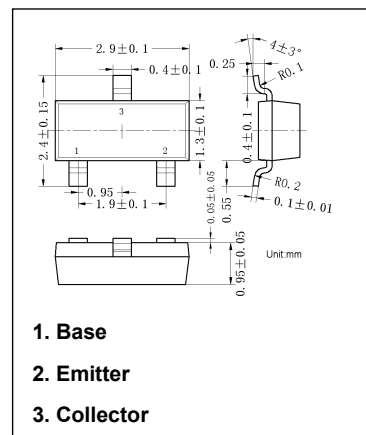
BC848A NPN Transistors

Features

- Ideally suited for automatic insertion
- For switching and AF amplifier applications

Marking

- BC848A: 1J
- BC848B: 1K
- BC848C: 1L



Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector Base Voltage	30	V
V_{CEO}	Collector Emitter Voltage	30	V
V_{EBO}	Emitter Base Voltage	6	V
I_C	Collector Current	0.1	A
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	625	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	- 55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=10\mu\text{A}$, $I_E=0$	30			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10\text{mA}$, $I_B=0$	30			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\mu\text{A}$, $I_C=0$	6			V
I_{CBO}	Collector cut-off current	$V_{CB}=30\text{V}$, $I_E=0$			100	nA
I_{CEO}	Collector cut-off current	$V_{CE}=30\text{V}$, $I_B=0$			100	nA
I_{EBO}	Emitter cut-off current	$V_{EB}=5\text{V}$, $I_C=0$			100	nA
h_{FE}	DC current gain	BC848A	110		220	
		BC848B	200		450	
		BC848C	420		800	
		$V_{CE}=5\text{V}$, $I_C=2\text{mA}$	110			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=100\text{mA}$, $I_B=5\text{mA}$			0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=100\text{mA}$, $I_B=5\text{mA}$			1.1	V
f_T	Transition frequency	$V_{CE}=5\text{V}$, $I_C=10\text{mA}$, $f=100\text{MHz}$	100			MHz
C_{ob}	Collector output capacitance	$V_{CB}=10\text{V}$, $f=1\text{MHz}$			4.5	pF

Typical Characteristics

