



DC COMPONENTS CO., LTD.
DISCRETE SEMICONDUCTORS

BC848
BC849

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

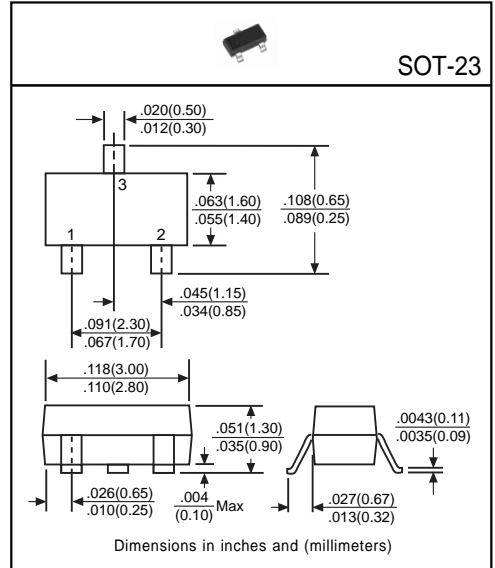
Designed for switching and AF amplifier amplification suitable for automatic insertion in thick and thin-film circuits.

Pinning

- 1 = Base
- 2 = Emitter
- 3 = Collector

Absolute Maximum Ratings(T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	30	V
Collector-Emitter Voltage	V _{CEO}	30	V
Emitter-Base Voltage	V _{EBO}	5	V
Collector Current	I _C	100	mA
Total Power Dissipation	P _D	225	mW
Junction Temperature	T _J	+150	°C
Storage Temperature	T _{STG}	-55 to +150	°C



Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions	
Collector-Base Breakdown Voltage	BV _{CB0}	30	-	-	V	I _C =100μA, I _E =0	
Collector-Emitter Breakdown Voltage	BV _{CEO}	30	-	-	V	I _C =1mA, I _B =0	
Emitter-Base Breakdown Voltage	BV _{EBO}	5	-	-	V	I _E =10μA, I _C =0	
Collector Cutoff Current	I _{CBO}	-	-	15	nA	V _{CB} =30V, I _E =0	
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)1}	-	-	0.25	V	I _C =10mA, I _B =0.5mA	
	V _{CE(sat)2}	-	0.2	0.6	V	I _C =100mA, I _B =5mA	
Base-Emitter Saturation Voltage ⁽¹⁾	V _{BE(sat)1}	-	0.7	-	V	I _C =10mA, I _B =0.5mA	
	V _{BE(sat)2}	-	0.9	-	V	I _C =100mA, I _B =5mA	
Base-Emitter On Voltage ⁽¹⁾	V _{BE(on)}	0.58	-	0.7	V	I _C =2mA, V _{CE} =5V	
DC Current Gain ⁽¹⁾	BC848	h _{FE}	110	-	800	-	I _C =2mA, V _{CE} =5V
	BC849		200	-	800		
Transition Frequency	f _T	100	-	-	MHz	I _C =10mA, V _{CE} =5V, f=100MHz	
Output Capacitance	C _{ob}	-	3.5	6	pF	V _{CB} =10V, f=1MHz	
Noise Figure	BC848	NF	-	-	10	dB	V _{CE} =5V, I _C =200μA, f=1KHz, R _S =2KΩ, B=200Hz
	BC849		-	-	4		

(1)Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

Classification of h_{FE}

Rank	A	B	C
Range	110~220	200~450	420~800