



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

BC817

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

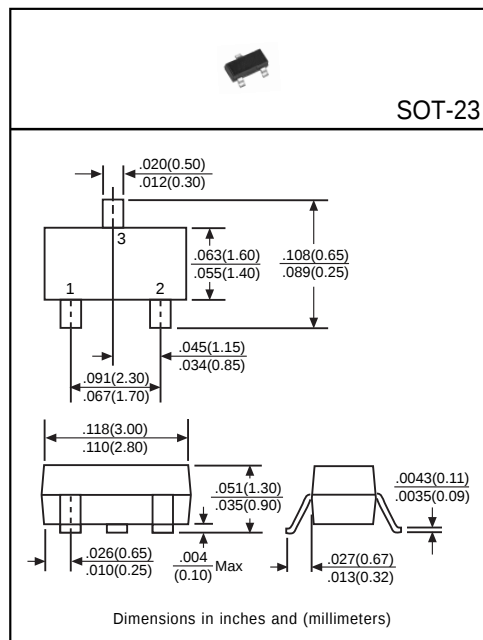
Designed for use in drive and output stages of audio amplifiers.

Pinning

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

Absolute Maximum Ratings($T_A=25^{\circ}\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage	V_{CES}	50	V
	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_C	500	mA
Total Power Dissipation	P_D	225	mW
Junction Temperature	T_J	+150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$



Electrical Characteristics

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Emitter Breakdown Voltage	BV_{CES}	50	-	-	V	$I_C=10\mu\text{A}$
	BV_{CEO}	45	-	-	V	$I_C=10\text{mA}$
Emitter-Base Breakdown Voltage	BV_{EBO}	5	-	-	V	$I_E=1\mu\text{A}$
Collector Cutoff Current	I_{CBO}	-	-	0.1	μA	$V_{CB}=20\text{V}$
Emitter Cutoff Current	I_{EBO}	-	-	0.1	μA	$V_{EB}=4\text{V}$
Collector-Emitter Saturation Voltage ⁽¹⁾	$V_{CE(sat)}$	-	-	0.7	V	$I_C=500\text{mA}$, $I_B=50\text{mA}$
Base-Emitter On Voltage	$V_{BE(on)}$	-	-	1.2	V	$I_C=300\text{mA}$, $V_{CE}=1\text{V}$
DC Current Gain ⁽¹⁾	h_{FE}	100	-	630	-	$I_C=100\text{mA}$, $V_{CE}=1\text{V}$
Transition Frequency	f_T	-	100	-	MHz	$I_C=10\text{mA}$, $V_{CE}=5\text{V}$, $f=100\text{MHz}$
Output Capacitance	C_{ob}	-	-	12	pF	$V_{CB}=10\text{V}$, $f=1\text{MHz}$, $I_E=0$

(1) Pulse Test: Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$

Classification of h_{FE}

Rank	16	25	40
Range	100-250	160-400	250-630