



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

BC817

TECHNICAL SPECIFICATIONS OF NPN EPITAXIAL PLANAR TRANSISTOR

Description

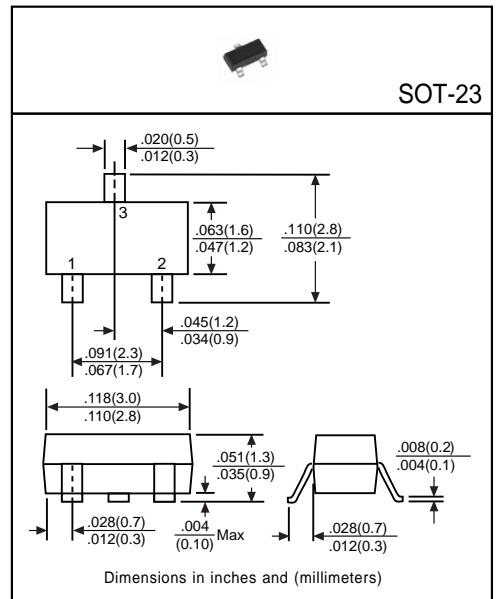
Designed for driver and output stage of audio amplifiers.

Pinning

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

Absolute Maximum Ratings (TA=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V _{CB0}	50	V
Collector-Emitter Voltage	V _{CE0}	45	V
Emitter-Base Voltage	V _{EB0}	5	V
Collector Current	I _C	500	mA
Total Power Dissipation	P _D	300	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}	50	-	-	V	I _C =10μA, I _E =0
Collector-Emitter Breakdown Voltage	BV _{CE0}	45	-	-	V	I _C =10mA, I _B =0
Emitter-Base Breakdown Voltage	BV _{EB0}	5	-	-	V	I _E =1μA, I _C =0
Collector Cutoff Current	I _{CBO}	-	-	0.1	μA	V _{CB} =45V, I _E =0
Collector-Emitter Saturation Voltage ⁽¹⁾	V _{CE(sat)}	-	-	0.7	V	I _C =500mA, I _B =50mA
Base-Emitter Saturation Voltage ⁽¹⁾	V _{BE(sat)}	-	-	1.2	V	I _C =500mA, I _B =50mA
DC Current Gain ⁽¹⁾	h _{FE1}	100	-	600	-	I _C =100mA, V _{CE} =1V
	h _{FE2}	40	-	-	-	I _C =500mA, V _{CE} =1V
Transition Frequency	f _T	100	-	-	MHz	I _C =10mA, V _{CE} =5V, f=100MHz
Output Capacitance	C _{ob}	-	4	-	pF	V _{CB} =10V, f=1MHz, I _E =0

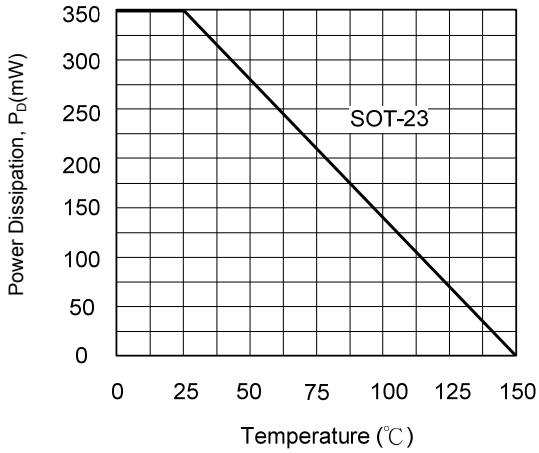
(1)Pulse Test: Pulse Width ≤ 380μs, Duty Cycle ≤ 2%

Classification of h_{FE1}

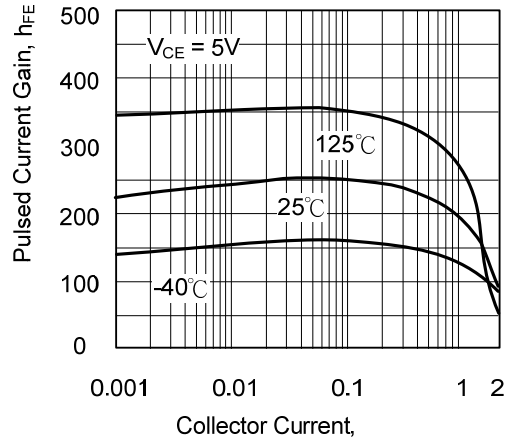
Rank	25	40
Range	160~400	250~600
Making	6B	6C

Electrical Characteristic Curves

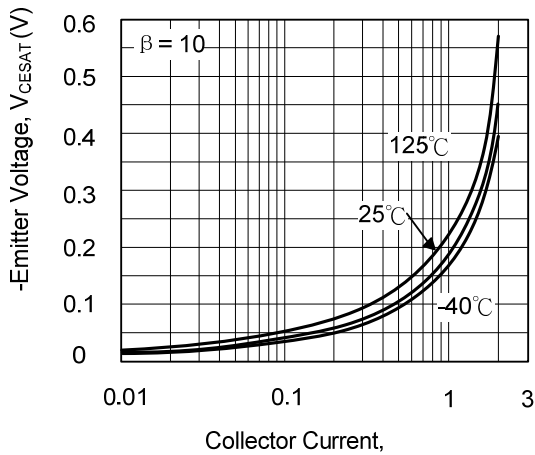
Power Dissipation vs. Ambient Temperature



Typical Pulsed Current Gain vs. Collector Current



Collector-Emitter Saturation Voltage vs. Collector Current



Gain Bandwidth Product vs. Collector Current

