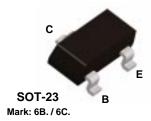


Discrete POWER & Signal **Technologies**

BC817-25 BC817-40



NPN General Purpose Amplifier

This device is designed for general purpose medium power amplifiers and switches requiring collector currents to 1.2 A. Sourced from Process 38.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	45	V
V _{CES}	Collector-Base Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5.0	V
Ic	Collector Current - Continuous	1.5	Α
T _J , T _{stg}	Operating and Storage Junction Temperature Range	-55 to +150	°C

^{*}These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

TA = 25°C unless otherwise noted

Symbol	Characteristic	Max	Units	
		*BC817-25 / BC817-40		
P _D	Total Device Dissipation	350	mW	
	Derate above 25°C	2.8	mW/°C	
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W	

^{*}Device mounted on FR-4 PCB 40 mm X 40 mm X 1.5 mm.

These ratings are based on a maximum junction temperature of 150 degrees C.
 These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

NPN General Purpose Amplifier

(continued)

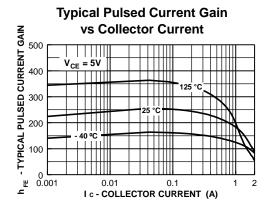
TA = 25°C unless otherwise noted

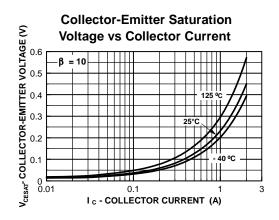
Syllibol	Parameter	rest Conditions	IVIIII	IVIAX	Ullits
OFF CHA	RACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10 \text{ mA}, I_B = 0$	45		V
V _{(BR)CES}	Collector-Base Breakdown Voltage	$I_C = 100 \mu A, I_E = 0$	50		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10 \mu A, I_C = 0$	5.0		V
I _{CBO}	Collector-Cutoff Current	V _{CB} = 20 V		100	nA
		$V_{CB} = 20 \text{ V}, T_A = 150^{\circ}\text{C}$		5.0	μΑ

ON CHARACTERISTICS

h _{FE}	DC Current Gain	$I_C = 100 \text{ mA}, V_{CE} = 1.0 \text{ V}$ - 25	160	400	
		- 40	250	600	
		$I_C = 500 \text{ mA}, V_{CE} = 1.0 \text{ V}$	40		
V _{CE(sat)}	Collector-Emitter Saturation Voltage	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$		0.7	V
$V_{BE(On)}$	Base-Emitter On Voltage	$I_C = 500 \text{ mA}, V_{CE} = 1.0 \text{ V}$		1.2	V

Typical Characteristics

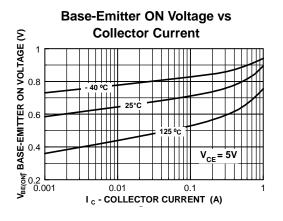


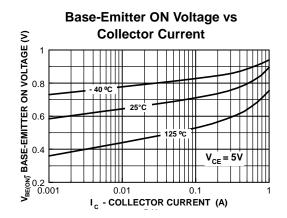


NPN General Purpose Amplifier

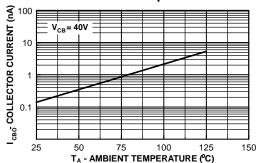
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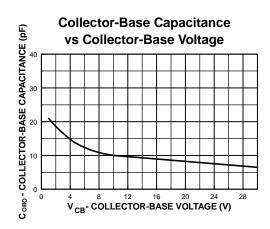
Typical Characteristics (continued)

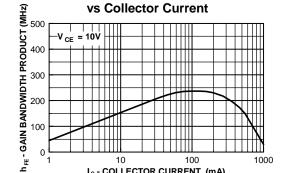




Collector-Cutoff Current vs Ambient Temperature

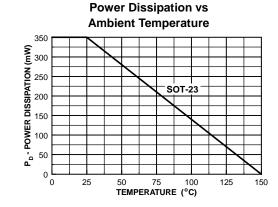






Ic - COLLECTOR CURRENT (mA)

Gain Bandwidth Product



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