

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	50			V	$I_C=10\mu A, I_E=0$
Collector-Emitter Breakdown Voltage <sup>(Note3)</sup>	$V_{(BR)CEO}$	45			V	$I_C=10mA, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E=1\mu A, I_C=0$
Collector Cutoff Current	$I_{CBO}$			0.1	$\mu A$	$V_{CB}=45V, I_E=0$
Emitter-Base Cutoff Current	$I_{EBO}$			0.1	$\mu A$	$V_{EB}=4V, I_C=0$
DC Current Gain <sup>(Note3)</sup>	$h_{FE1}$	100		600		$V_{CE}=1V, I_C=100mA$
	$h_{FE2}$	40				$V_{CE}=1V, I_C=500mA$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.7	V	$I_C=500mA, I_B=50mA$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1.2	V	$I_C=500mA, I_B=50mA$
Base-Emitter Voltage	$V_{BE}$			1.2	V	$V_{CE}=1V, I_C=500mA$
Collector capacitance	$C_{ob}$		10		pF	$V_{CB}=10V, f=1MHz,$
Transition Frequency	$f_T$	100			MHz	$V_{CE}=5V, I_C=10mA, f=100MHz$

Note: 3. Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2.0\%$

**CLASSIFICATION OF  $h_{FE}$  (1)**

Rank	BC817-16	BC817-25	BC817-40
Range	100-250	160-400	250-600

## Curve Characteristics

Fig. 1 - Static Characteristics

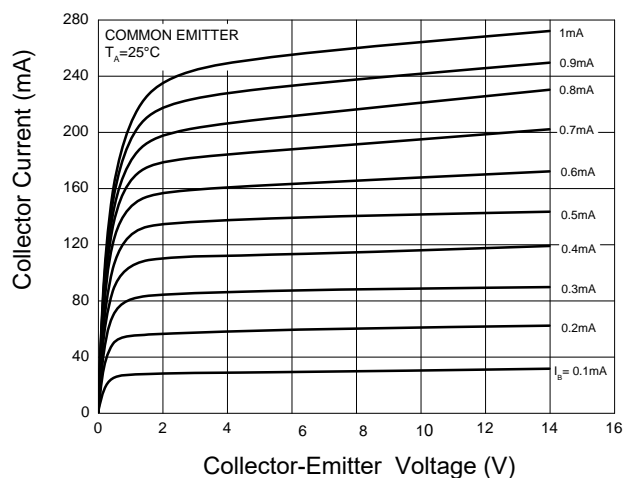


Fig. 2 - DC Current Gain Characteristics

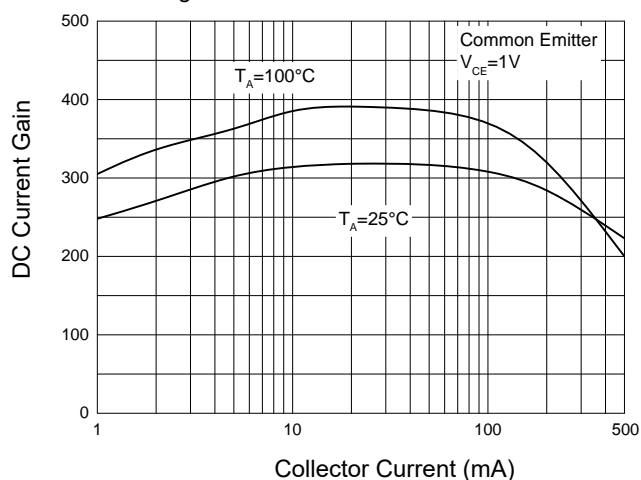


Fig. 3 - Collector-Emitter Saturation Voltage Characteristics

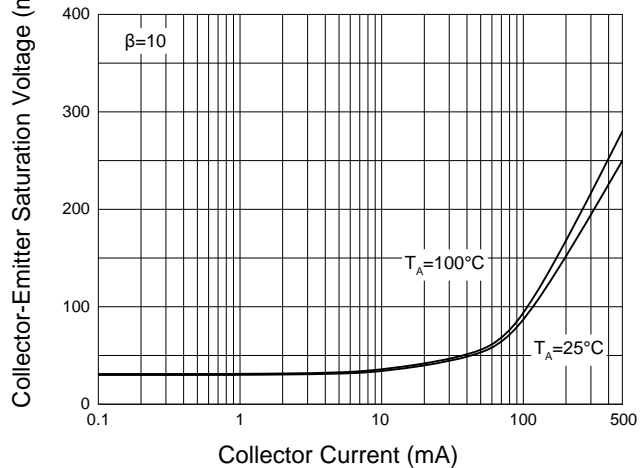


Fig. 4 - Base-Emitter Saturation Voltage Characteristics

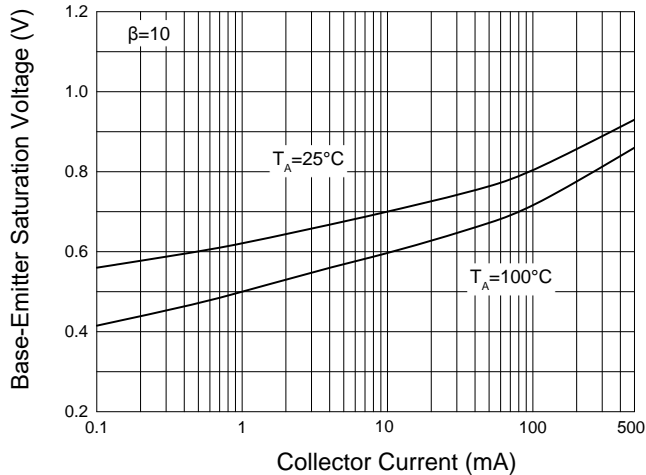


Fig. 5 - Base-Emitter Voltage Characteristics

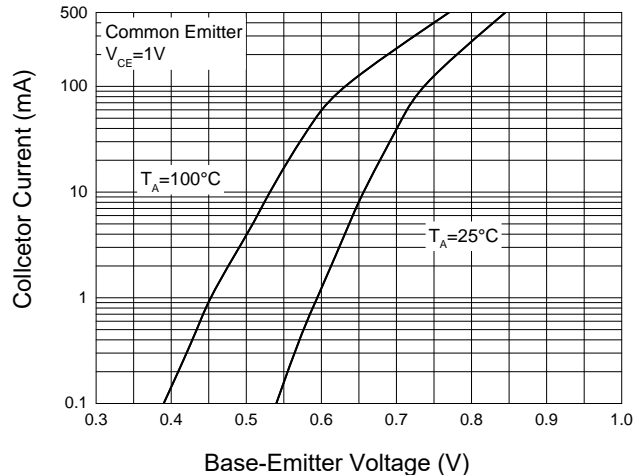
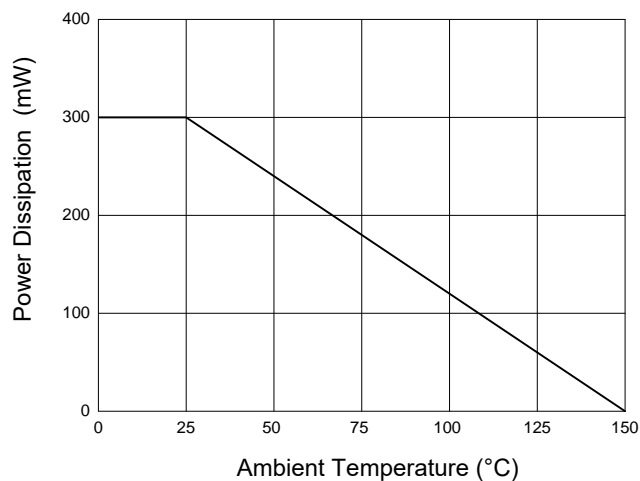


Fig. 6 - Power Derating Curve



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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