

Electrical Characteristics (at Ta=25 °C unless otherwise specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNITS
Collector Cut Off Current	I_{CBO}	$V_{CB} = 30V, I_E = 0$			15	nA
		$V_{CB} = 30V, I_E = 0, T_j = 150^{\circ}C$			4	uA
Base Emitter On Voltage	$V_{BE(on)}^*$	$I_C = 2mA, V_{CE} = 5V$	0.58	0.7		V
		$I_C = 10mA, V_{CE} = 5V$		0.77		
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$	$I_C = 10mA, I_B = 0.5mA$		0.25		V
		$I_C = 100mA, I_B = 5mA$		0.60		
Base Emitter Saturation Voltage	$V_{BE(Sat)}^{***}$	$I_C = 10mA, I_B = 0.5mA$		0.7		V
		$I_C = 100mA, I_B = 5mA$		0.9		
DC Current Gain	h_{FE}	$I_C = 10uA, V_{CE} = 5V$ BC846A/BC847A/BC848A		90		
		BC846B/BC847B/BC848B		150		
		BC847C/BC848C		270		
		$I_C = 2mA, V_{CE} = 5V$ BC846	110		450	
		BC847/BC848	110		800	
		BC846A/BC847A/BC848A	110		220	
		BC846B/BC847B/BC848B	200		450	
		BC847C/BC848C	420		800	
Collector Capacitance	C_C	$I_E = I_C = 0, V_{CB} = 10V, f = 1MHz$		2.5		pF
Transition Frequency	f_T	$I_C = 10mA, V_{CB} = 5V, f = 100MHz$	100			MHz
Small Signal Current Gain	$ h_{fe} $	$I_C = 2mA, V_{CE} = 5V, f = 1kHz$ BC856	125		500	
		BC857/BC858	125		900	
		BC846A/BC847A/BC848A	125		260	
		BC846B/BC847B/BC848B	240		500	
		BC847C/BC848C	450		900	
Noise Figure	NF	$I_C = 0.2mA, V_{CE} = 5V$ $R_S = 2k\ ohm, f = 1KHz, B = 200Hz$		10		dB

* $V_{BE(on)}$ decreases by about 2mV/K with increase temperature.

*** $V_{BE(Sat)}$ decreases by about 1.7mV/K with increase temperature.