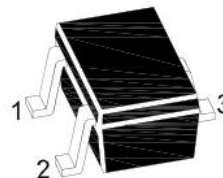


NPN Silicon Epitaxial Transistor

for switching and amplifier applications



1.Base 2.Emitter 3.Collector
SOT-523 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	BC846T 80	V
		BC847T, BC850T 50	
		BC848T, BC849T 30	
Collector Emitter Voltage	V_{CEO}	BC846T 65	V
		BC847T, BC850T 45	
		BC848T, BC849T 30	
Emitter Base Voltage	V_{EBO}	BC846T, BC847T 6	V
		BC848T, BC849T, BC850T 5	
Collector Current	I_C	100	mA
Peak Collector Current	I_{CM}	200	mA
Power Dissipation	P_{tot}	150	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

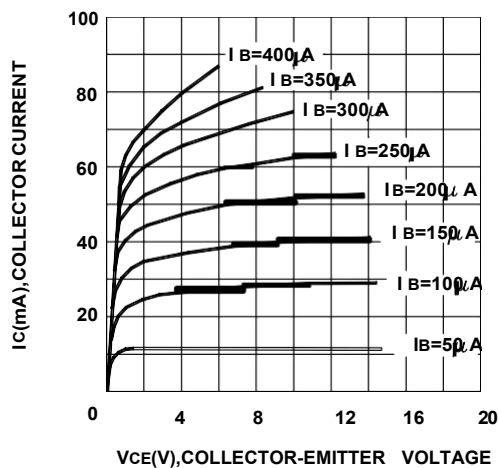
Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain	Current Gain Group	h_{FE}	-	220	-
at $V_{CE} = 5\text{ V}$, $I_C = 2\text{ mA}$					
	B	110	-	450	-
	C	200	-	800	-
Collector Base Cutoff Current	I_{CBO}	-	-	15	nA
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	250	mV
at $I_C = 10\text{ mA}$, $I_B = 0.5\text{ mA}$					
at $I_C = 100\text{ mA}$, $I_B = 5\text{ mA}$	$V_{CE(sat)}$	-	-	600	mV
Base Emitter On Voltage	$V_{BE(on)}$	-	-	700	mV
at $V_{CE} = 5\text{ V}$, $I_C = 2\text{ mA}$					
at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	$V_{BE(on)}$	-	-	720	mV
Transition Frequency	f_T	-	300	-	MHz
at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$, $f = 100\text{ MHz}$					
Output Capacitance	C_{ob}	-	-	6	pF
at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$					

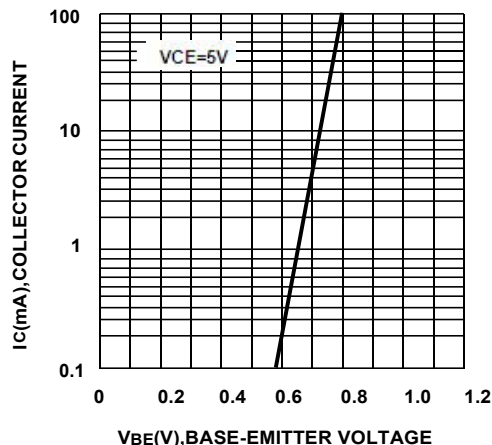
MARKING CODE

TYPE	846AT	846BT	846CT	847AT	847BT	847CT	848AT	848BT	848CT
MARKING	1A	1B	1C	1E	1F	1G	1J	1K	1L
TYPE	849AT	849BT	849CT	850AT	850BT	850CT			
MARKING	2A	2B	2C	2E	2F	2G			

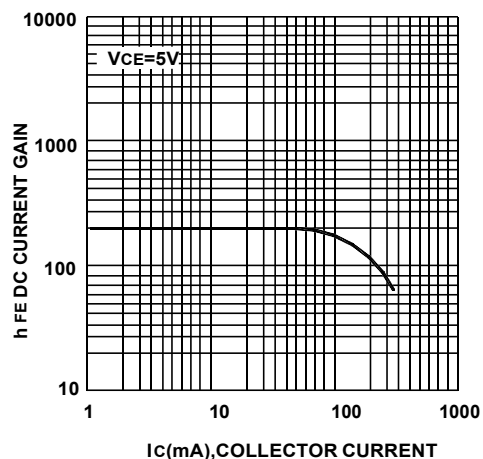
STATIC CHARACTERISTIC



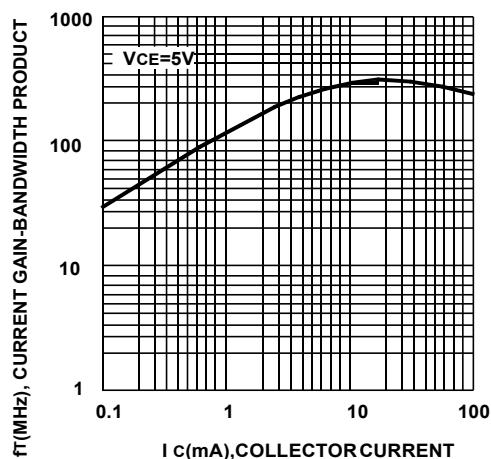
BASE-EMITTER ON VOLTAGE



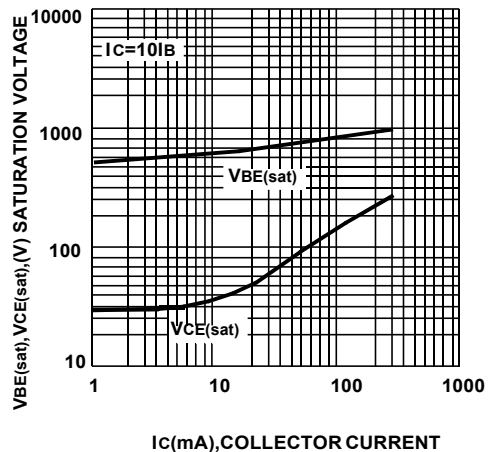
DC CURRENT GAIN



CURRENT GAIN BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE

