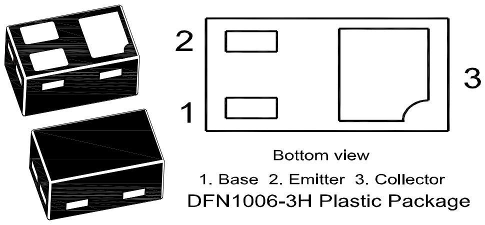
BC846P…BC850P

NPN Silicon Epitaxial Transistor

for switching and amplifier applications



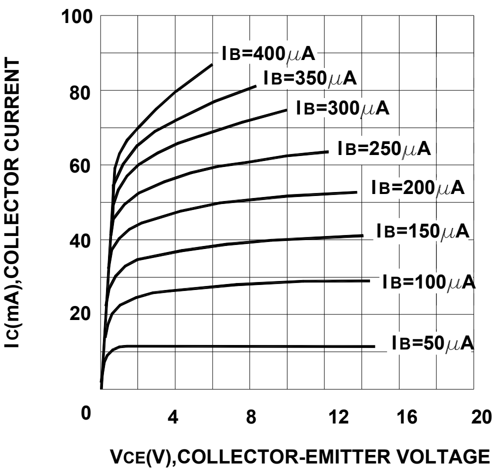
Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC846P	V_{CBO}	80	V
	BC847P, BC850P	V_{CBO}	50	V
	BC848P, BC849P	V_{CBO}	30	V
Collector Emitter Voltage	BC846P	V_{CEO}	65	V
	BC847P, BC850P	V_{CEO}	45	V
	BC848P, BC849P	V_{CEO}	30	V
Emitter Base Voltage	BC846P, BC847P	V_{EBO}	6	V
	BC848P,BC849P,BC850P	V_{EBO}	5	V
Collector Current		I_C	100	mA
Peak Collector Current		I_{CM}	200	mA
Power Dissipation		P_{tot}	150	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{stg}	- 65 to + 150	℃

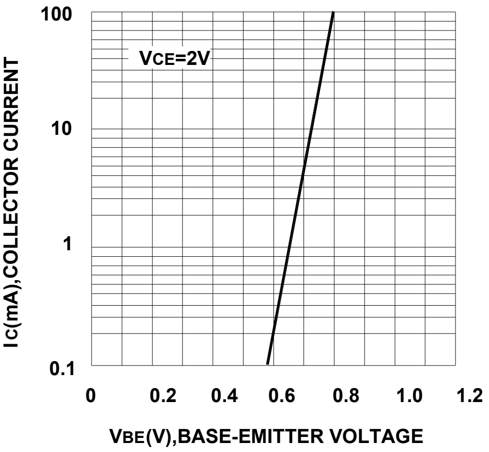
Characteristics at T_a = 25℃

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain						
at V_{CE} = 5 V, I_C = 2 mA	Current Gain Group A	h_{FE}	110	-	220	-
	B	h_{FE}	200	-	450	-
	C	h_{FE}	420	-	800	-
Collector Base Cutoff Current at V_{CB} = 30 V		I_{CBO}	-	-	15	nA
Collector Emitter Saturation Voltage						
at I_C = 10 mA, I_B = 0.5 mA		V_{CEsat}	-	-	250	mV
at I_C = 100 mA, I_B = 5 mA		V_{CEsat}	-	-	600	mV
Base Emitter On Voltage						
at V_{CE} = 5 V, I_C = 2 mA		$V_{BE(on)}$	580	-	700	mV
at V_{CE} = 5 V, I_C = 10 mA		$V_{BE(on)}$	-	-	720	mV
Transition Frequency at V_{CE} = 5 V, I_C = 10 mA, f = 100 MHz		f_T	-	300	-	MHz
Output Capacitance at V_{CB} = 10 V, f = 1 MHz		C_{ob}	-	-	6	pF
Input Capacitance at V_{EB} = 0.5 V, f = 1 MHz		C_{ib}	-	9	-	pF

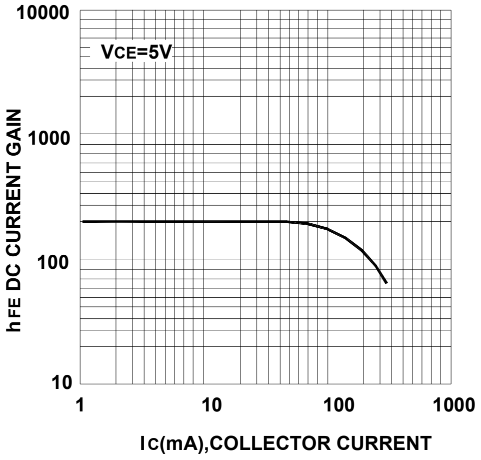
STATIC CHARACTERISTIC



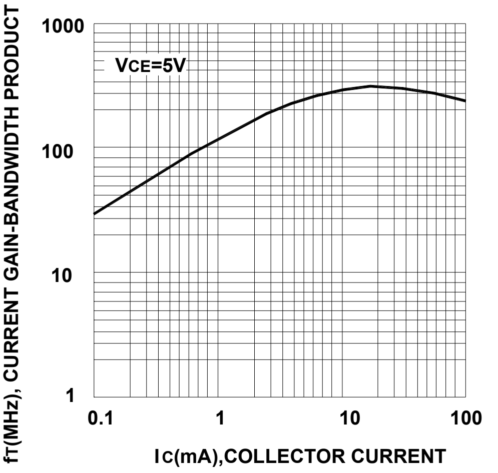
BASE-EMITTER ON VOLTAGE



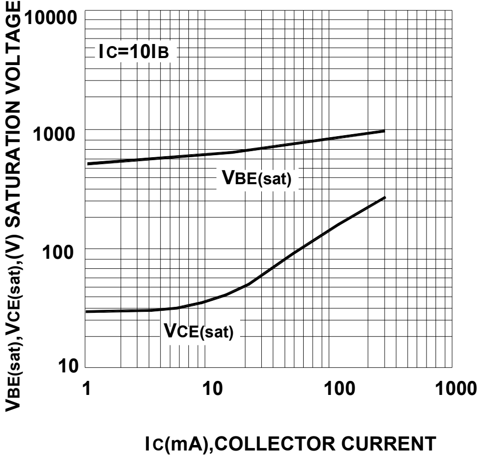
DC CURRENT GAIN



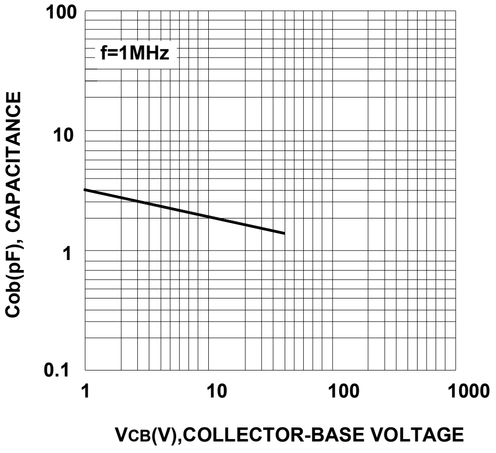
CURRENT GAIN BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE

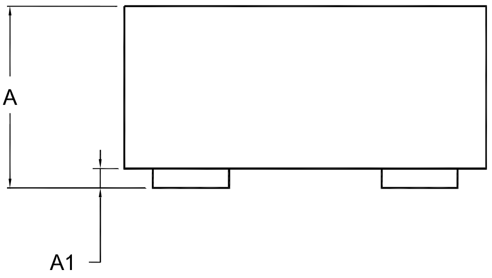


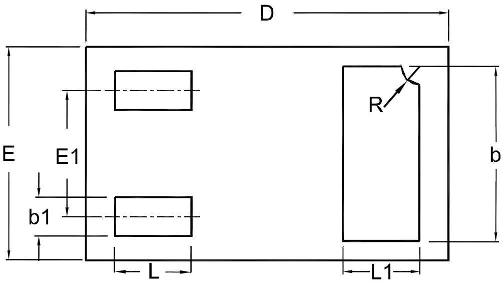
COLLECTOR OUTPUT CAPACITANCE



PACKAGE OUTLINE

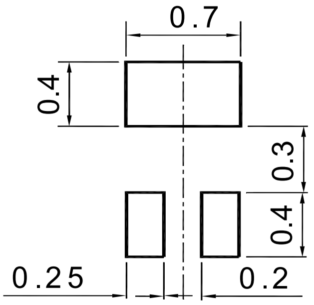
Plastic surface mounted package **DFN1006-3H**





UNIT	A	A1	b	b1	D	E	E1	L	L1	R
mm	0.51 0.46	0.05 0	0.55 0.45	0.2 0.1	1.05 0.95	0.65 0.55	0.325	0.3 0.2	0.3 0.2	0.15 0.05

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
DFN1006-3H	8	4 ± 0.1	0.157 ± 0.004	178	7	5,000