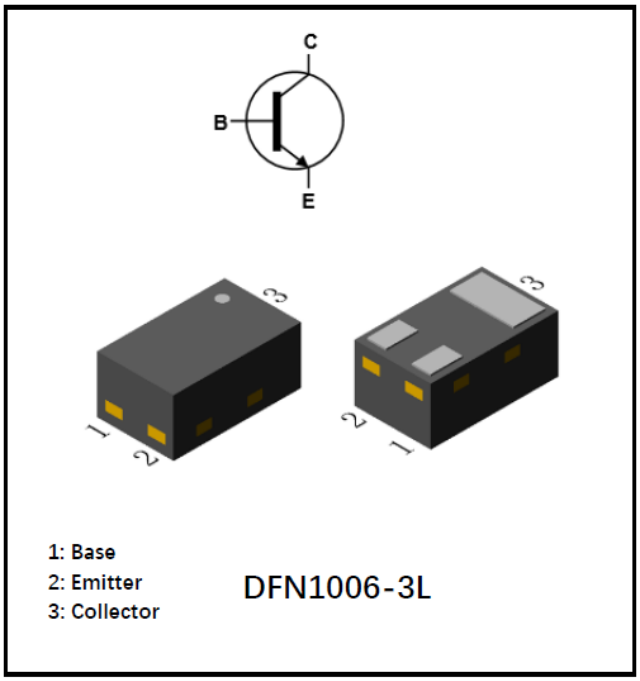
NPN General Purpose Transistor



Features

- Lead Free Finish/RoHS Compliant
- Small package saves board space
- Moisture Sensitivity Level 3

Mechanical Data

- **Package**: DFN1006-3L
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking**: D5

■Maximum Ratings (Ta=25℃ Unless otherwise specified)

Symbol	Parameter	Value	Unit
VCBO	Collector-Base Voltage	50	V
VCEO	Collector-Emitter Voltage	45	V
VEBO	Emitter-Base Voltage	6	V
IC	Collector Current	100	mA
PC	Collector Power Dissipation	100	mW
Tj	Junction Temperature	-55～+150	℃
Tstg	Storage Temperature	-55～+150	℃

■Ordering Information (Example)

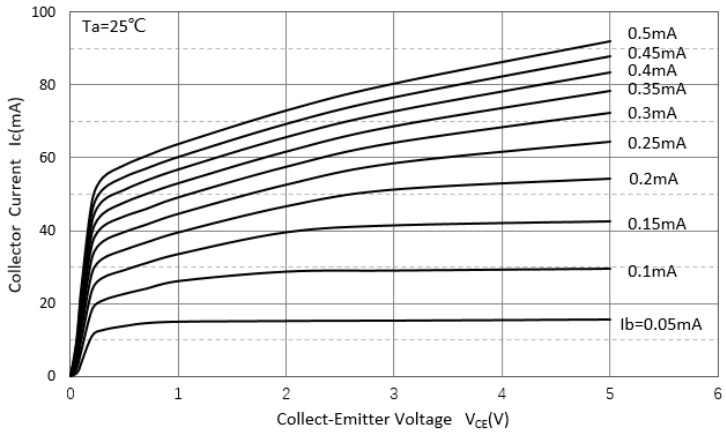
PREFERED P/N	UNIT WEIGHT(mg)	MINIIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC847BM	Approximate 0.89	10K	100K	400K	Tape & Reel

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

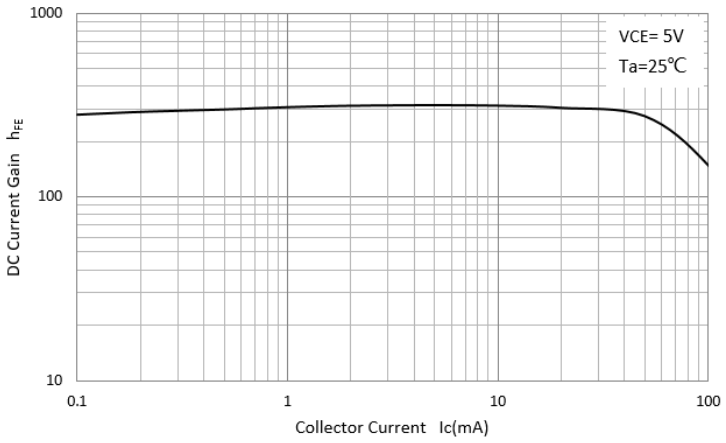
Parameter	Symbol	Test conditions	Min	TYP	Max	Unit
Collector-base breakdown voltage	V_{CBO}	IC= 10μA, IE=0	50	-	-	V
Collector-emitter breakdown voltage	V_{CEO}	IC= 10mA, IB=0	45	-	-	V
Emitter-base breakdown voltage	V_{EBO}	IE= 10μA, IC=0	6	-	-	V
Collector-base cut-off current	I_{CBO}	VCB=30 V ,IE=0	-	-	15	nA
Emitter-base cut-off current	I_{EBO}	VEB=5 V , IC=0	-	-	100	nA
DC current gain	h_{FE}	VCE= 5V, IC= 2mA	200	-	450	
Collector-emitter saturation voltage	$V_{CE(sat)}$	IC=10mA, IB= 0.5mA	-	-	200	mV
	$V_{CE(sat)}$	IC=100mA, IB= 5mA	-	-	400	mV
Base-emitter saturation voltage	$V_{BE(sat)}$	IC=100mA, IB= 5mA	-	0.9	1.1	V
Base-emitter voltage	V_{BE}	VCE= 5V, IC= 2mA	580	-	700	mV
	V_{BE}	VCE=5V, IC= 10mA	-	-	770	mV
Transition frequency	f_T	VCE=5V, IC= 10mA f=100MHz	100	-	-	MHz
Collector-base output capacitance	Cob	VCB=10V,f=1MHz	-	-	4.5	pF

■ **Characteristics** (Typical)

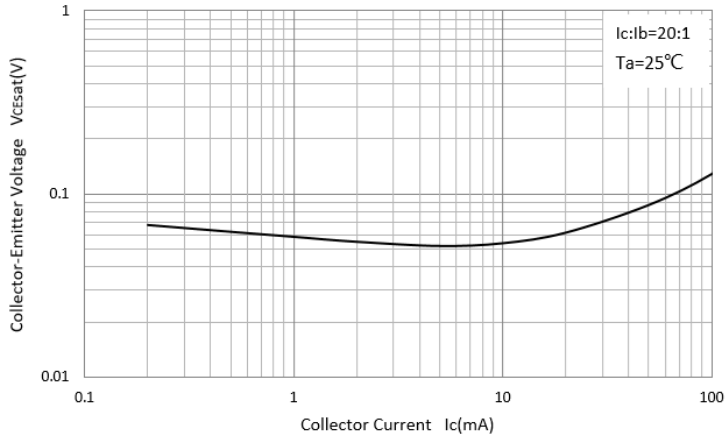
Static Characteristic



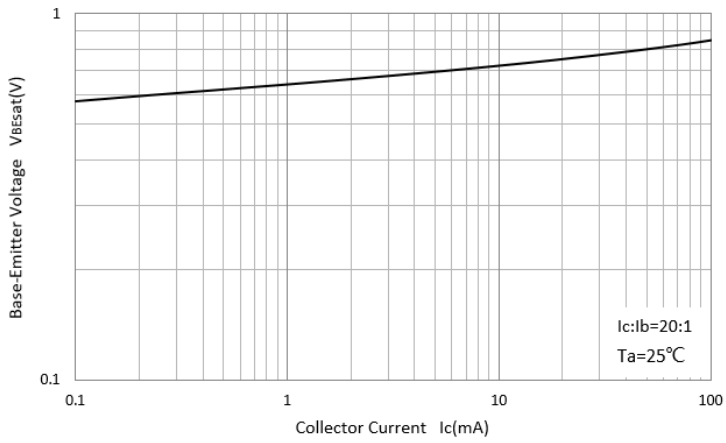
DC Current Gain



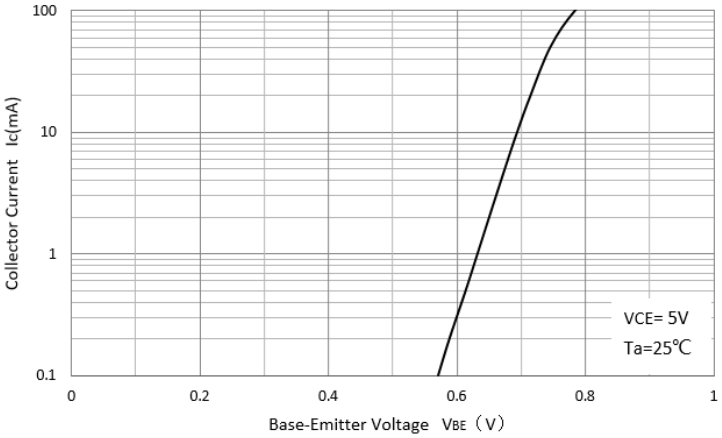
Collector-Emitter Saturation Voltage



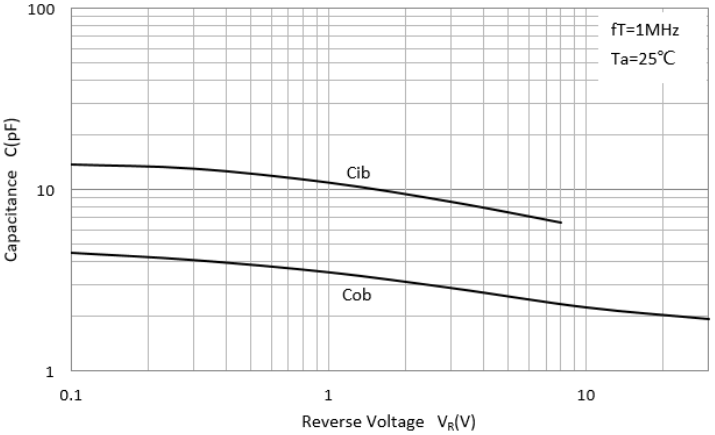
Base-Emitter Saturation Voltage



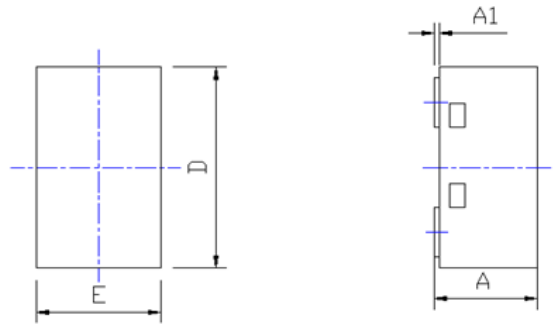
Base-Emitter On Voltage



Cob/Cib-V_{CB}/V_{EB}

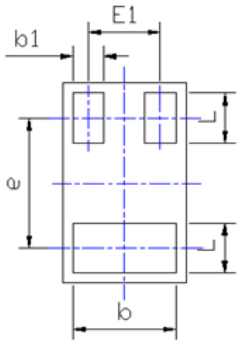


■Outline Dimensions



TOP VIEW

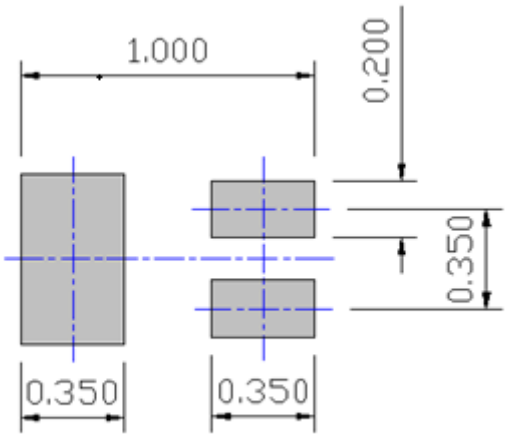
SIDE VIEW



BOTTOM VIEW

DIMENSIONS			
SYMBOL	Millimeter		
	MIN.	NOM.	MAX.
A	0.42	---	0.55
A1	0.025REF		
b	0.45	0.50	0.55
b1	0.10	0.15	0.20
D	0.95	1.00	1.05
E	0.55	0.60	0.65
E1	0.35BSC		
e	0.65BSC		
L	0.20	0.25	0.30

■ Soldering Footprint



UNIT：mm

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