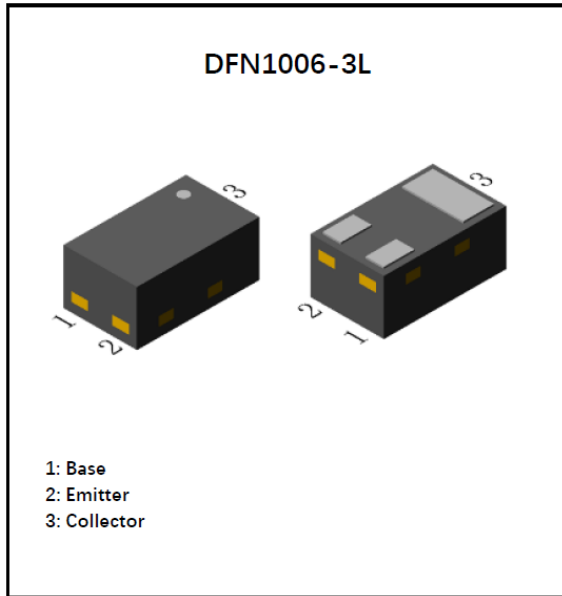


## PNP General Purpose Amplifier



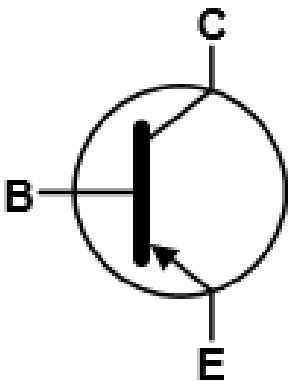
### Features

- We declare that the material of product compliance with RoHS requirements and Halogen Free
- Surface mount package ideally suited for automatic Insertion
- Moisture Sensitivity Level 3
- General switching and amplification

### Mechanical Data

- Package: DFN1006-3L
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking: 2A

### Equivalent circuit



### Maximum Ratings (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	$V_{CBO}$	V	$I_C = -10\mu A, I_E = 0$	-40
Collector-Emitter Voltage	$V_{CEO}$	V	$I_C = -1mA, I_B = 0$	-40
Emitter-Base Voltage	$V_{EBO}$	V	$I_E = -10\mu A, I_C = 0$	-5
Collector Current	$I_C$	mA		-200
Collector Power Dissipation	$P_C$	mW		100
Operation Junction Temperature	$T_J$	°C		-55 to +150
Storage Temperature	$T_{STG}$	°C		-55 to +150



# MMBT3906L3

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

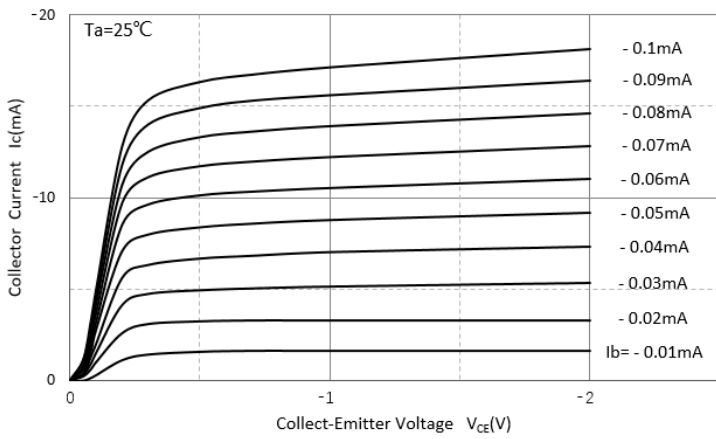
Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	$I_C = -10\mu A, I_E = 0$	-40	-	-
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	$I_C = -1mA, I_B = 0$	-40	-	-
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E = -10\mu A, I_C = 0$	-5	-	-
Collector-base Cut-off Current	$I_{CBO}$	nA	$V_{CB} = -30Vdc$	-	-	-50
Emitter-base cut-off current	$I_{EBO}$	nA	$V_{EB} = -5Vdc$	-	-	-50
DC current gain	$h_{FE1}$		$V_{CE} = -1V, I_C = -0.1mA$	60	-	-
	$h_{FE2}$		$V_{CE} = -1V, I_C = -1mA$	80	-	-
	$h_{FE3}$		$V_{CE} = -1V, I_C = -10mA$	100	-	300
	$h_{FE4}$		$V_{CE} = -1V, I_C = -50mA$	60	-	-
	$h_{FE5}$		$V_{CE} = -1V, I_C = -100mA$	30	-	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C = -10mA, I_B = -1mA$	-	-	-0.25
		V	$I_C = -50mA, I_B = -5mA$	-	-	-0.4
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C = -10mA, I_B = -1mA$	-0.65	-	-0.85
		V	$I_C = -50mA, I_B = -5mA$	-	-	-0.95
Collector-Base Output Capacitance	$C_{ob}$	pF	$V_{CB} = -5V, I_E = 0A, f = 1MHz$	-	-	4.5
Transition frequency	$f_T$	MHZ	$I_C = -10mA, V_{CE} = -20Vdc, f = 100MHz$	250	-	-
Delay Time	$t_d$	ns	$V_{CC} = -3V, I_C = -10mA, V_{BE} = -0.5V, I_{B1} = -1mA$	-	-	35
Rise Time	$t_r$	ns		-	-	35
Storage Time	$t_s$	ns	$V_{CC} = -3V, I_C = -10mA, I_{B1} = I_{B2} = -1mA$	-	-	225
Fall Time	$t_f$	ns		-	-	75



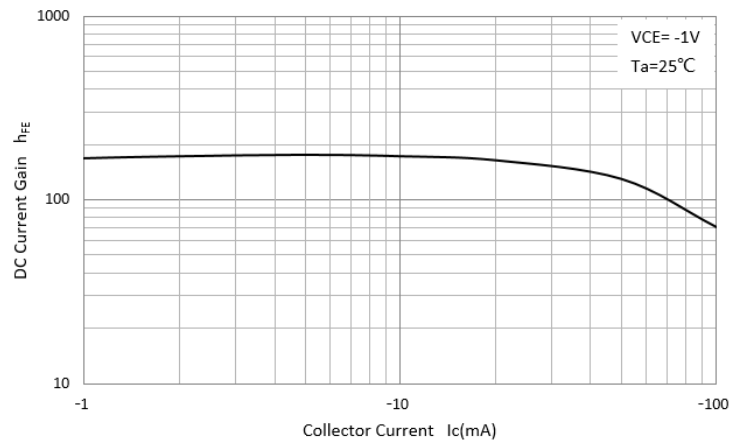
# MMBT3906L3

## Electrical Characteristics (Typical)

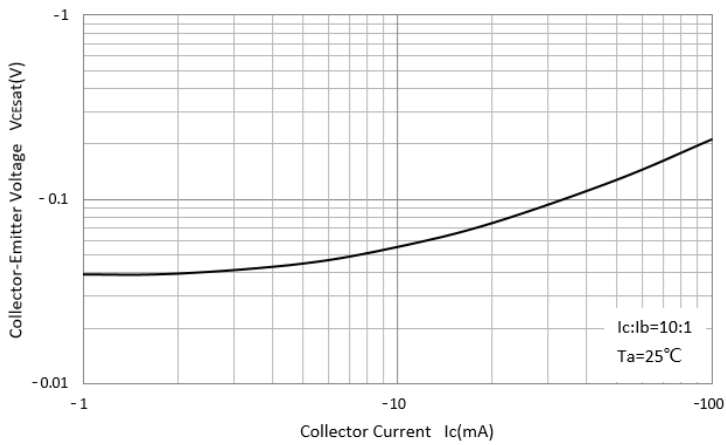
### Static Characteristic



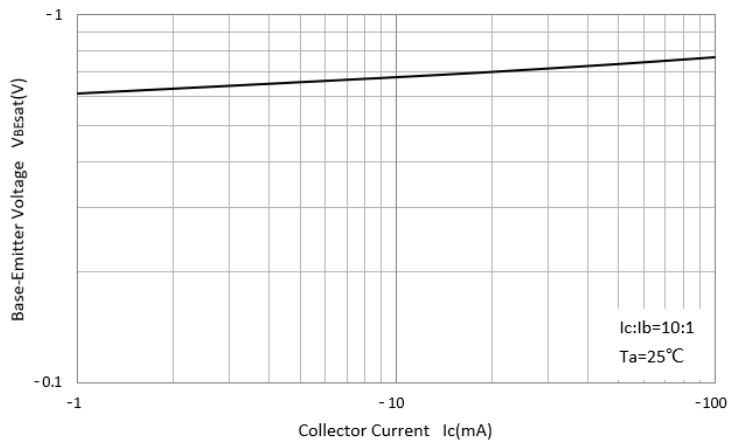
### DC Current Gain



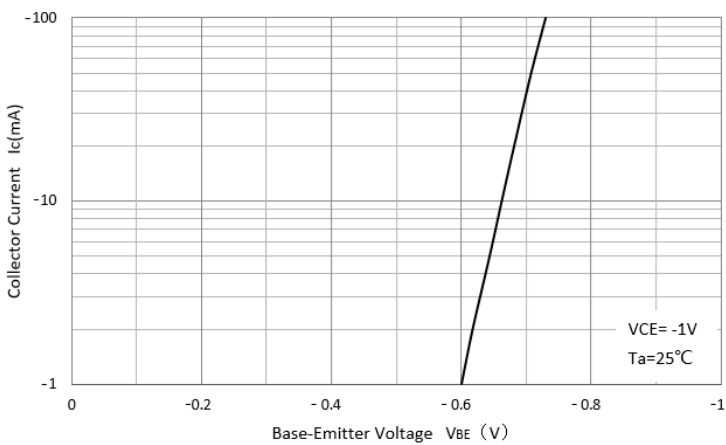
### Collector-Emmitter Saturation Voltage



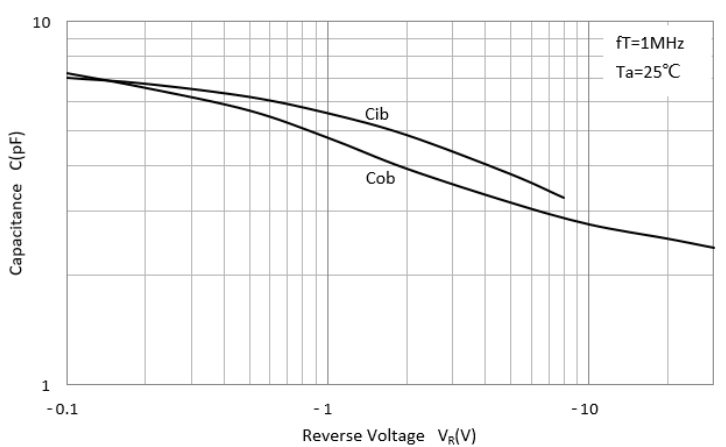
### Base-Emmitter Saturation Voltage



### Base-Emmitter On Voltage



### Cob/Cib-V<sub>CB</sub>/V<sub>EB</sub>



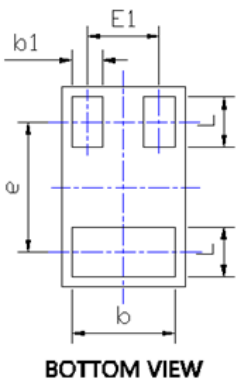
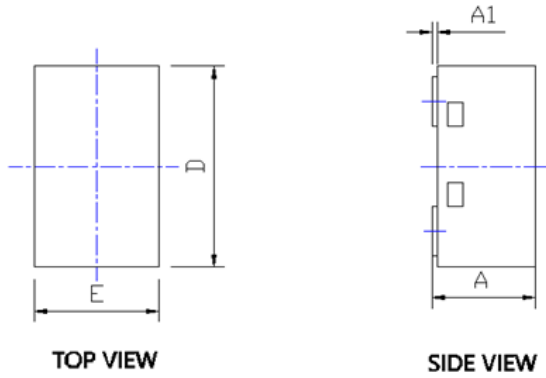


# MMBT3906L3

## ■ Ordering Information (Example)

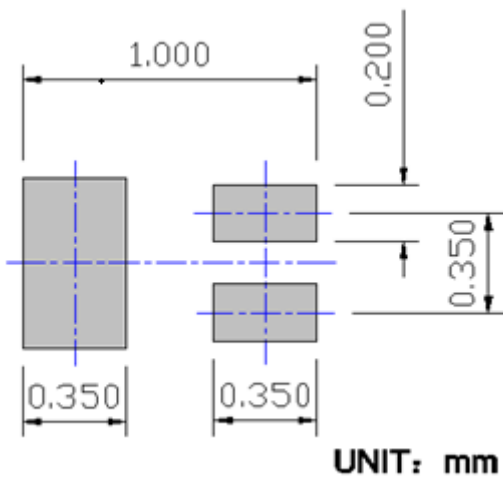
PREFERRED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBT3906L3	Approximate 0.89	10K	100K	400K	Tape & Reel

## ■DFN1006-3L Package Outline Dimensions



SYMBOL	DIMENSIONS		
	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

## ■DFN1006-3L Soldering Footprint





## MMBT3906L3

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