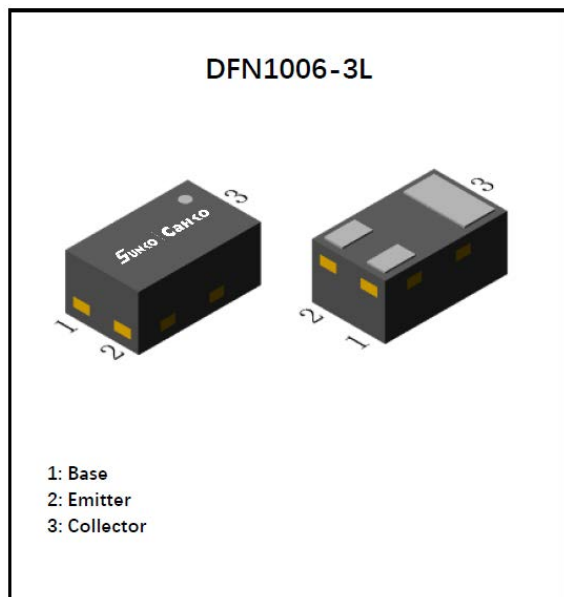


PNP General Purpose Amplifier



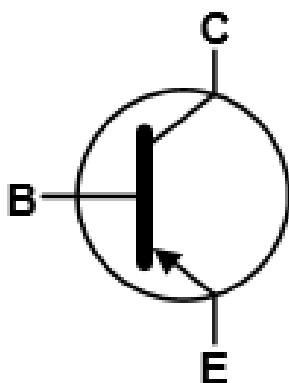
Features

- We declare that the material of product compliance with 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

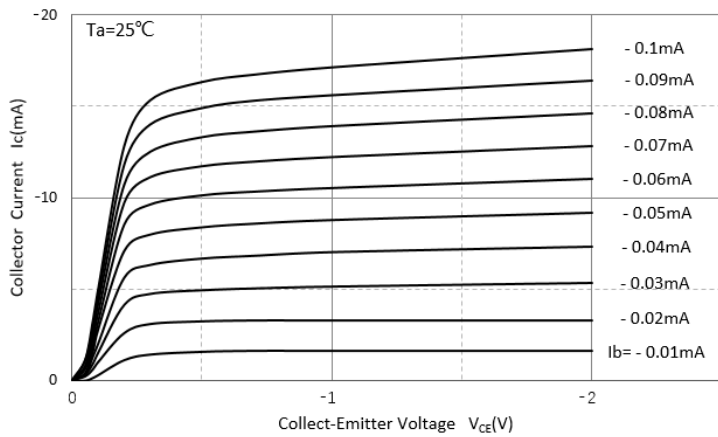
MMBT3906L3

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

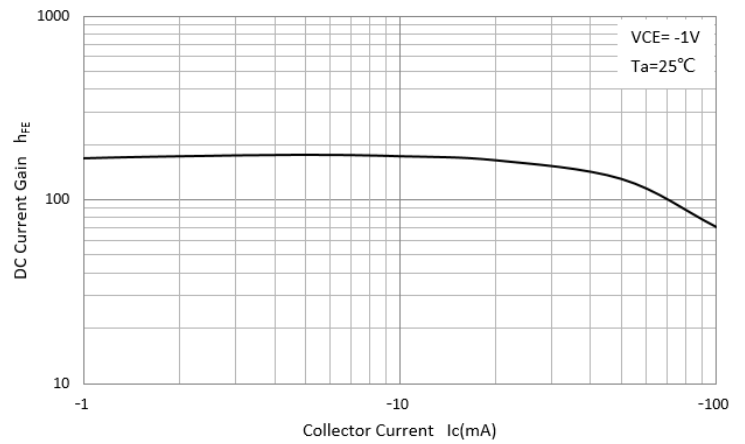
Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	$I_C=-10\mu A, I_E=0$	-40	-	-
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	$I_C=-1mA, I_B=0$	-40	-	-
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E=-10\mu A, I_C=0$	-5	-	-
Collector-base Cut-off Current	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

■ Electrical Characteristics (Typical)

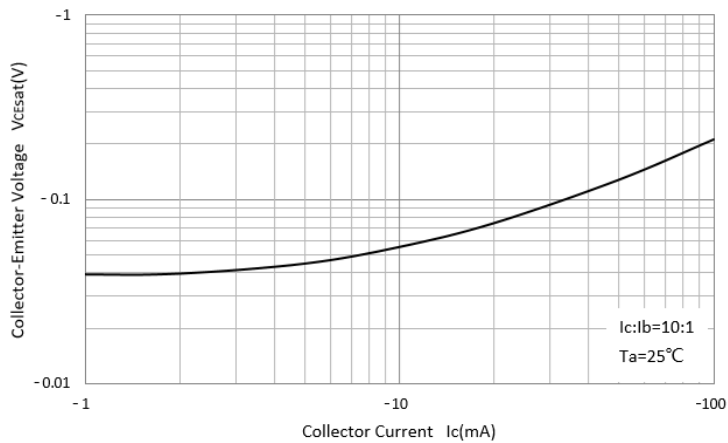
Static Characteristic



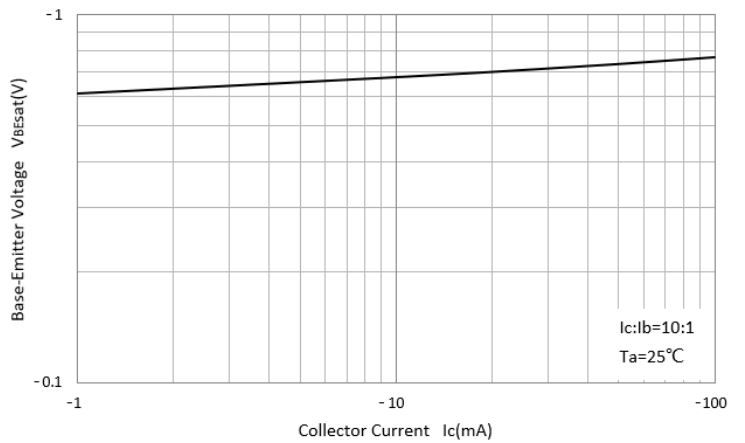
DC Current Gain



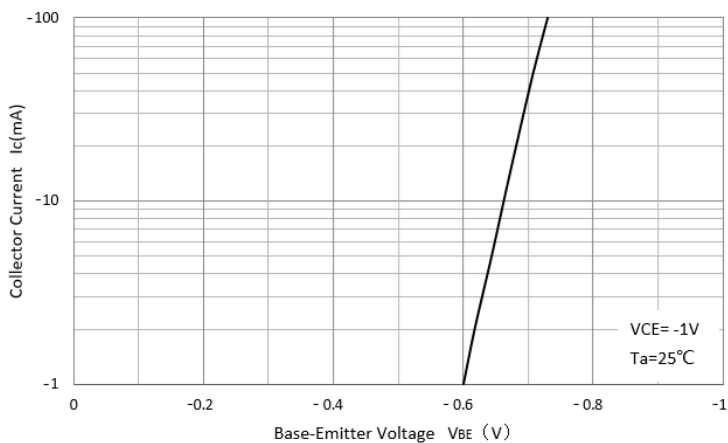
Collector-Emitter Saturation Voltage



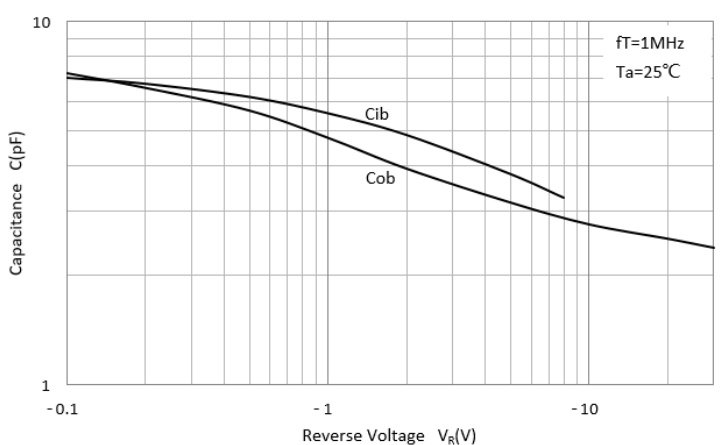
Base-Emitter Saturation Voltage



Base-Emitter On Voltage



$C_{ob}/C_{ib}-V_{CB}/V_{EB}$

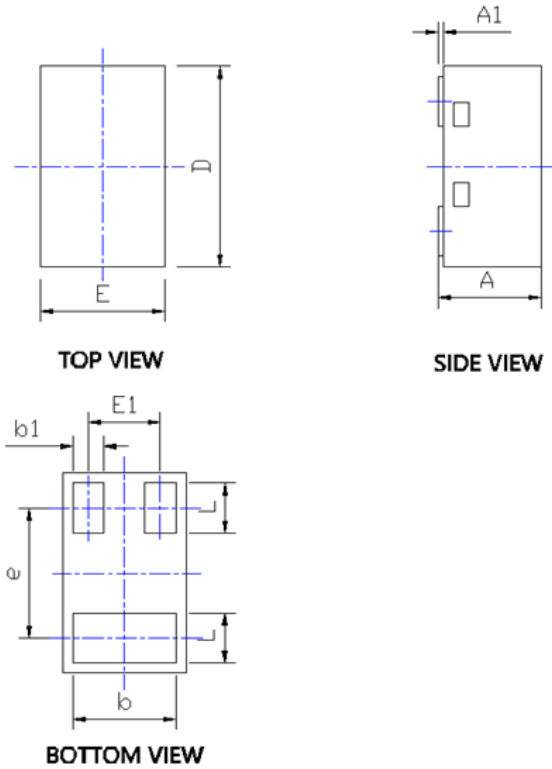


MMBT3906L3

■ Ordering Information (Example)

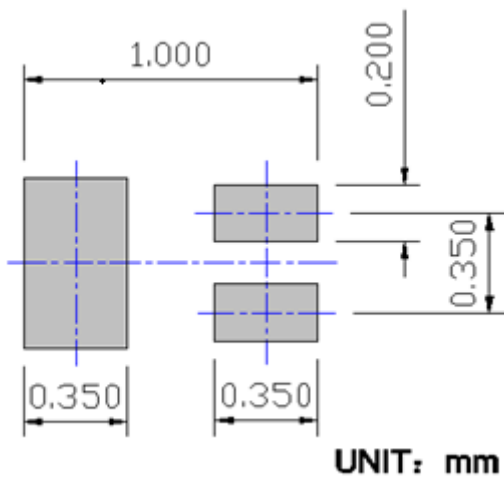
PREFERRED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBT3906L3	Approximate 0.89	10K	100K	400K	Tape & Reel

■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



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