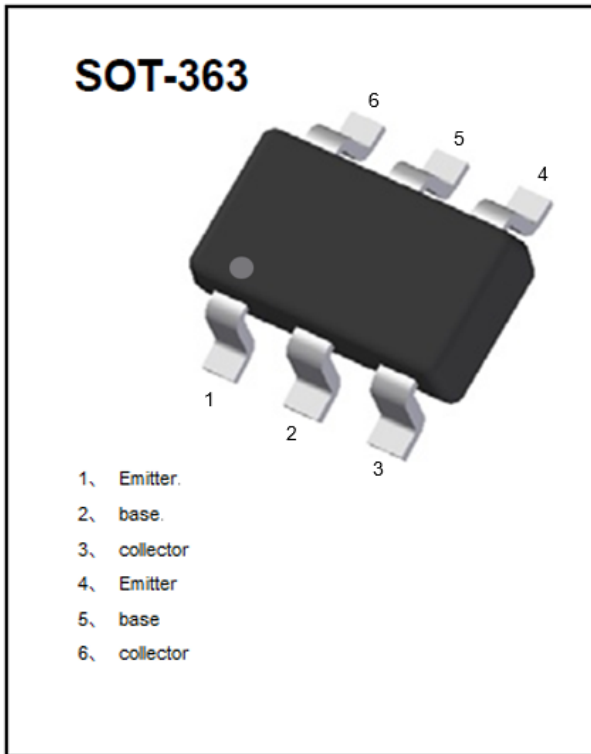


## Dual PNP Small Signal Transistor



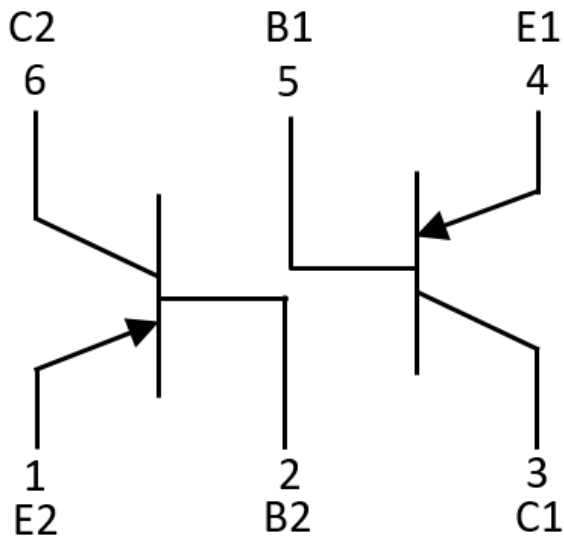
### Features

- Epoxy meets UL-94 V-0 flammability rating
- Surface mount package ideally Suited for Automatic Insertion
- PNP

### Mechanical Data

- **Package:** SOT-363
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** K3N

### ■Equivalent circuit





# MMDT3906

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

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage	$V_{CEO}$	V	$I_C=-1mA, I_B=0$	-40
Collector-Base Voltage	$V_{CBO}$	V	$I_C=-10\mu A, I_E=0$	-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		200
Junction Temperature	$T_J$	°C		-55 to +150
Storage Temperature	$T_{stg}$	°C		-55 to +150

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

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-base breakdown voltage	$V_{CBO}$	V	$I_C=-10\mu A, I_E=0$	-40		
Collector-emitter breakdown voltage	$V_{CEO}$	V	$I_C=-1mA, I_B=0$	-40		
Emitter-base breakdown voltage	$V_{EBO}$	V	$I_E=-10\mu A, I_C=0$	-5		
Collector-Base cut-off current	$I_{CBO}$	nA	$V_{CB}=-30V, I_E=0$			-50
Collector-emitter cut-off Current	$I_{CEX}$	nAdc	$V_{CE}=-30Vdc, V_{BE}=-3.0Vdc$			-50
Emitter-Base Cut-off current	$I_{EBO}$	nA	$V_{EB}=-5V, I_C=0$			-50
DC current gain	$h_{FE(1)}$		$V_{CE}=-1V, I_C=-0.1mA$	40		
	$h_{FE(2)}$		$V_{CE}=-1V, I_C=-1mA$	70		
	$h_{FE(3)}$		$V_{CE}=-1V, I_C=-10mA$	100		300
	$h_{FE(4)}$		$V_{CE}=-1V, I_C=-50mA$	60		
	$h_{FE(5)}$		$V_{CE}=-1V, I_C=-100mA$	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=-10mA, I_B=-1mA$			-0.25
			$I_C=-50mA, I_B=-5mA$			-0.4
Baser-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C=-10mA, I_B=-1mA$	-0.65		-0.85
			$I_C=-50mA, I_B=-5mA$			-0.95
Collector-base Output Capacitance	Cobo	pF	$V_{CB}=-5.0Vdc, f=1.0MHz, I_E=0$			4.5
Transition frequency	$f_T$	MHz	$V_{CE}=-20V, I_C=-10mA, f=100MHz$	250		
Noise figure	NF	dB	$V_{CE}=-5V, I_C=-0.1mA, f=1kHz, R_s=1K\Omega$			4



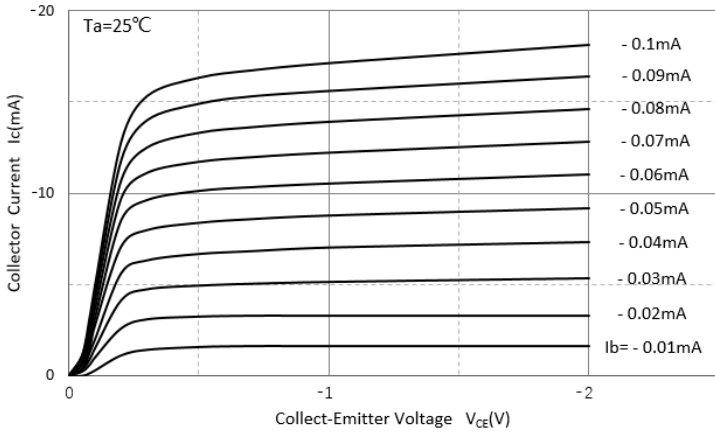
# MMDT3906

## Ordering Information (Example)

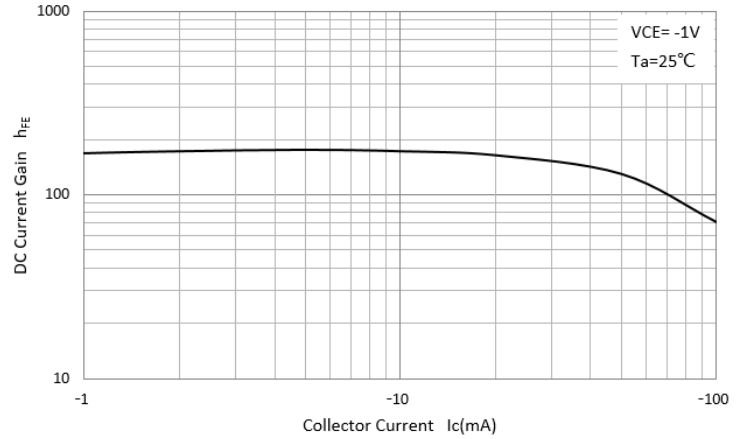
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMDT3906	F2	Approximate 0.009g	3000	30000	120000	7" reel

## Characteristics (Typical)

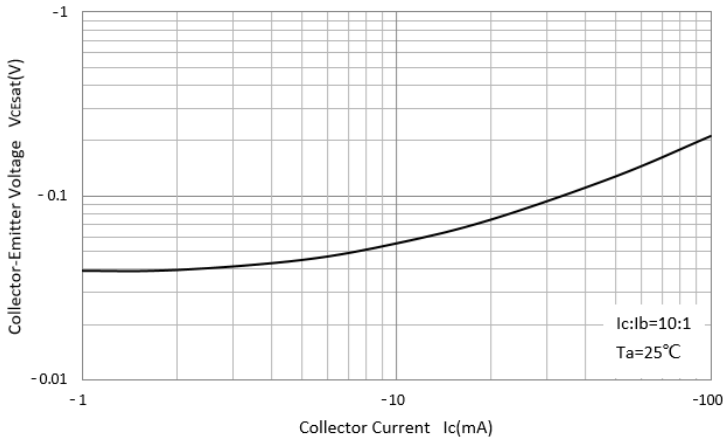
Static Characteristic



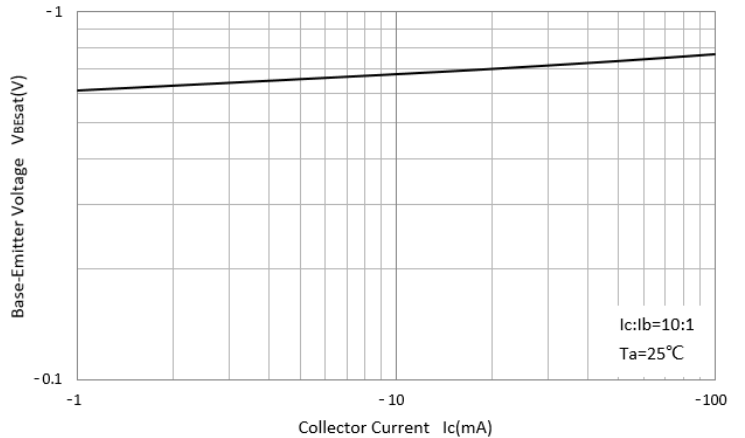
DC Current Gain



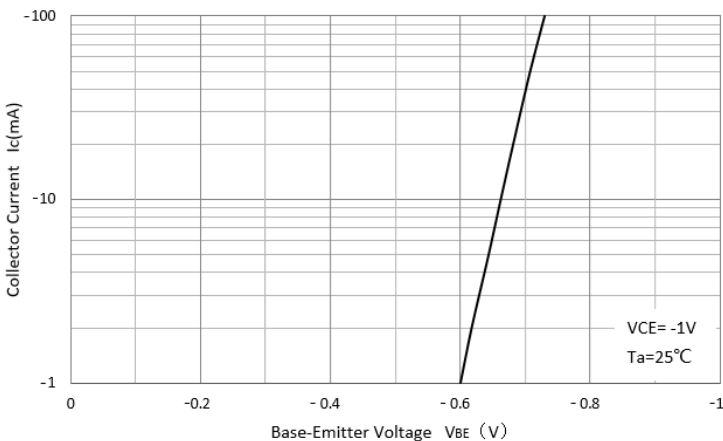
Collector-Emmitter Saturation Voltage



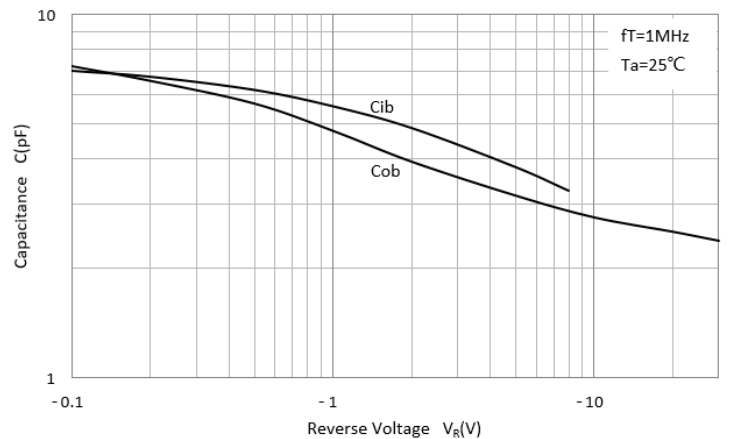
Base-Emmitter Saturation Voltage



Base-Emmitter On Voltage



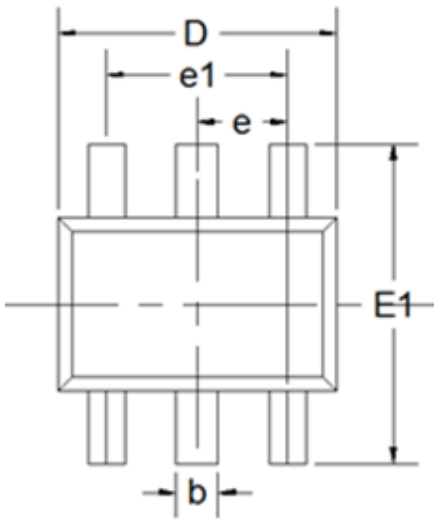
Cob/Cib-V<sub>CB</sub>/V<sub>EB</sub>



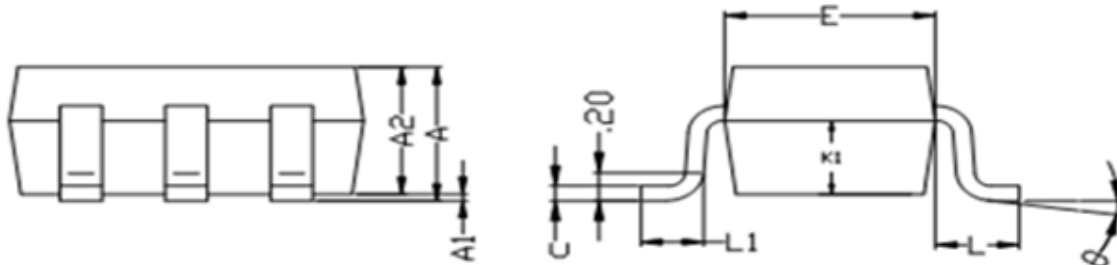


# MMDT3906

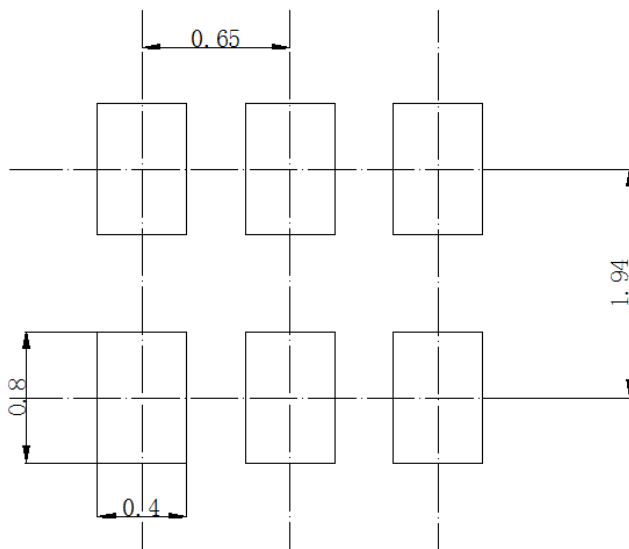
## ■SOT-363 Package Outline Dimensions



DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.035	0.043	0.9	1.1
A1	0	0.004	0	0.1
A2	0.035	0.039	0.9	1
b	0.006	0.014	0.15	0.35
c	0.002	0.01	0.05	0.25
D	0.071	0.087	1.8	2.2
E	0.045	0.053	1.15	1.35
E1	0.085	0.096	2.15	2.45
e	0.026Typ		0.65Typ	
e1	0.047	0.055	1.2	1.4
L	0.021Typ		0.525Typ	
L1	0.01	0.018	0.26	0.46
φ	0°	8°	0°	8°



## ■SOT-363 Soldering Footprint



Unit: mm



## MMDT3906

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