



Micro Commercial Components

Micro Commercial Components  
 20736 Marilla Street Chatsworth  
 CA 91311  
 Phone: (818) 701-4933  
 Fax: (818) 701-4939

# MMDT3906

## Features

- Ideal for Low Power Amplification and Switching
- Ultra-small Surface Mount Package
- Epitaxial Planar Die Construction
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Marking: K3N

### Maximum Ratings @ 25°C Unless Otherwise Specified

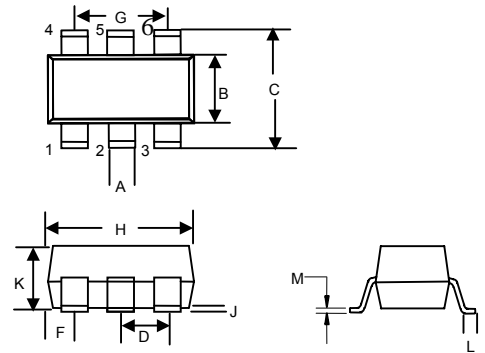
Symbol	Rating	Rating(PNP)	Unit
V <sub>CEO</sub>	Collector-Emitter Voltage	-40	V
V <sub>CBO</sub>	Collector-Base Voltage	-40	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current-Continuous	-0.2	A
P <sub>C</sub>	Collector Dissipation	0.2	W
T <sub>J</sub>	Operating Junction Temperature	-55 to +150	°C
T <sub>STG</sub>	Storage Temperature	-55 to +150	°C

### Electrical Characteristics @ 25°C Unless Otherwise Specified

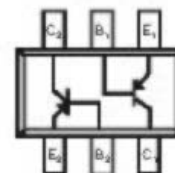
Symbol	Parameter	Min	Max	Units	
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage (I <sub>C</sub> =-1mA, I <sub>B</sub> =0)	-40	---	Vdc	
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage (I <sub>C</sub> =-10μA, I <sub>E</sub> =0)	-40	---	Vdc	
V <sub>(BR)EBO</sub>	Collector-Emitter Breakdown Voltage (I <sub>E</sub> =-10μA, I <sub>C</sub> =0)	-5	---	Vdc	
I <sub>CBO</sub>	Collector Cutoff Current (V <sub>CB</sub> =-30Vdc, I <sub>E</sub> =0)	---	-50	nAdc	
I <sub>EBO</sub>	Emitter Cutoff Current (V <sub>EB</sub> =-5Vdc, I <sub>C</sub> =0)	---	-50	nAdc	
h <sub>FE</sub>	DC Current Gain (I <sub>C</sub> =-0.1mA, V <sub>CE</sub> =-1Vdc)	40	---	---	
	(I <sub>C</sub> =-1mA, V <sub>CE</sub> =-1Vdc)	70	---		
	(I <sub>C</sub> =-10mA, V <sub>CE</sub> =-1Vdc)	100	300		
	(I <sub>C</sub> =-50mA, V <sub>CE</sub> =-1Vdc)	60	---		
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =-10mA, I <sub>B</sub> =-1mA)	---	-0.25	Vdc	
	(I <sub>C</sub> =-50mA, I <sub>B</sub> =-5mA)	---	-0.4		
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage (I <sub>C</sub> =-10mA, I <sub>B</sub> =-1mA)	-0.65	-0.85	Vdc	
	(I <sub>C</sub> =-50mA, I <sub>B</sub> =-5mA)	---	-0.95		
f <sub>T</sub>	Current Gain-Bandwidth Product (V <sub>CE</sub> =-20Vdc, I <sub>C</sub> =-10mA, f=100MHz)	250	---	MHz	
C <sub>ob</sub>	Output Capacitance (V <sub>CB</sub> =-5Vdc, f=1.0MHz, I <sub>E</sub> =0)	---	4.5	pF	
NF	Noise Figure (V <sub>CE</sub> =-5V, I <sub>C</sub> =-0.1mA, f=1KHz, R <sub>S</sub> =1kΩ)	---	4	dB	
t <sub>d</sub>	Delay Time	V <sub>CC</sub> =-3V, I <sub>C</sub> =-10mA,	---	35	ns
t <sub>r</sub>	Rise Time	V <sub>BE</sub> =-0.5V, I <sub>B1</sub> =-I <sub>B2</sub> =-1mA	---	35	ns
t <sub>s</sub>	Storage Time	V <sub>CC</sub> =-3V, I <sub>C</sub> =-10mA,	---	225	ns
t <sub>f</sub>	Fall Time	I <sub>B1</sub> =-I <sub>B2</sub> =-1mA	---	75	ns

## PNP Small Signal Surface Mount Transistors

### SOT-363



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	.004	.012	0.10	0.30	
B	.045	.053	1.15	1.35	
C	.079	.087	2.00	2.20	
D	.026		0.65Nominal		
F	.012	.016	0.30	0.40	
H	.071	.087	1.80	2.20	
J	---	.004	---	0.10	
K	.035	.039	0.90	1.00	
L	.010	.016	0.25	0.40	
M	.004	.016	0.10	0.25	





TM

Micro Commercial Components

**\*\*\*IMPORTANT NOTICE\*\*\***

*Micro Commercial Components Corp.* reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. *Micro Commercial Components Corp.* does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp.* and all the companies whose products are represented on our website, harmless against all damages.

**\*\*\*APPLICATIONS DISCLAIMER\*\*\***

Products offer by *Micro Commercial Components Corp.* are not intended for use in Medical, Aerospace or Military Applications.

---

[www.mccsemi.com](http://www.mccsemi.com)