

M·C·C·

Micro Commercial Components



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MMDT3906

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Ideal for Low Power Amplification and Switching
- Ultra-small Surface Mount Package
- Epitaxial Planar Die Construction
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: K3N

Maximum Ratings @ 25°C Unless Otherwise Specified

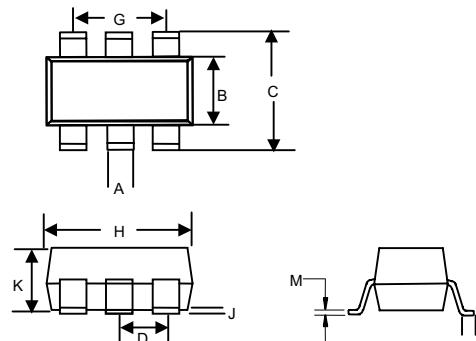
Symbol	Rating	Rating(PNP)	Unit
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{CBO}	Collector-Base Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-0.2	A
P_C	Collector Dissipation	0.2	W
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

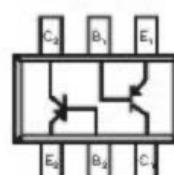
Symbol	Parameter	Min	Max	Units	
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=-1\text{mA}_{\text{dc}}, I_E=0$)	-40	---	Vdc	
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=-10\text{uA}_{\text{dc}}, I_E=0$)	-40	---	Vdc	
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ($I_E=-10\text{uA}_{\text{dc}}, I_C=0$)	-5	---	Vdc	
I_{CBO}	Collector Cutoff Current ($V_{CB}=-30\text{Vdc}, I_E=0$)	---	-50	nA _{dc}	
I_{EBO}	Emitter Cutoff Current ($V_{EB}=-5\text{Vdc}, I_C=0$)	---	-50	nA _{dc}	
h_{FE}	DC Current Gain ($I_C=0.1\text{mA}_{\text{dc}}, V_{CE}=-1\text{Vdc}$)	40	---		
	($I_C=1\text{mA}_{\text{dc}}, V_{CE}=-1\text{Vdc}$)	70	---		
	($I_C=10\text{mA}_{\text{dc}}, V_{CE}=-1\text{Vdc}$)	100	300	---	
	($I_C=50\text{mA}_{\text{dc}}, V_{CE}=-1\text{Vdc}$)	60	---		
	($I_C=100\text{mA}_{\text{dc}}, V_{CE}=-1\text{Vdc}$)	30	---		
$V_{CE(\text{sat})}$	Collector-Emitter Saturation Voltage ($I_C=-10\text{mA}_{\text{dc}}, I_E=1\text{mA}_{\text{dc}}$)	---	-0.25	Vdc	
	($I_C=-50\text{mA}_{\text{dc}}, I_E=5\text{mA}_{\text{dc}}$)	---	-0.4		
$V_{BE(\text{sat})}$	Base-Emitter Saturation Voltage ($I_C=-10\text{mA}_{\text{dc}}, I_E=-1\text{mA}_{\text{dc}}$)	-0.65	-0.85	Vdc	
	($I_C=-50\text{mA}_{\text{dc}}, I_E=-5\text{mA}_{\text{dc}}$)	---	-0.95		
f_T	Current Gain-Bandwidth Product ($V_{CE}=-20\text{Vdc}, I_C=10\text{mA}_{\text{dc}}, f=100\text{MHz}$)	250	---	MHz	
C_{ob}	Output Capacitance ($V_{CB}=-5\text{Vdc}, f=1.0\text{MHz}, I_E=0$)	---	4.5	pF	
NF	Noise Figure ($V_{CE}=-5\text{V}, I_C=-0.1\text{mA}, f=1\text{kHz}, R_S=1\text{k}\Omega$)	---	4	dB	
t_d	Delay Time	$V_{CC}=-3\text{V}, I_C=-10\text{mA}, V_{BE}=-0.5\text{V}, I_{B1}=-I_{B2}=-1\text{mA}$	---	35	ns
t_r	Rise Time		35	ns	
t_s	Storage Time	$V_{CC}=-3\text{V}, I_C=-10\text{mA}, I_{B1}=-I_{B2}=-1\text{mA}$	---	225	ns
t_f	Fall Time		75	ns	

PNP Small Signal Surface Mount Transistors

SOT-363



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.006	.014	0.15	0.35	
B	.045	.053	1.15	1.35	
C	.085	.096	2.15	2.45	
D	.026		0.65Nominal		
G	.047	.055	1.20	1.40	
H	.071	.087	1.80	2.20	
J	---	.004	---	0.10	
K	.035	.043	0.90	1.10	
L	.010	.018	0.26	0.46	
M	.003	.006	0.08	0.15	



www.mccsemi.com

TM

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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

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