Micro Commercial Components

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DMMT3906

PNP Small Signal Transistors

Features

- Halogen free available upon request by adding suffix "-HF"
- Epitaxial Planar Die Construction
- Ultra-small surface mount package
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisure Sensitivity Level 1
- Marking: K3Q

Maximum Ratings

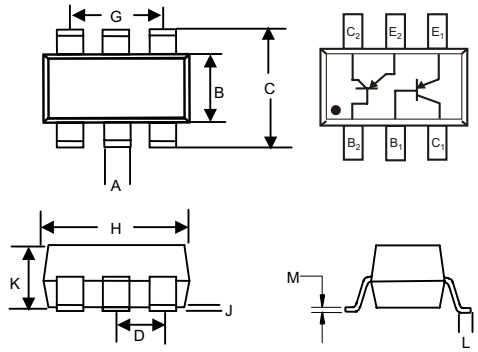
Symbol	Parameter	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{CBO}	Collector-Base Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current-Continuous [1]	-200	mA
P_C	Power dissipation [1]	200	mW
R_{THJA}	Thermal Resistance	625	°C/W
T_J	Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS [2]				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (I_C=-1.0mAdc, I_B=0)	-40	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=-10uAdc, I_E=0)	-40	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage (I_E=-10uAdc, I_C=0)	-5.0	---	Vdc
I_{CEX}	Collector-Base Cutoff Current (V_{CE}=-30Vdc, $V_{EB(OFF)}$=-3.0Vdc)	---	-50	nAdc
I_{BL}	Emitter-Base Cutoff Current (V_{CE}=-30Vdc, $V_{EB(OFF)}$=-3.0Vdc)	---	-50	nAdc
ON CHARACTERISTICS [2]				
h_{FE}	DC Current Gain (I_C=-100uAdc, V_{CE}=-1.0Vdc) (I_C=-1.0mAdc, V_{CE}=-1.0Vdc) (I_C=-10mAdc, V_{CE}=-1.0Vdc) (I_C=-50mAdc, V_{CE}=-1.0Vdc) (I_C=-100mAdc, V_{CE}=-1.0Vdc)	 60 80 100 60 30	 --- --- 300 --- ---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=-10mAdc, I_B=-1.0mAdc) (I_C=-50mAdc, I_B=-5.0mAdc)	 ---	 -0.25 -0.40	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C=-10mAdc, I_B=-1.0mAdc) (I_C=-50mAdc, I_B=-5.0mAdc)	 -0.65 ---	 -0.85 -0.95	Vdc

Note: 1. Valid provided that terminals are kept at ambient temperature.

SOT-363



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
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	

SMALL SIGNAL CHARACTERISTICS

C_{obo}	Output Capacitance (V_{CB}=-5.0Vdc, f=1.0MHz, I_E=0)	---	4.5	pF
f_T	Current Gain-Bandwidth Product (V_{CE}=-20Vdc, I_C=-10mAdc, f=100MHz)	250	---	MHz

SWITCHING CHARACTERISTICS

t_d	Delay Time	V_{CC}=-3.0Vdc, I_C=-10mAdc, VBE(off)=0.5Vdc, I_{B1}=-1.0mAdc	---	35	ns
t_r	Rise Time		---	35	ns
t_s	Storage Time	V_{CC}=-3.0Vdc, I_C=-10mAdc, I_{B1}=I_{B2}=-1.0mAdc	---	225	ns
t_f	Fall Time		---	75	ns

DMMT3906

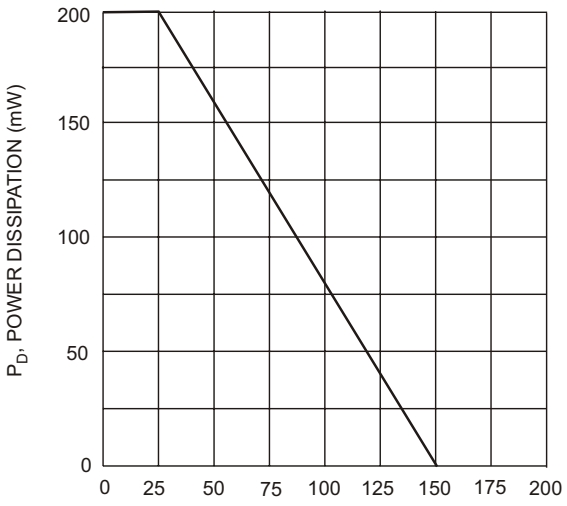


Fig. 1, Max Power Dissipation vs Ambient Temperature

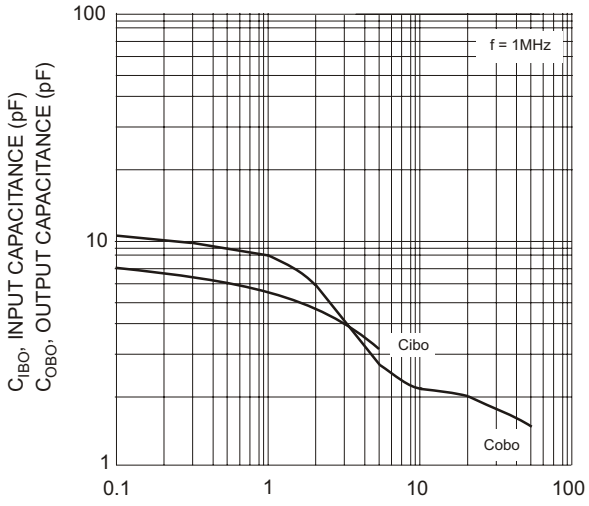


Fig. 2, Input and Output Capacitance vs. Collector-Base Voltage

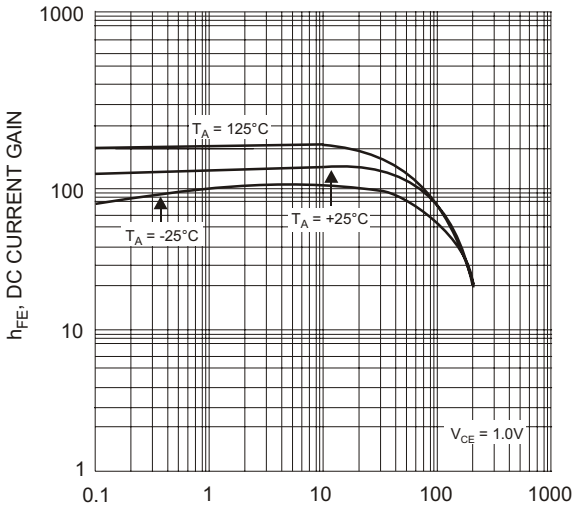


Fig. 3, Typical DC Current Gain vs Collector Current

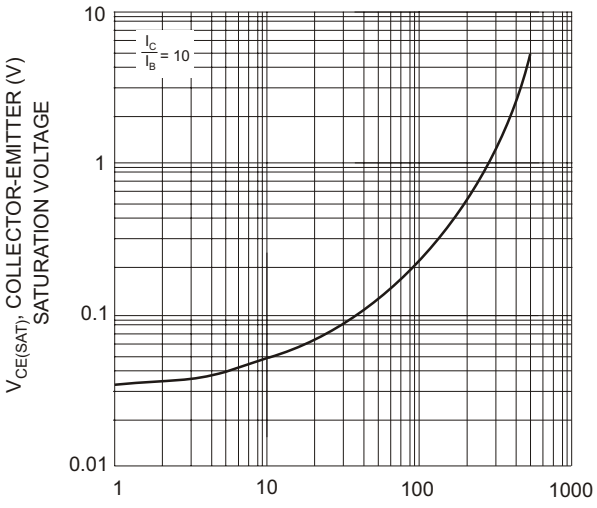


Fig. 4, Typical Collector-Emitter Saturation Voltage vs. Collector Current

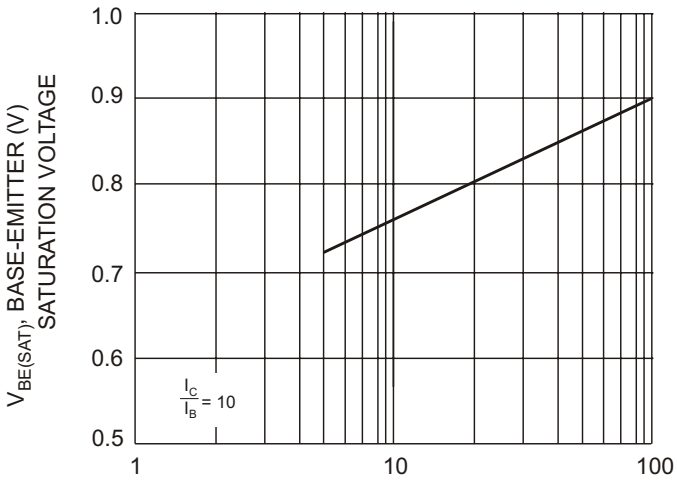


Fig. 5, Typical Base-Emitter Saturation Voltage vs. Collector Current

Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

Mouser Electronics

Authorized Distributor

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Micro Commercial Components (MCC):

DMMT3906-TP