



Micro Commercial Components

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DMMT3904

Features

- Epitaxial Planar Die Construction
- Ultra-small surface mount package
- Available in RoHs compliant version
- Case Material:Molded Plastic. UL Flammability Classificatio Rating 94-0 and MSL Rating 1
- Marking:K4A

NPN Small Signal Transistors

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	40	V
V_{CBO}	Collector-Base Voltage	60	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	$^{\circ}C/W$
T_J	Junction Temperature	-55 to +150	$^{\circ}C$
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}C$

Electrical Characteristics @ 25°C Unless Otherwise Specified

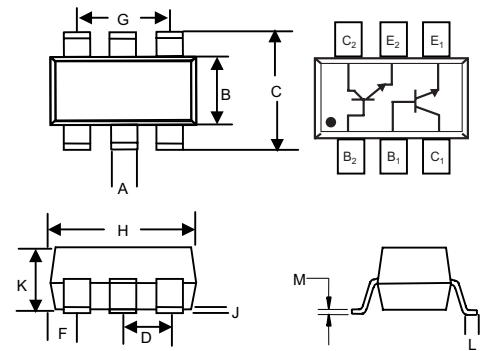
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS ⁽²⁾				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ($I_C=1.0mA$, $I_B=0$)	40	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ($I_C=10\mu A$, $I_E=0$)	60	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ($I_E=10\mu A$, $I_C=0$)	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 ($I_C=100\mu A$, $V_{CE}=1.0Vdc$) ($I_C=1.0mA$, $V_{CE}=1.0Vdc$) ($I_C=10mA$, $V_{CE}=1.0Vdc$) ($I_C=50mA$, $V_{CE}=1.0Vdc$) ($I_C=100mA$, $V_{CE}=1.0Vdc$)	40 70 100 60 30	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ($I_C=10mA$, $I_B=1.0mA$) ($I_C=50mA$, $I_B=5.0mA$)	---	0.20 0.30	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ($I_C=10mA$, $I_B=1.0mA$) ($I_C=50mA$, $I_B=5.0mA$)	0.65 ---	0.85 0.95	Vdc

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

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	

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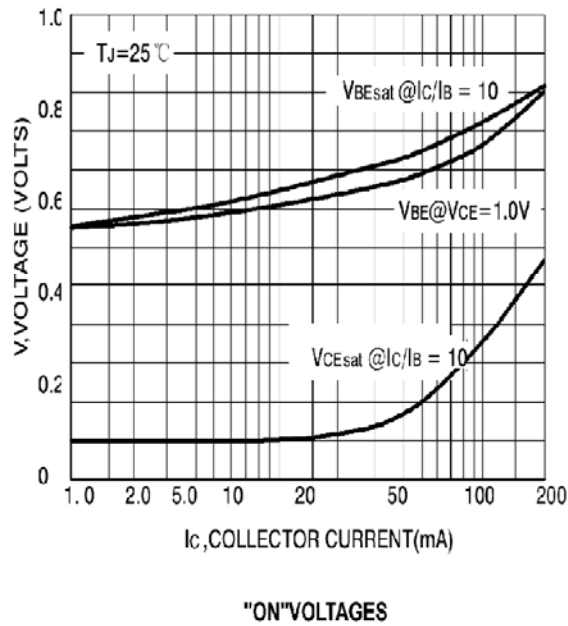
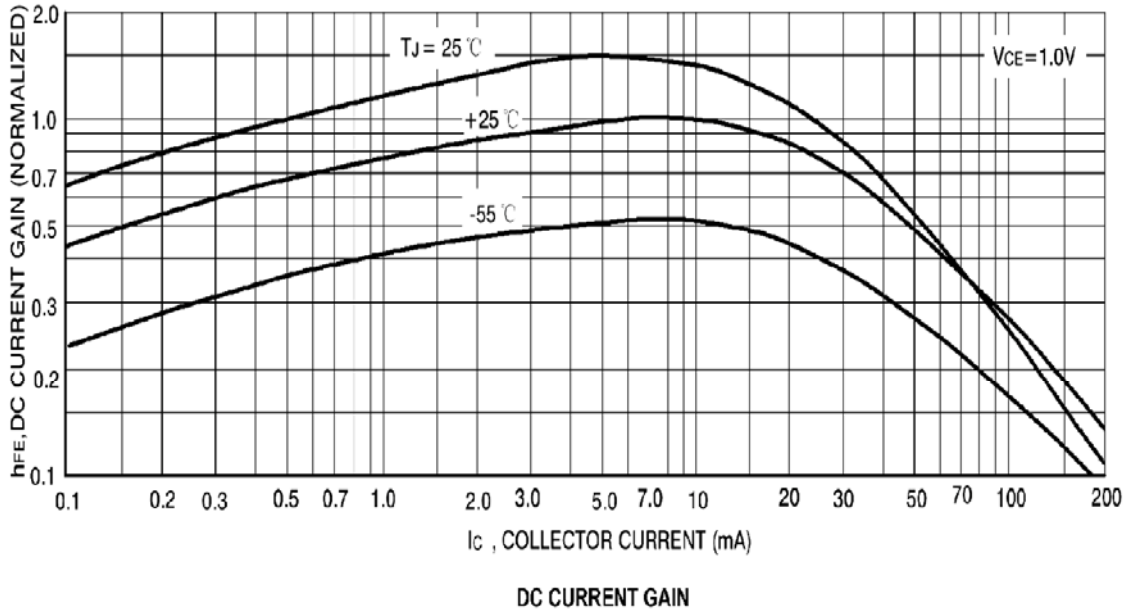
SMALL SIGNAL CHARACTERISTICS

C_{obo}	Output Capacitance ($V_{CB}=5.0Vdc$, $f=1.0MHz$, $I_E=0$)	---	4.0	pF
f_T	Current Gain-Bandwidth Product ($V_{CE}=20Vdc$, $I_C=10mAdc$, $f=100MHz$)	300	---	MHz

SWITCHING CHARACTERISTICS

t_d	Delay Time	$V_{CC}=3.0Vdc$, $I_C=10mAdc$,	---	35	ns
t_r	Rise Time	$V_{BE(off)}=-0.5Vdc$, $I_{B1}=1.0mAdc$	---	35	ns
t_s	Storage Time	$V_{CC}=3.0Vdc$, $I_C=10mAdc$,	---	200	ns
t_f	Fall Time	$I_{B1}=I_{B2}=1.0mAdc$	---	50	ns

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Ordering Information

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

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