



Micro Commercial Components



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DMMT3904

Features

- Epitaxial Planar Die Construction
- Ultra-small surface mount package
- Available in RoHs compliant version
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 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	°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
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OFF CHARACTERISTICS⁽²⁾

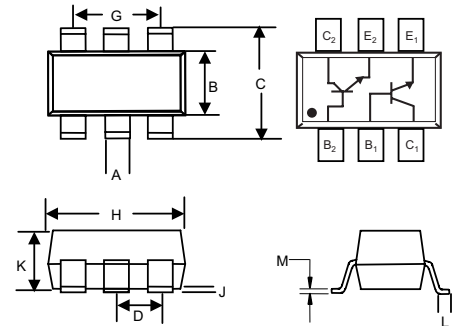
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage (I _C =1.0mA, I _B =0)	40	---	Vdc
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _C =10uA, I _E =0)	60	---	Vdc
V _{(BR)EBO}	Collector-Emitter Breakdown Voltage (I _E =10uA, I _C =0)	5.0	---	Vdc
I _{CEX}	Collector-Base Cutoff Current (V _{CE} =30Vdc, V _{EB(OFF)} =3.0Vdc)	---	50	nA
I _{BL}	Emitter-Base Cutoff Current (V _{CE} =30Vdc, V _{EB(OFF)} =3.0Vdc)	---	50	nA

ON CHARACTERISTICS⁽²⁾

h _{FE}	DC Current Gain (I _C =100uA, 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	300	
		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	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	

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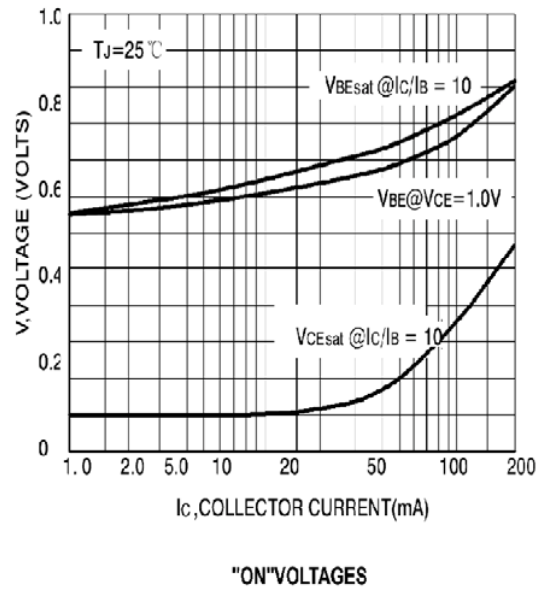
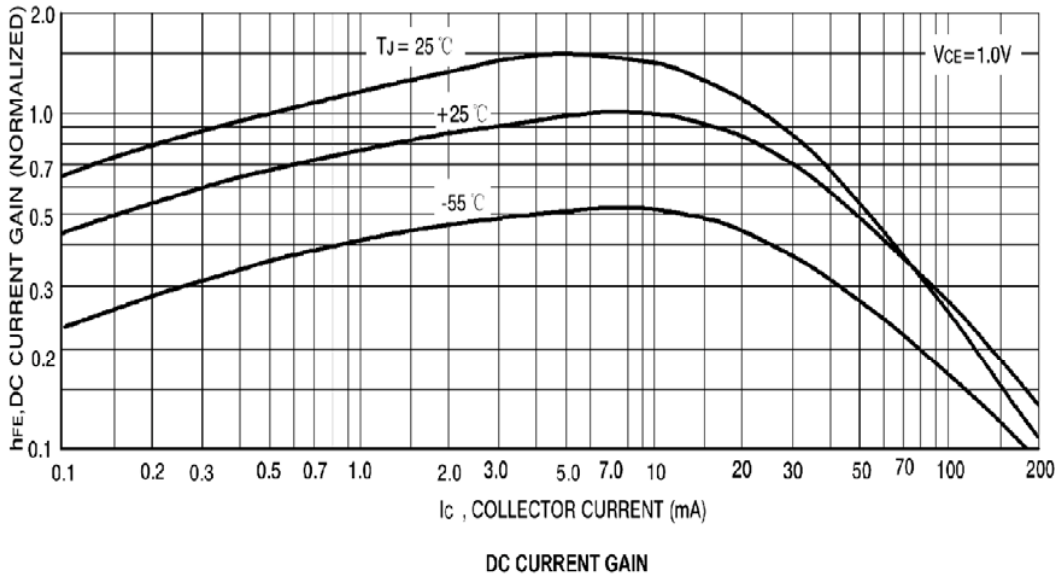
SMALL SIGNAL CHARACTERISTICS

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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