



Micro Commercial Components

Micro Commercial Components  
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# DMMT3904

## Features

- Halogen free available upon request by adding suffix "-HF"
- 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 <sup>(1)</sup>	200	mA
$P_C$	Power dissipation <sup>(1)</sup>	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
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### OFF CHARACTERISTICS <sup>(2)</sup>

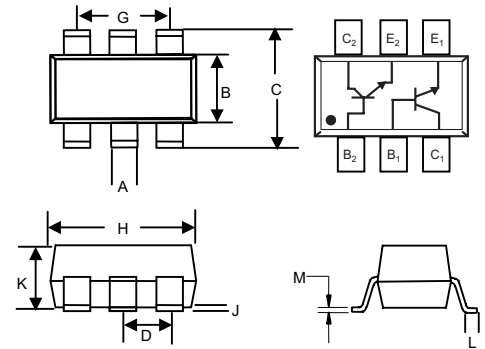
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=1.0mA$ , $I_B=0$ )	40	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=10\mu A$ , $I_E=0$ )	60	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ( $I_E=10\mu A$ , $I_C=0$ )	5.0	---	Vdc
$I_{CEX}$	Collector-Base Cutoff Current ( $V_{CE}=30Vdc$ , $V_{EB(OFF)}=3.0Vdc$ )	---	50	nAdc
$I_{BL}$	Emitter-Base Cutoff Current ( $V_{CE}=30Vdc$ , $V_{EB(OFF)}=3.0Vdc$ )	---	50	nAdc

### ON CHARACTERISTICS <sup>(2)</sup>

$h_{FE}$	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	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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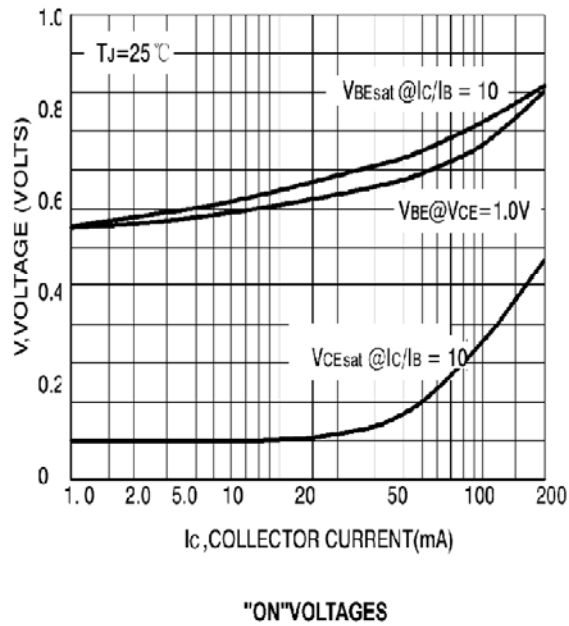
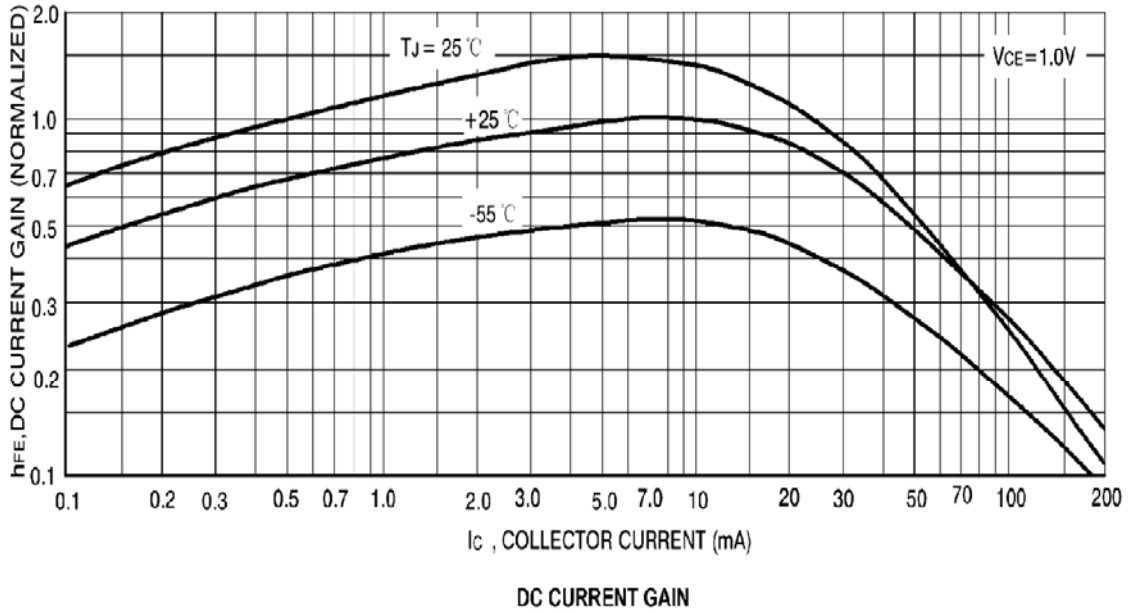
## SMALL SIGNAL CHARACTERISTICS

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

## SWITCHING CHARACTERISTICS

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

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### Ordering Information :

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

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

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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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