

## Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[Micro Commercial Components \(MCC\)](#)  
[MMDT4403-TP](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

**M.C.C.**

Micro Commercial Components



Micro Commercial Components  
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## Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epitaxial Planar Die Construction
- Ideal for Low Power Amplification and Switching
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: K4M/K2T

## 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	0.6	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

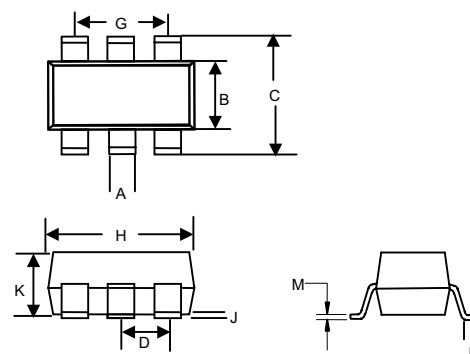
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C = -1\text{mA}$ , $I_E = 0$ )	40	---	Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C = 100\text{uA}$ , $I_E = 0$ )	40	---	Vdc
$V_{(BR)EBO}$	Collector-Emitter Breakdown Voltage ( $I_E = 100\text{uA}$ , $I_C = 0$ )	5	---	Vdc
$I_{CBO}$	Collector Cutoff Current ( $V_{CB} = 50\text{Vdc}$ , $I_E = 0$ )	---	0.1	uA
$I_{EBO}$	Emitter Cutoff Current ( $V_{EB} = -5\text{Vdc}$ , $I_C = 0$ )	---	0.1	uA
$h_{FE}$	DC Current Gain ( $I_C = 0.1\text{mA}$ , $V_{CE} = 1\text{Vdc}$ ) ( $I_C = 1\text{mA}$ , $V_{CE} = 1\text{Vdc}$ ) ( $I_C = 10\text{mA}$ , $V_{CE} = 1\text{Vdc}$ ) ( $I_C = 150\text{mA}$ , $V_{CE} = 2\text{Vdc}$ ) ( $I_C = 500\text{mA}$ , $V_{CE} = 2\text{Vdc}$ )	30 60 100 100 20	---	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C = 150\text{mA}$ , $I_B = 15\text{mA}$ ) ( $I_C = 500\text{mA}$ , $I_B = 50\text{mA}$ )	---	0.4 0.75	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage ( $I_C = 150\text{mA}$ , $I_B = 15\text{mA}$ ) ( $I_C = 500\text{mA}$ , $I_B = 50\text{mA}$ )	0.75 ---	0.95 1.3	Vdc
$f_T$	Current Gain-Bandwidth Product ( $V_{CE} = 10.0\text{Vdc}$ , $I_C = 20\text{mA}$ , $f = 100\text{MHz}$ )	200	---	MHz
$C_{ob}$	Output Capacitance ( $V_{CB} = 10\text{Vdc}$ , $f = 1.0\text{MHz}$ , $I_E = 0$ )	---	8.5	pF
$t_d$	Delay Time $V_{CC} = 30\text{V}$ , $I_C = 150\text{mA}$ , $V_{BE} = 2.00\text{V}$ , $I_{B1} = 15.00\text{mA}$	---	15	ns
$t_r$	Rise Time	---	20	ns
$t_s$	Storage Time $V_{CC} = 30\text{V}$ , $I_C = 150\text{mA}$ , $I_{B1} = I_{B2} = 15\text{mA}$	---	225	ns
$t_f$	Fall Time	---	30	ns

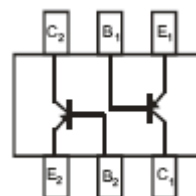
**MMDT4403**

**PNP  
Plastic-Encapsulate  
Transistors**

**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	



# MMDT4403

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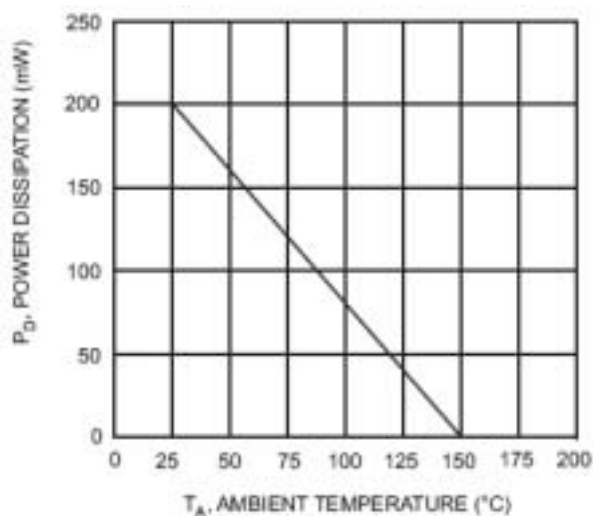


Fig. 1, Max Power Dissipation vs Ambient Temperature

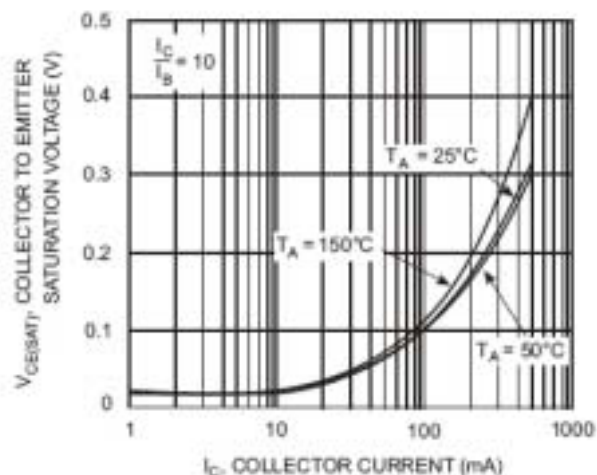


Fig. 2 Collector Emitter Saturation Voltage vs. Collector Current

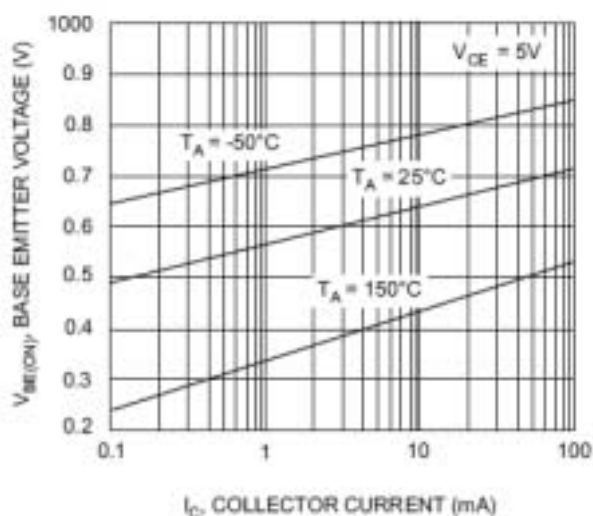


Fig. 3 Base-Emitter Voltage vs. Collector Current

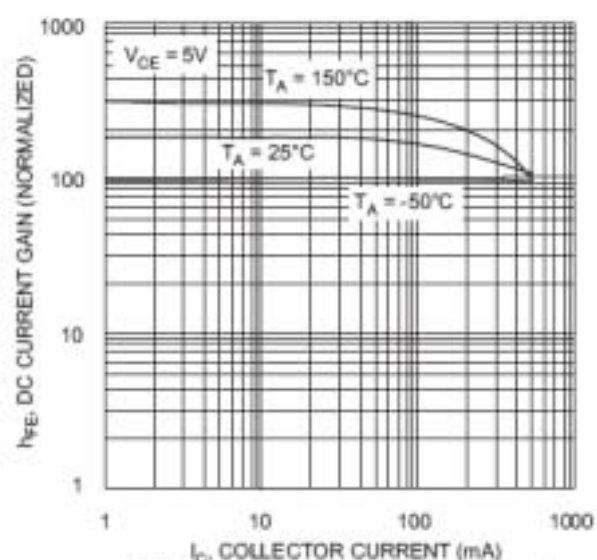


Fig. 4 DC Current Gain vs. Collector Current

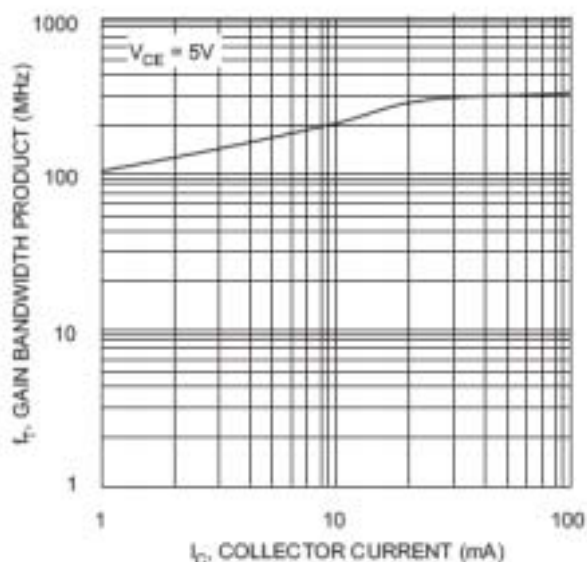


Fig. 5 Gain Bandwidth Product vs. Collector Current

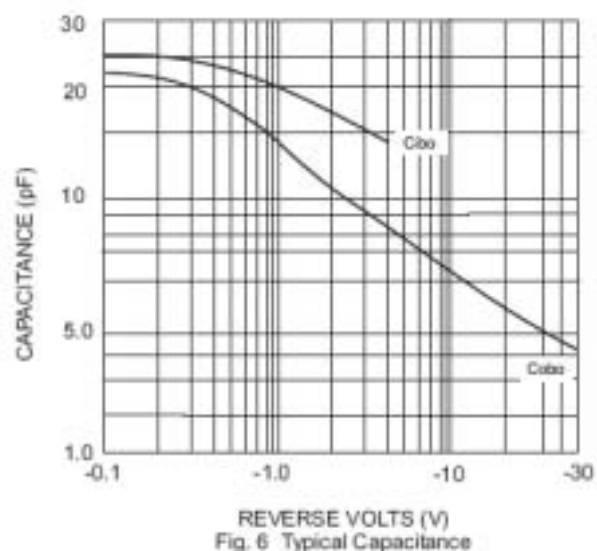


Fig. 6 Typical Capacitance



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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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