



Micro Commercial Components



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MMDT5401

Plastic-Encapsulate Transistors

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Marking:K4M
- Ideal for Low Power Amplification and Switching
- Ultra-small Surface Mount Package
- Epitaxial Planar Die Construction
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

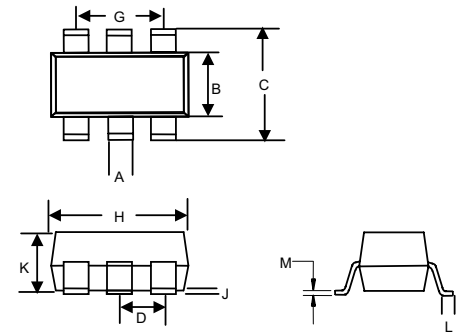
Maximum Ratings @ 25°C Unless Otherwise Specified

Symbol	Rating	Rating	Unit
V _{CEO}	Collector-Emitter Voltage	-150	V
V _{CBO}	Collector-Base Voltage	-160	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current-Continuous	-0.2	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

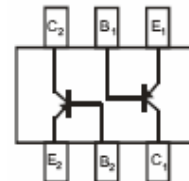
Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units	
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage (I _C =-1mA, I _B =0)	-150	---	Vdc	
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _C =-100uA, I _E =0)	-160	---	Vdc	
V _{(BR)EBO}	Collector-Emitter Breakdown Voltage (I _E =-10uA, I _C =0)	-5	---	Vdc	
I _{CBO}	Collector Cutoff Current (V _{CB} =-120Vdc, I _E =0)	--	0.05	uA	
I _{EBO}	Emitter Cutoff Current (V _{EB} =-3Vdc, I _C =0)	---	-0.05	uA	
h _{FE}	DC Current Gain (I _C =-1mA, V _{CE} =-5Vdc) (I _C =-10mA, V _{CE} =-5Vdc) (I _C =-50mA, V _{CE} =-5Vdc)	50	---	---	
		60	240		
		50	---		
V _{CE(sat)}	Collector-Emitter Saturation Voltage (I _C =-10mA, I _B =-1mA) (I _C =-50mA, I _B =-5mA)	---	-0.2 -0.5	Vdc	
V _{BE(sat)}	Base-Emitter Saturation Voltage (I _C =-10mA, I _B =-1mA) (I _C =-50mA, I _B =-5mA)	---	-1 -1	Vdc	
f _T	Current Gain-Bandwidth Product (V _{CE} =-10V, I _C =-10mA, f=100MHz)	100	300	MHz	
C _{ob}	Output Capacitance (V _{CB} =-5Vdc, f=1.0MHz, I _E =0)	---	4.5	pF	
NF	Noise Figure (V _{CE} =-10V, I _C =-0.1mA, f=1KHz, R _S =1kΩ)	---	6	dB	
t _d	Delay Time	V _{CC} =-3V, I _C =-10mA,	---	35	ns
t _r	Rise Time	V _{BE} =-0.5V, I _{B1} =-I _{B2} =-1mA	---	35	ns
t _s	Storage Time	V _{CC} =-3V, I _C =-10mA,	---	225	ns
t _f	Fall Time	I _{B1} =-I _{B2} =-1mA	---	75	ns

SOT-363



DIM	DIMENSIONS				NOTE
	INCHES		MM		
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	



MMDT5401



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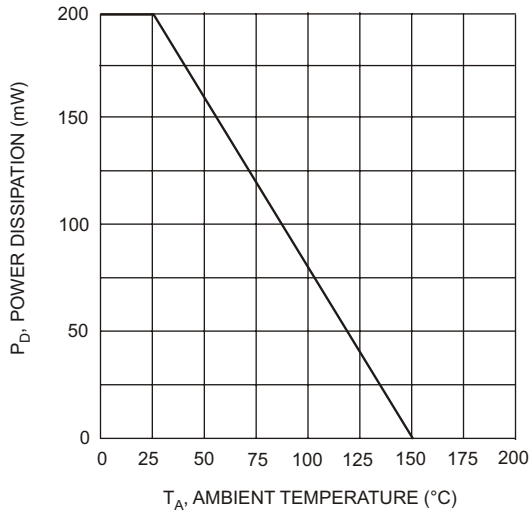


Fig. 1, Max Power Dissipation vs Ambient Temperature

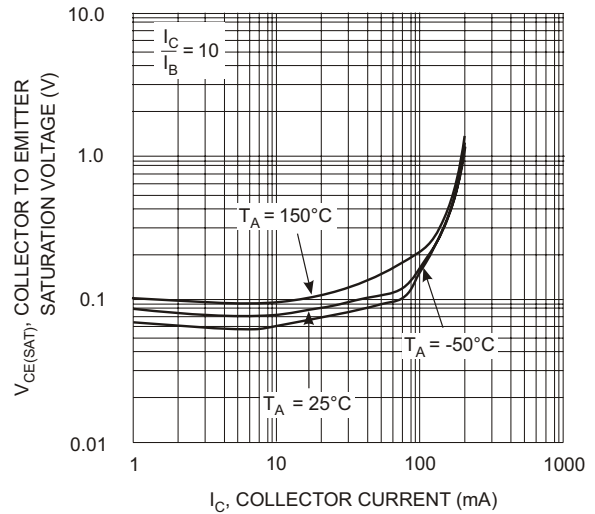


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

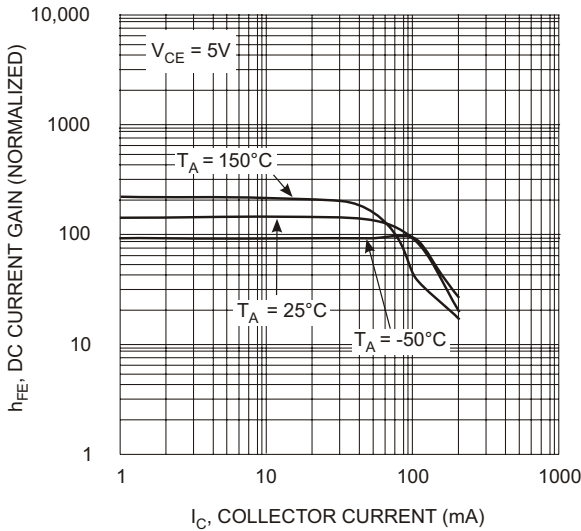


Fig. 3, DC Current Gain vs. Collector Current

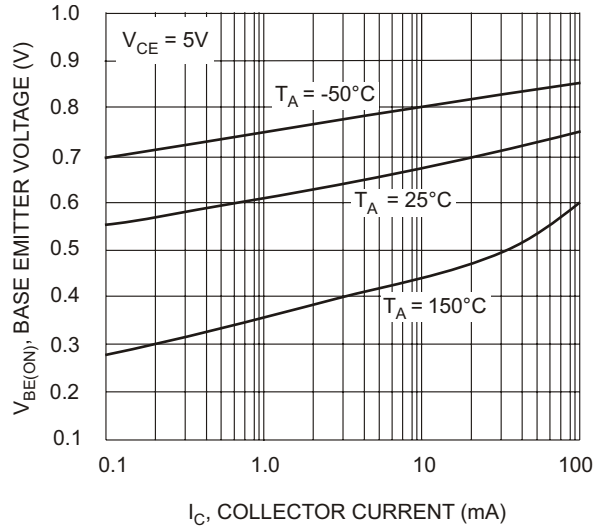


Fig. 4, Base Emitter Voltage vs. Collector Current

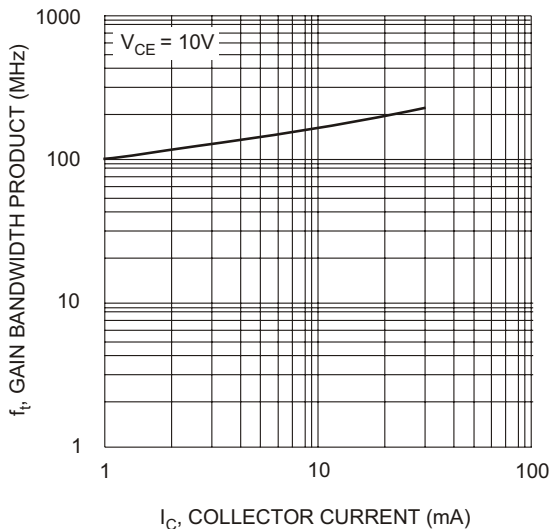


Fig. 5, Gain Bandwidth Product vs Collector Current



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Ordering Information :

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

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