



Micro Commercial Components

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20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MMDT5401

Features

- Marking:K4M
- Ideal for Low Power Amplification and Switching
- Ultra-small Surface Mount Package
- Epitaxial Planar Die Construction
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

Maximum Ratings @ 25°C Unless Otherwise Specified

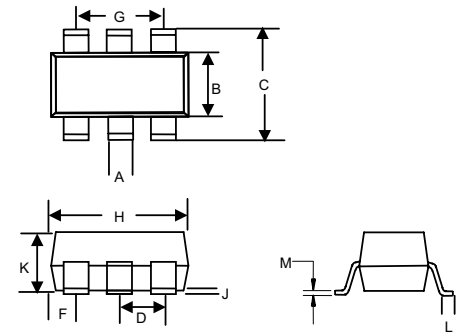
Symbol	Rating	Rating	Unit
V _{CEO}	Collector-Emitter Voltage	-150	V
V _{CBO}	Collector-Base Voltage	-160	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current-Continuous	-0.2	A
P _C	Collector Dissipation	0.2	W
T _J	Operating Junction Temperature	-55 to +150	°C
T _{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

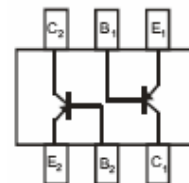
Symbol	Parameter	Min	Max	Units	
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage (I _C =-1mA _{dc} , I _B =0)	-150	---	Vdc	
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _C =-100uA _{dc} , I _E =0)	-160	---	Vdc	
V _{(BR)EBO}	Collector-Emitter Breakdown Voltage (I _E =-10uA _{dc} , I _C =0)	-5	---	Vdc	
I _{CBO}	Collector Cutoff Current (V _{CB} =-120V _{dc} , I _E =0)	--	0.05	uA	
I _{EBO}	Emitter Cutoff Current (V _{EB} =-3V _{dc} , I _C =0)	---	-0.05	uA	
h _{FE}	DC Current Gain (I _C =-1mA _{dc} , V _{CE} =-5V _{dc}) (I _C =-10mA _{dc} , V _{CE} =-5V _{dc}) (I _C =-50mA _{dc} , V _{CE} =-5V _{dc})	50	---	---	
		60	240		
		50	---		
V _{CE(sat)}	Collector-Emitter Saturation Voltage (I _C =-10mA _{dc} , I _B =-1mA _{dc}) (I _C =-50mA _{dc} , I _B =-5mA _{dc})	---	-0.2 -0.5	Vdc	
V _{BE(sat)}	Base-Emitter Saturation Voltage (I _C =-10mA _{dc} , I _B =-1mA _{dc}) (I _C =-50mA _{dc} , I _B =-5mA _{dc})	---	-1 -1	Vdc	
f _T	Current Gain-Bandwidth Product (V _{CE} =-10V _{dc} , I _C =-10mA _{dc} , f=100MHz)	100	300	MHz	
C _{ob}	Output Capacitance (V _{CB} =-5V _{dc} , 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

Plastic-Encapsulate Transistors

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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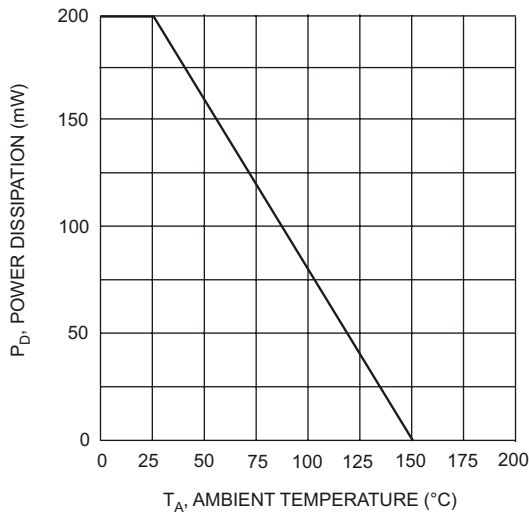


Fig. 1, Max Power Dissipation vs Ambient Temperature

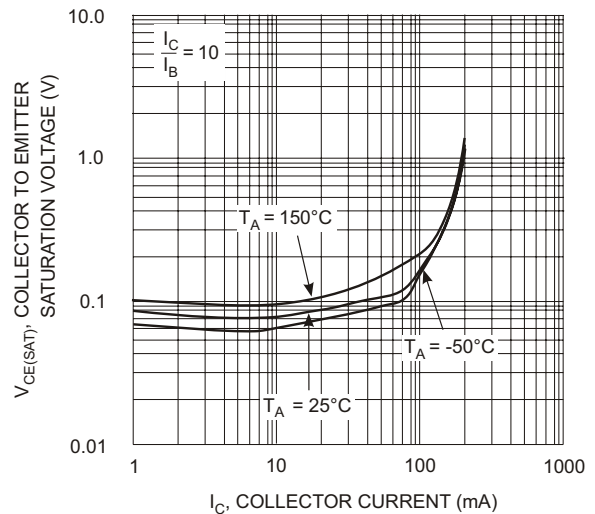


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

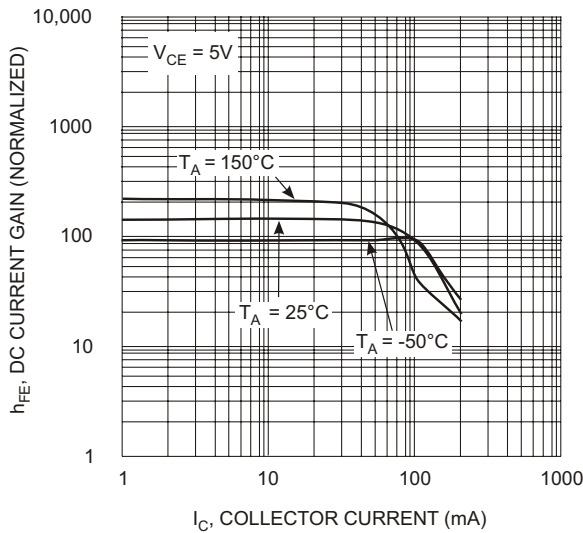


Fig. 3, DC Current Gain vs. Collector Current

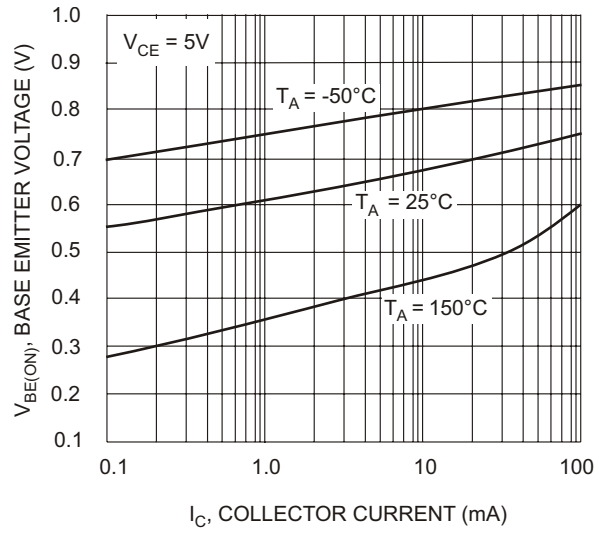


Fig. 4, Base Emitter Voltage vs. Collector Current

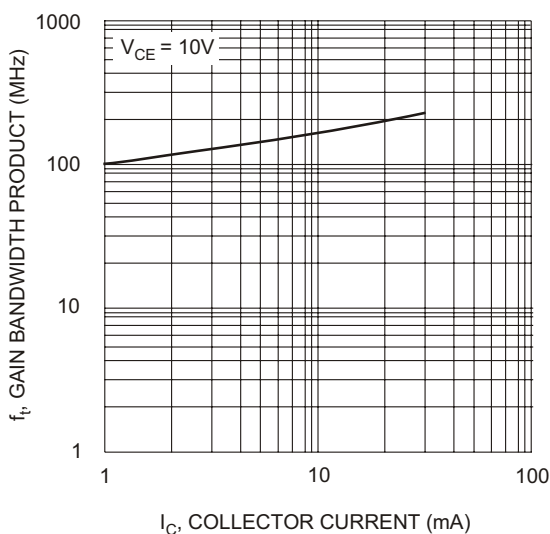


Fig. 5, Gain Bandwidth Product vs Collector Current



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Ordering Information

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

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