



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

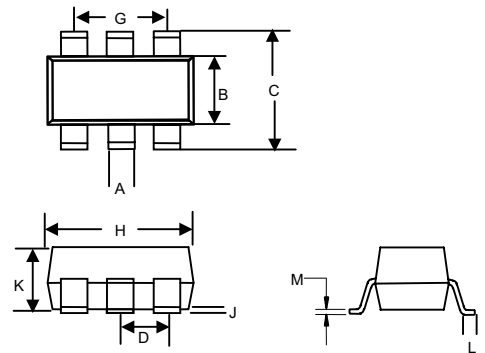
Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units	
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage (I _C =-1mA _{DC} , I _B =0)	40	---	Vdc	
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _C =100uA _{DC} , I _E =0)	40	---	Vdc	
V _{(BR)EBO}	Collector-Emitter Breakdown Voltage (I _E =100uA _{DC} , I _C =0)	5	---	Vdc	
I _{CBO}	Collector Cutoff Current (V _{CB} =50Vdc, I _E =0)	---	0.1	uA _{DC}	
I _{EBO}	Emitter Cutoff Current (V _{EB} =-5Vdc, I _C =0)	---	0.1	uA _{DC}	
h _{FE}	DC Current Gain (I _C =0.1mA _{DC} , V _{CE} =1Vdc)	30	---	---	
	(I _C =1mA _{DC} , V _{CE} =1Vdc)	60	---		
	(I _C =10mA _{DC} , V _{CE} =1Vdc)	100	----		
	(I _C =150mA _{DC} , V _{CE} =2Vdc)	100	300		
	(I _C =500mA _{DC} , V _{CE} =2Vdc)	20	---		
V _{CE(sat)}	Collector-Emitter Saturation Voltage (I _C =150mA _{DC} , I _B =15mA _{DC})	---	0.4	Vdc	
	(I _C =500mA _{DC} , I _B =50mA _{DC})	---	0.75		
V _{BE(sat)}	Base-Emitter Saturation Voltage (I _C =150mA _{DC} , I _B =15mA _{DC})	0.75	0.95	Vdc	
	(I _C =500mA _{DC} , I _B =50mA _{DC})	---	1.3		
f _T	Current Gain-Bandwidth Product (V _{CE} =10.0Vdc, I _C =20mA _{DC} , f=100MHz)	200	---	MHz	
C _{ob}	Output Capacitance (V _{CB} =10Vdc, f=1.0MHz, I _E =0)	---	8.5	pF	
t _d	Delay Time	V _{CC} =30V, I _C =150mA, V _{BE} =2.00V, I _{B1} =15.00mA		15	ns
t _r	Rise Time	---		20	ns
t _S	Storage Time	V _{CC} =30V, I _C =150mA, I _{B1} =I _{B2} =15mA		225	ns
t _f	Fall Time	---		30	ns

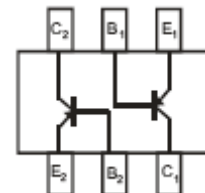
MMDT4403

PNP Plastic-Encapsulate Transistors

SOT-363



DIMENSIONS					
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	



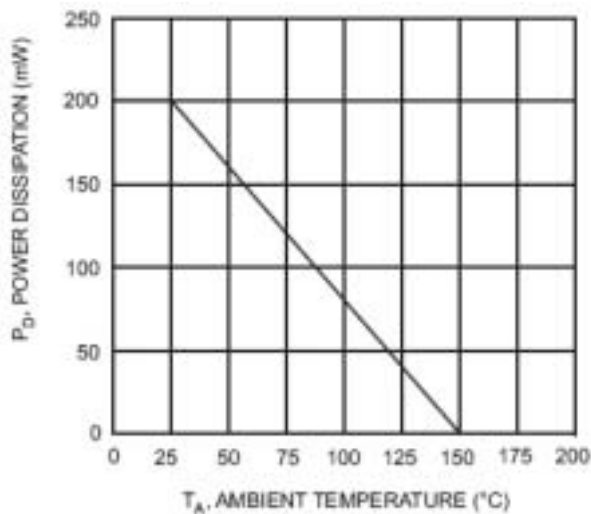


Fig. 1, Max Power Dissipation vs Ambient Temperature

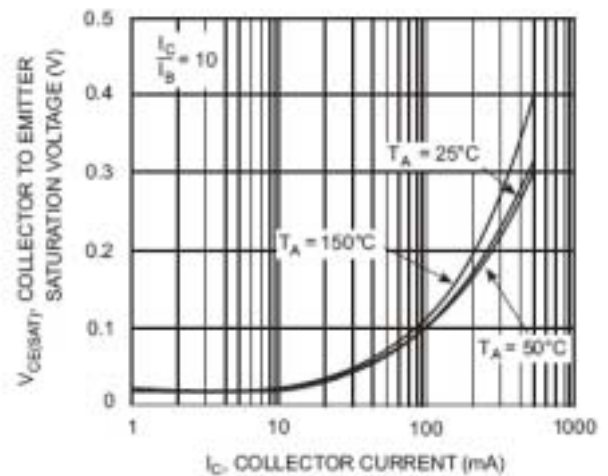


Fig. 2 Collector Emitter Saturation Voltage vs. Collector Current

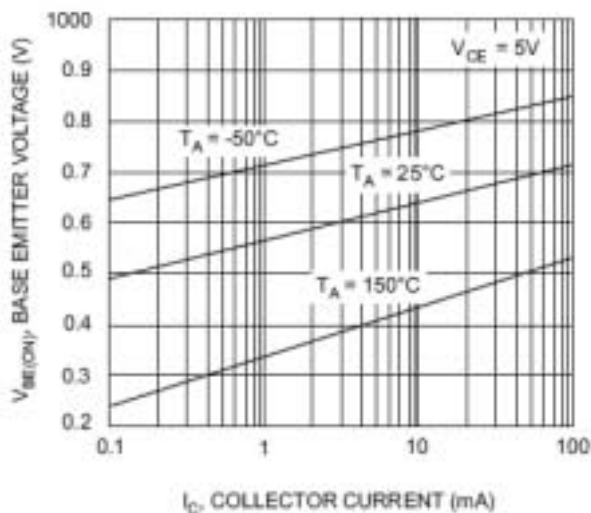


Fig. 3 Base-Emitter Voltage vs. Collector Current

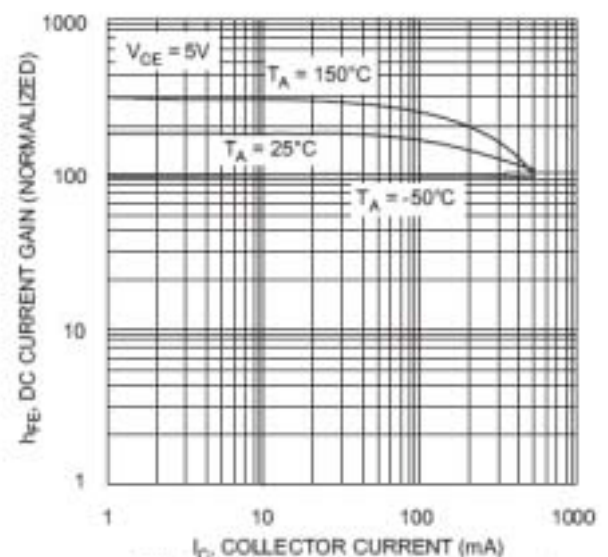


Fig. 4 DC Current Gain vs. Collector Current

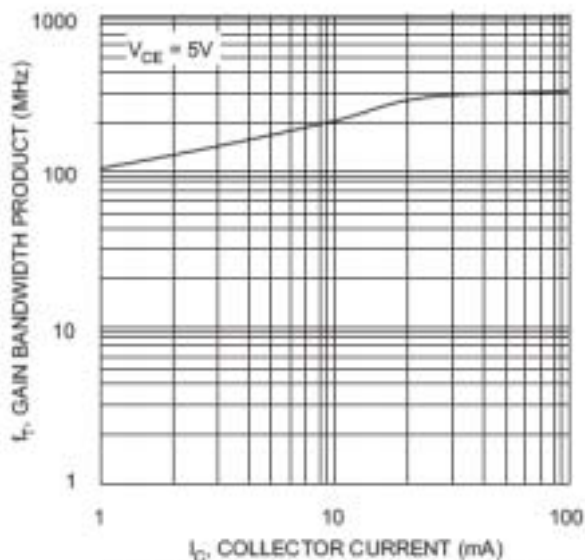


Fig. 5 Gain Bandwidth Product vs. Collector Current

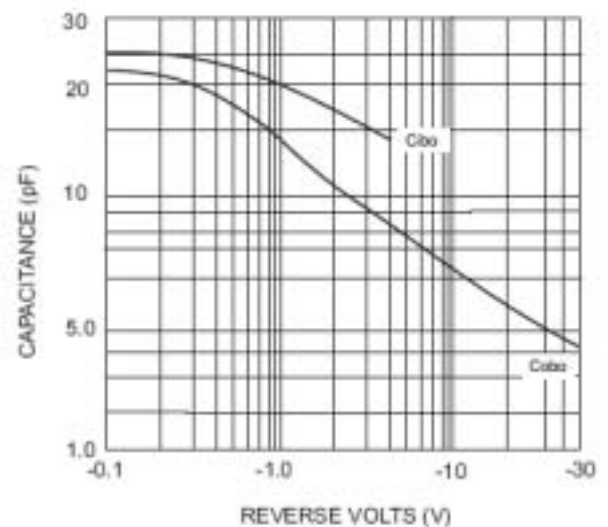


Fig. 6 Typical Capacitance

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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