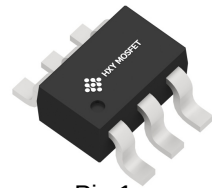




Features

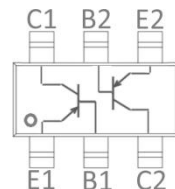
Epitaxial planar die construction.

Ideal for low power amplification and switching.



Pin 1

SOT-363



Pin 1

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MMDT5401-7-F	SOT-363	K4M	3000

Maximum Ratings (Ta=25°C unless otherwise noted)

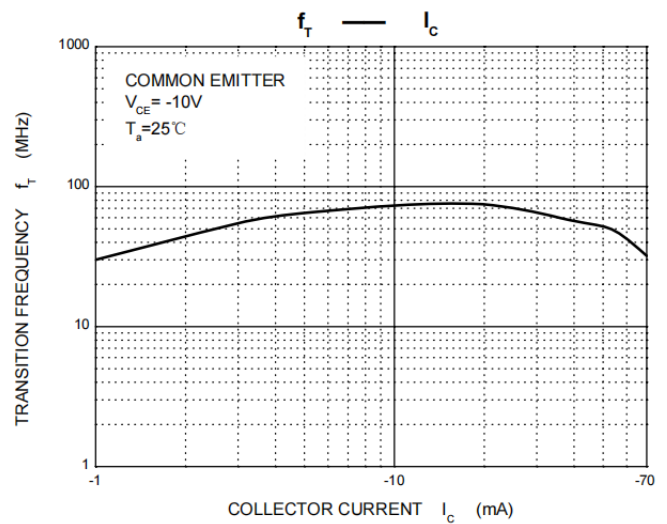
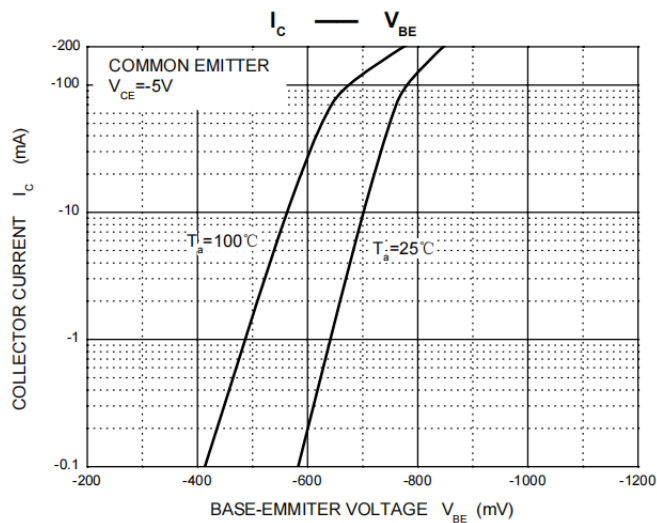
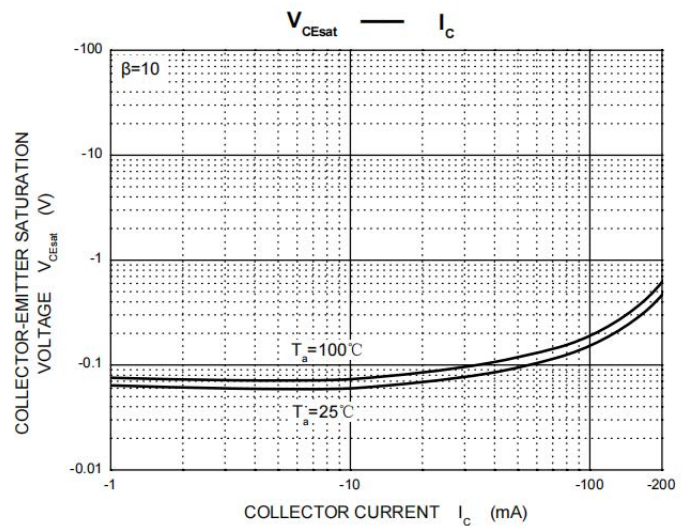
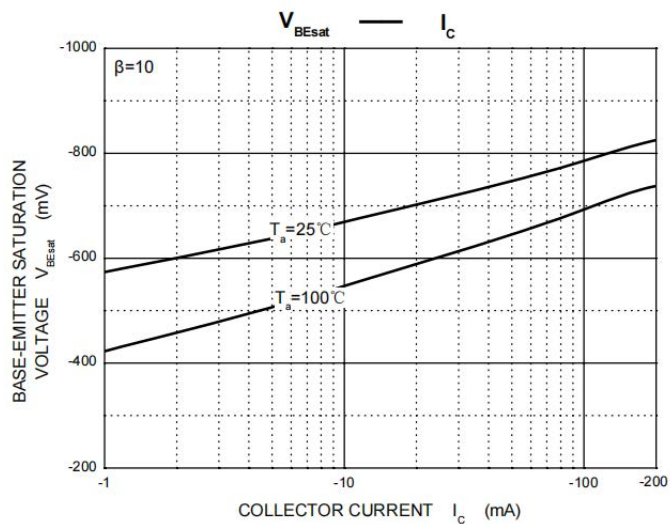
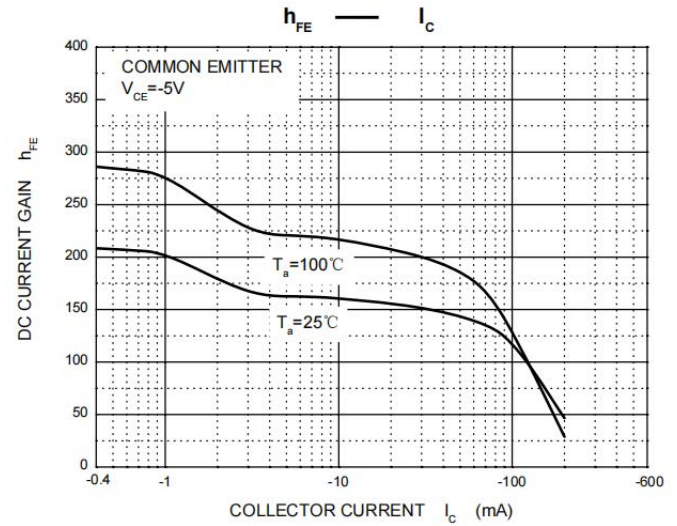
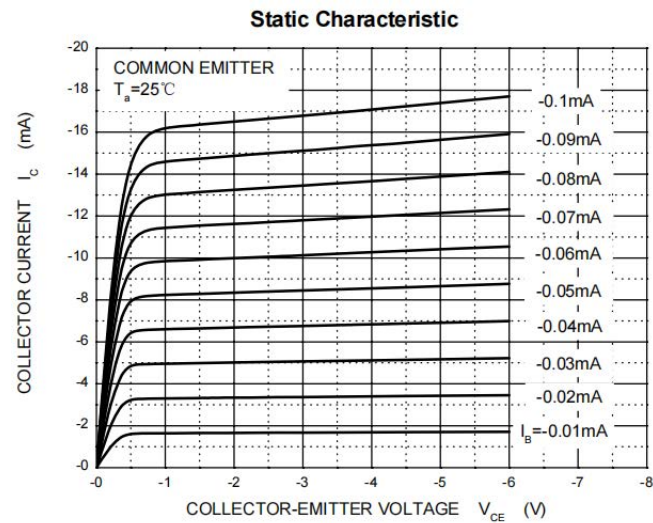
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-200	mA
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55~+150	°C

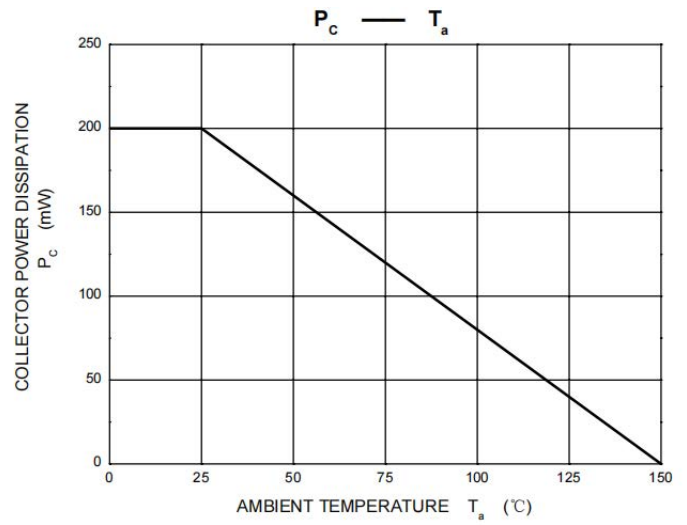
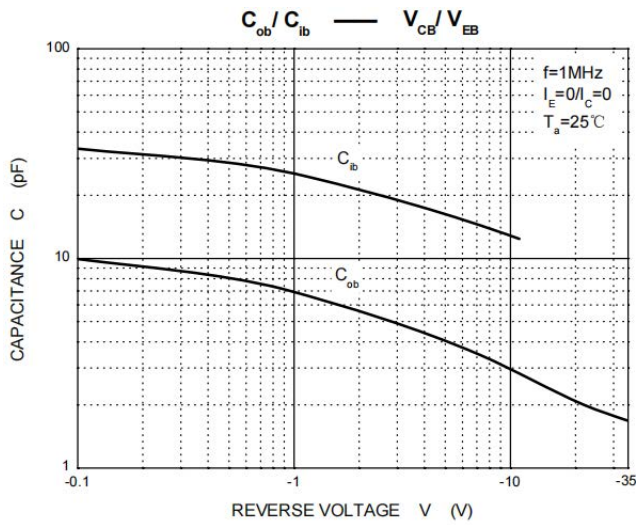
Electrical Characteristics(Ta=25°C unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu A, I_E=0$	-160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu A, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-120V, I_E=0$			-0.05	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-3V, I_C=0$			-0.05	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=-5V, I_C=-1mA$	50			
	$h_{FE(2)}$	$V_{CE}=-5V, I_C=-10mA$	100		200	
	$h_{FE(3)}$	$V_{CE}=-5V, I_C=-50mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=-10mA, I_B=-1mA$			-0.2	V
	$V_{CE(sat)2}$	$I_C=-50mA, I_B=-5mA$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C=-10mA, I_B=-1mA$			-1	V
	$V_{BE(sat)2}$	$I_C=-50mA, I_B=-5mA$			-1	V
Transition frequency	f_T	$V_{CE}=-10V, I_C=-10mA, f=100MHz$	100			MHz
Output Capacitance	C_{ob}	$V_{CB}=-10V, I_E=0, f=1MHz$			6	pF
Noise Figure	NF	$V_{CE}=-5.0V, I_C=-200\mu A, R_S=10\Omega, f=1.0kHz$			8.0	dB

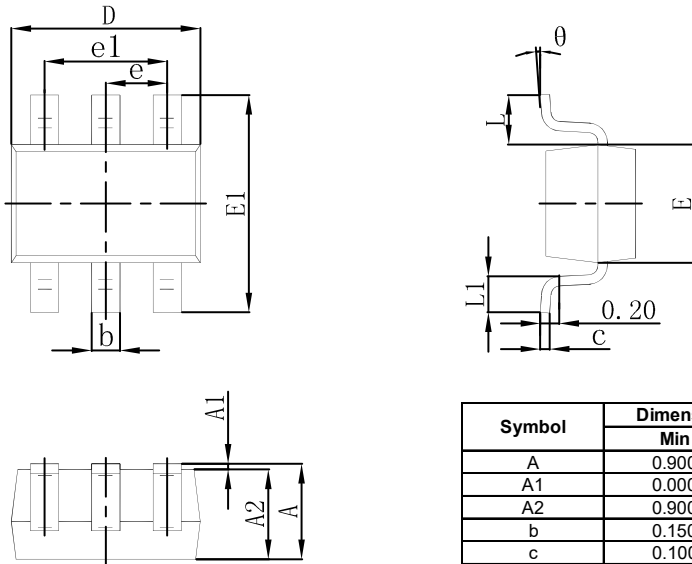


Typical Characteristics



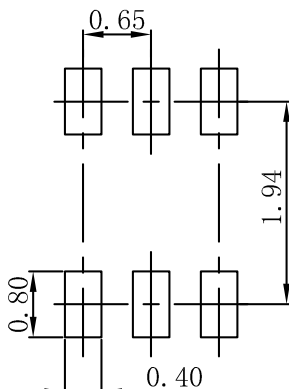


SOT-363 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-363 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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