MMDT5401

Dual-PNP Plastic-Encapsulate Transistors

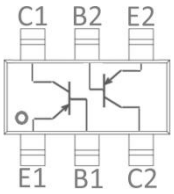
Features

Epitaxial planar die construction.

Ideal for low power amplification and switching.

Pin 1

SOT-363(SC-70-6)



Pin 1

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MMDT5401	SOT-363 (SC-70-6)	K4M	3000

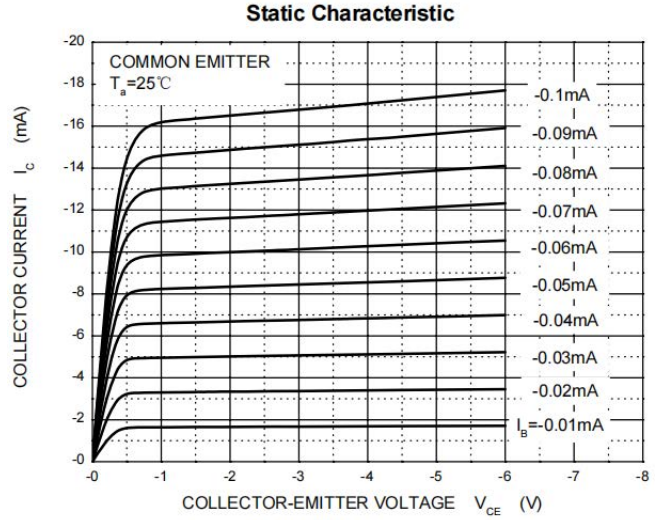
Maximum Ratings (Ta=25℃ unless otherwise noted)

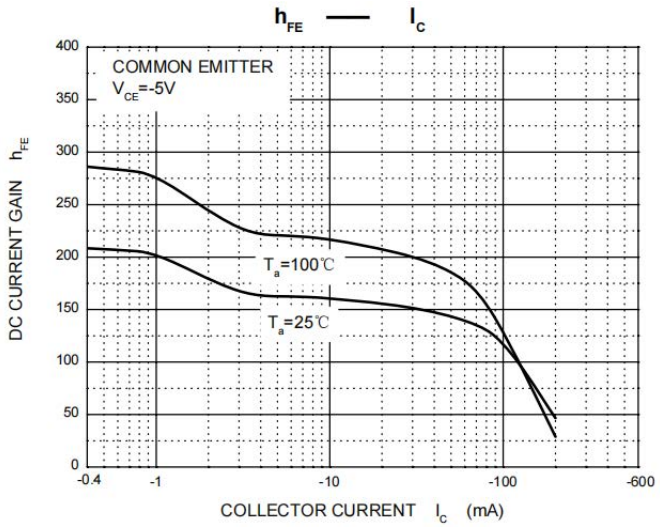
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-160	V
V_{CEO}	Collector-Emitter Voltage	-150	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-200	mA
P_C	Collector Power Dissipation	200	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	625	℃/W
T_J ,T_{stg}	Operation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

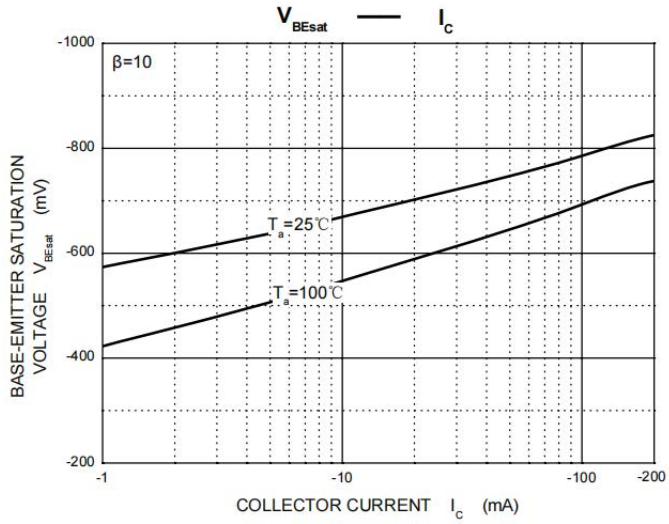
Electrical Characteristics(Ta=25℃ unless otherwise noted)

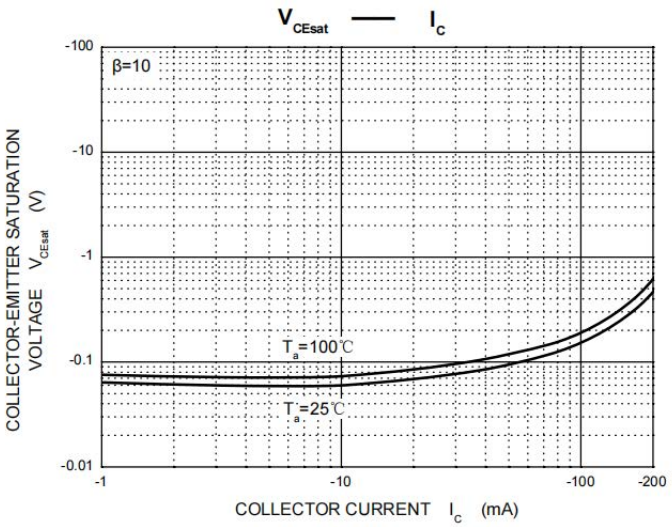
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA , I_E=0	-160			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= -1mA , I_B=0	-150			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA, I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-120 V , 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}=-5 V, I_C= -1mA	50			
	$h_{FE(2)}$	V_{CE}=-5 V, I_C= -10mA	100		300	
	$h_{FE(3)}$	V_{CE}=-5 V, I_C= -50mA	50			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	I_C=-10 mA, I_B=-1mA			-0.2	V
	$V_{CE(sat)2}$	I_C=-50 mA, I_B=-5mA			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	I_C= -10 mA, I_B=-1mA			-1	V
	$V_{BE(sat)2}$	I_C= -50 mA, 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= -200μA, R_S= 10Ω,f = 1.0kHz			8.0	dB

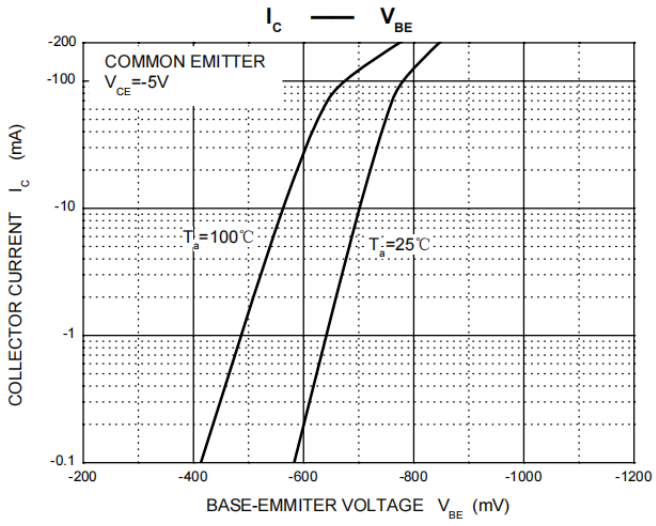
Typical Characteristics

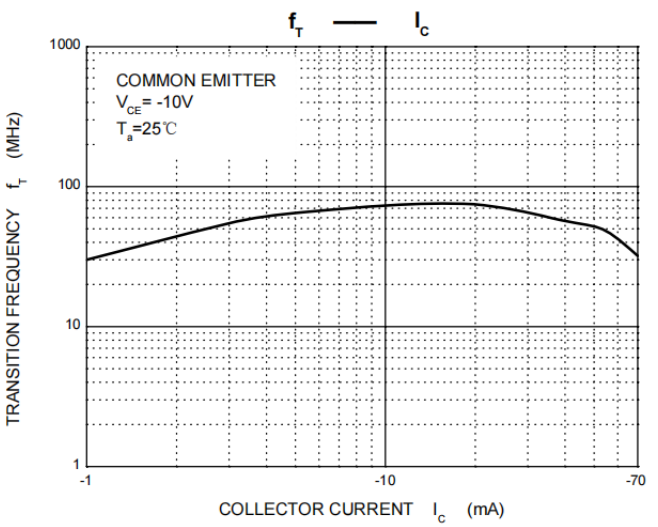


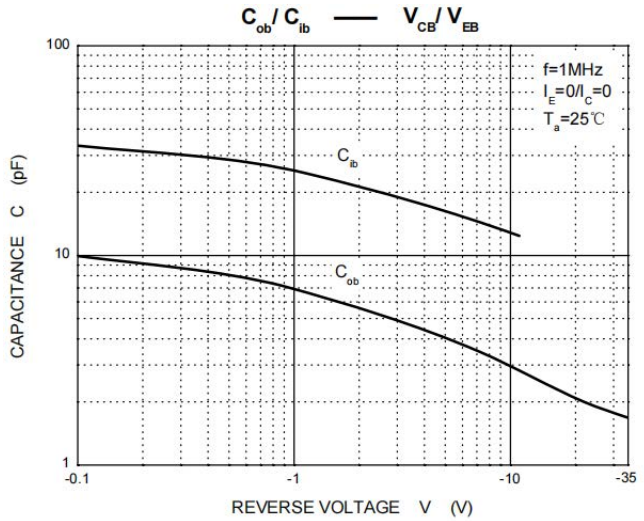


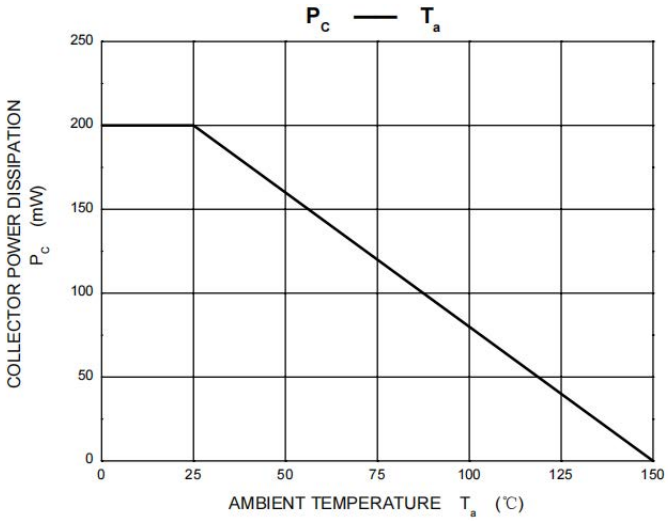




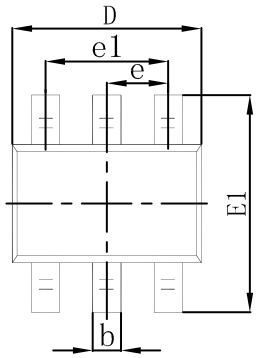


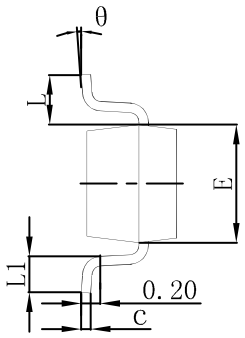


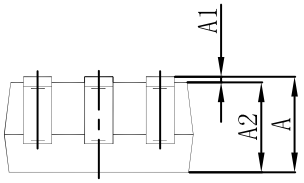




SOT-363(SC-70-6) Package Outline Dimensions

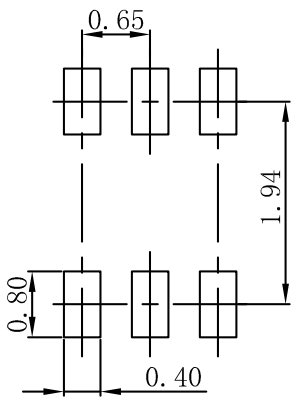






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 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(SC-70-6) Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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