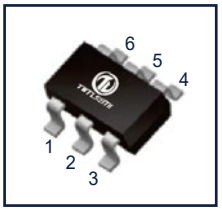
TL-MMDT5551

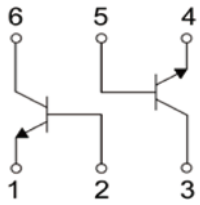
SOT-363 DUAL TRANSISTOR (NPN+NPN)

Features

- Epitaxial Planar Die Construction
- Complementary PNP Type Available(MMDT5401)
- Ideal for Medium Power Amplification and Switching



SOT-363



Equivalent Circuit

Absolute Maximum Ratings(T_A=25℃)

Symbol	Parameter	Value	Uniat
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	0.2	A
P_C	Collector Power Dissipation	0.2	W
T_J,T_{stg}	Operation Junction And Storage Temperature Range	-55～+150	℃

Electrical Characteristics (T_A=25℃ unless otherwise specified)

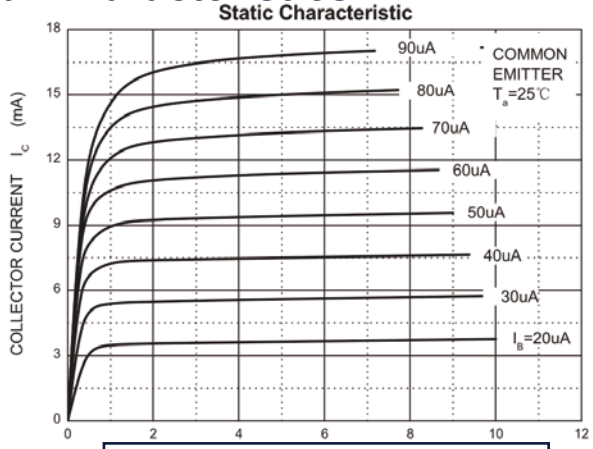
Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=100μA, I_E=0	180			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=1mA, I_B=0	160			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=10μA, I_C=0	6			V
I_{CBO}	Collector cut-off current	V_{CB}=120V, I_E=0			0.05	μA
I_{EBO}	Emitter cut-off current	V_{EB}=4V, I_C=0			0.05	μA
$h_{FE(1)}$	DC current gain	V_{CE}=5V, I_C=1mA	80			
$h_{FE(2)}$		V_{CE}=5V, I_C=10mA	100		300	
$h_{FE(3)}$		V_{CE}=5V, I_C=50mA	30			
$V_{CE(sat)(1)}$	Collector-emitter saturation voltage	I_C=10mA, I_B=1mA			0.15	V
$V_{CE(sat)(2)}$		I_C=50mA, I_B=5mA			0.2	V
$V_{BE(1)}$	Base-emitter voltage	I_C=10mA, I_B=1mA			1	V
$V_{BE(2)}$		I_C=50mA, I_B=5mA			1	V
f_T	Transition frequency	V_{CE}=10V,I_C=10mA ,f=100MHz	100		300	MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0A, f=1MHz			6	pF
NF	Noise Figure	V_{CE}=5V, I_C=0.2mA,R_S=1K,f =1kHz			8	dB

Ordering information

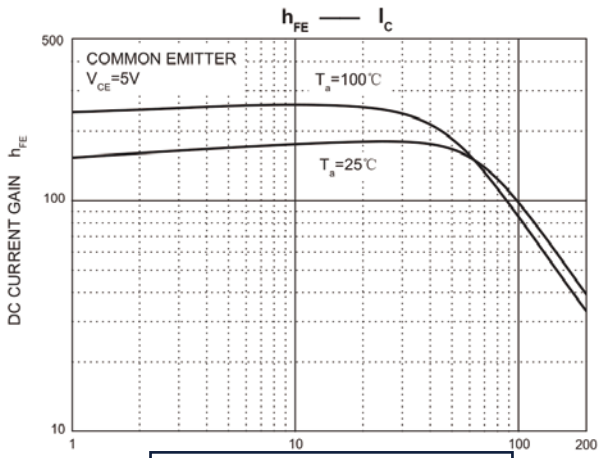
Product ID	Pack	Naming rule	Marking	hFE(1)	Qty(PCS)
MMDT5551	SOT-363	MMDT5551 产品名称 product name	K4N	100-300	3000

Typical Characteristics

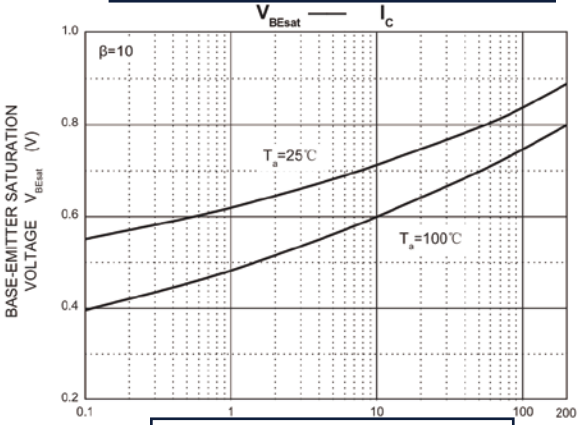
Static Characteristic



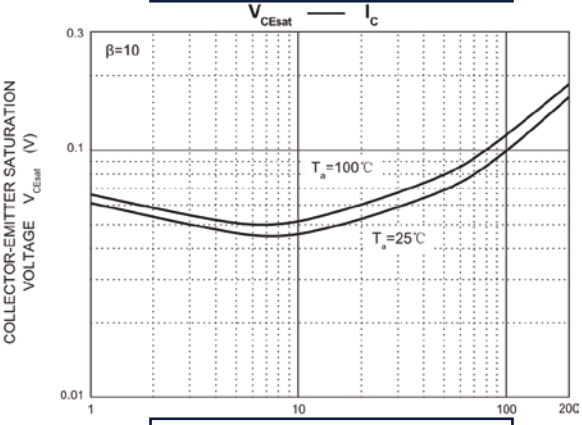
h_{FE} — I_C



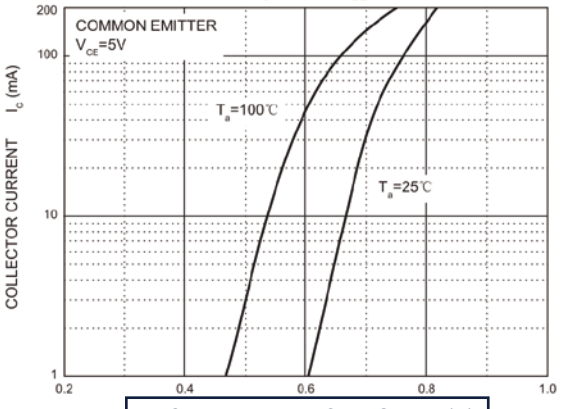
V_{BEsat} — I_C



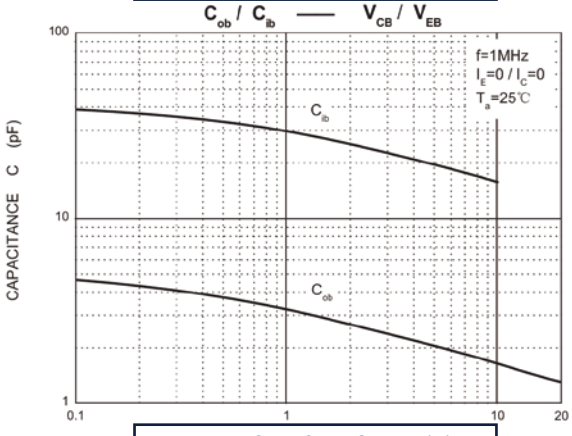
V_{CEsat} — I_C



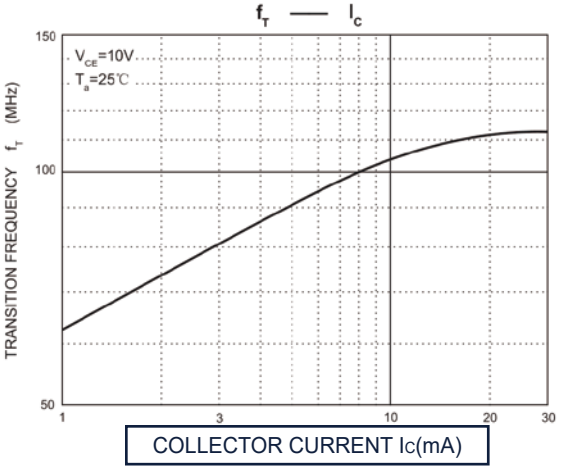
I_C — V_{BE}



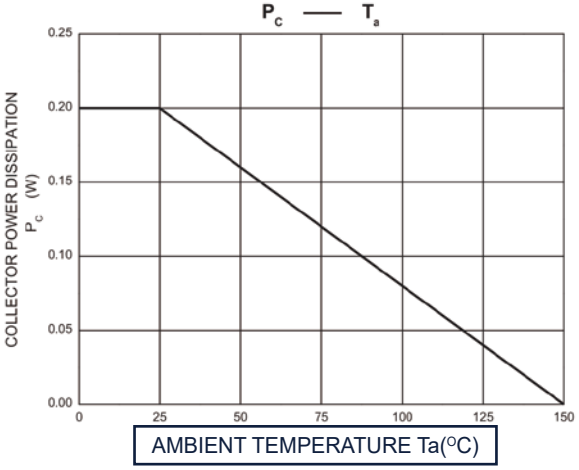
C_{ob} / C_{ib} — V_{CB} / V_{EB}



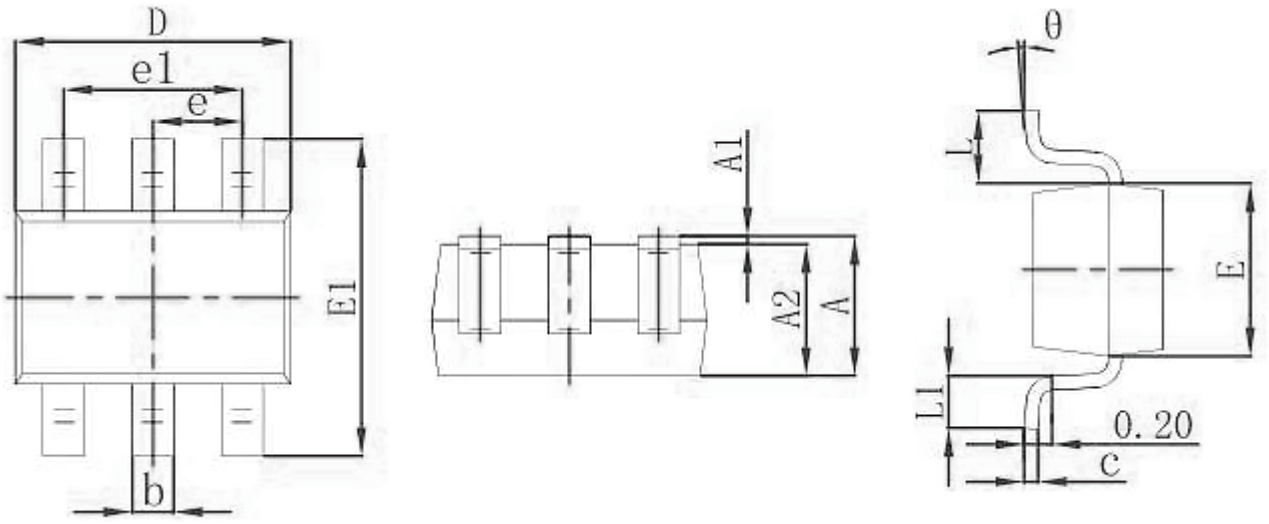
f_T — I_C



P_C — T_a



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	2.450	0.085	0.096
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°