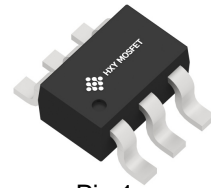




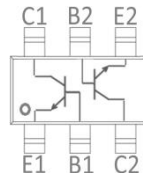
## Features

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)
MMDT5551	SOT-363	K4N	3000

## Maxmim Ratings (Ta=25 unless otherwise noted)

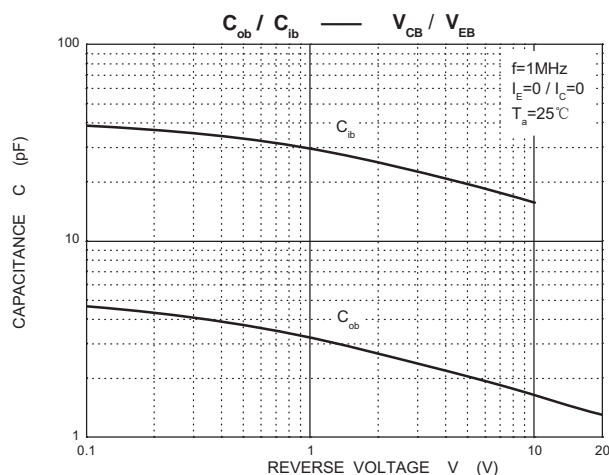
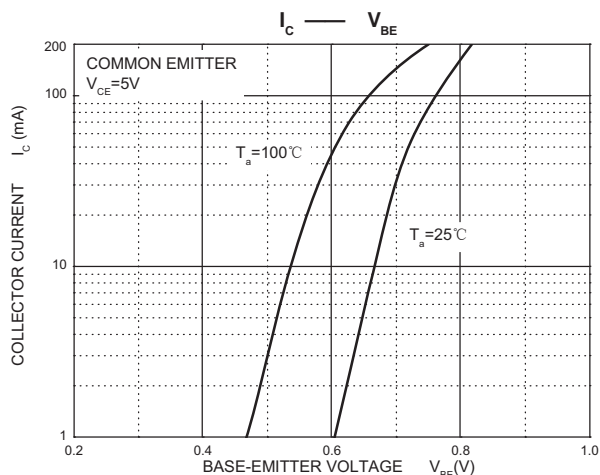
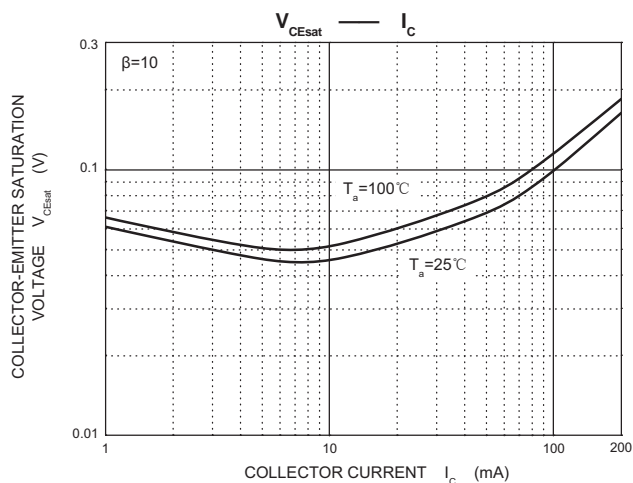
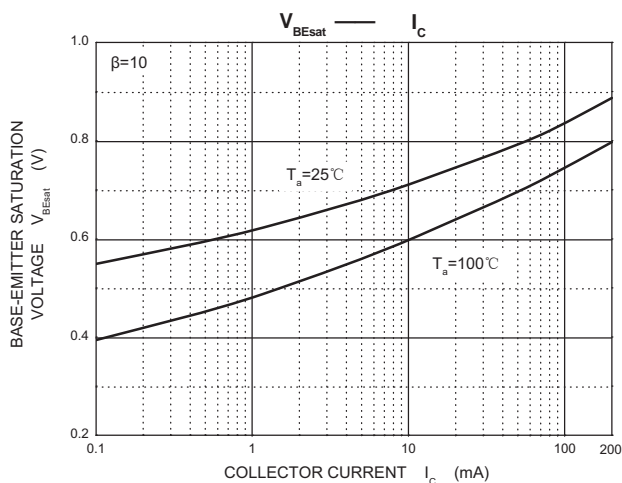
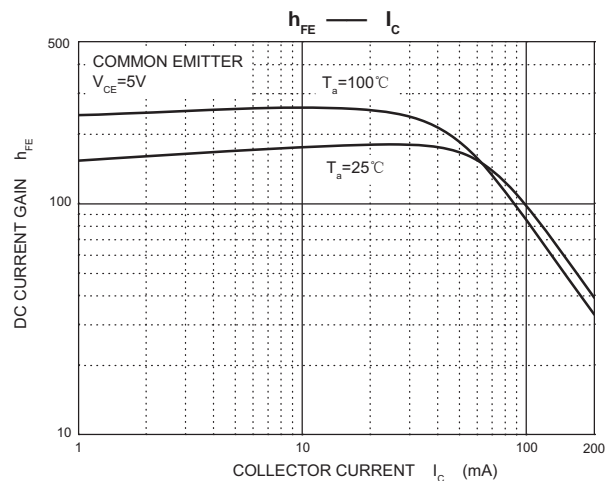
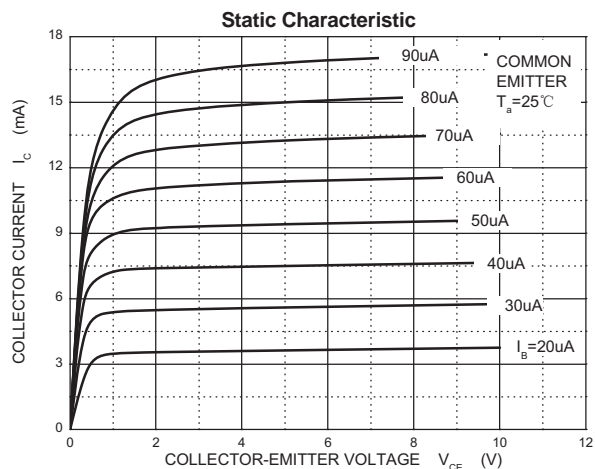
Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	180	V
$V_{CEO}$	Collector-Emitter Voltage	160	V
$V_{EBO}$	Emitter-Base Voltage	6	V
$I_C$	Collector Current	200	mA
$P_C$	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
$T_J, T_{stg}$	Operation Junction And Storage Temperature Range	-55~+150	°C

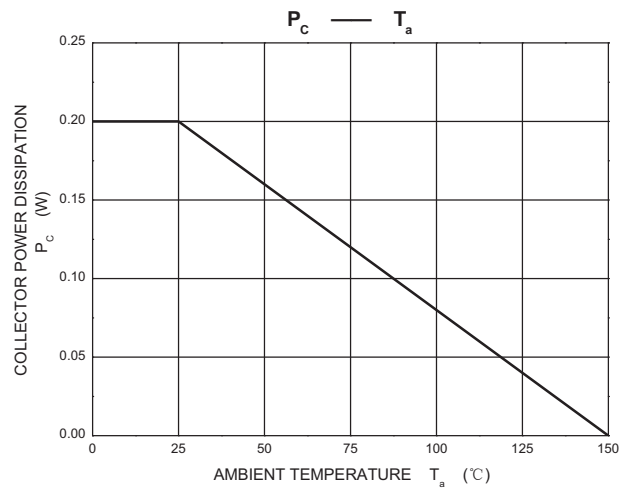
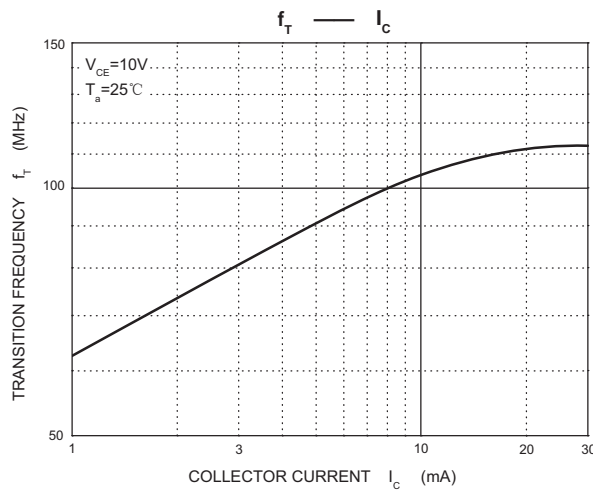
## Electrcal Charcteristics (Ta=25 unless otherwise noted)

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

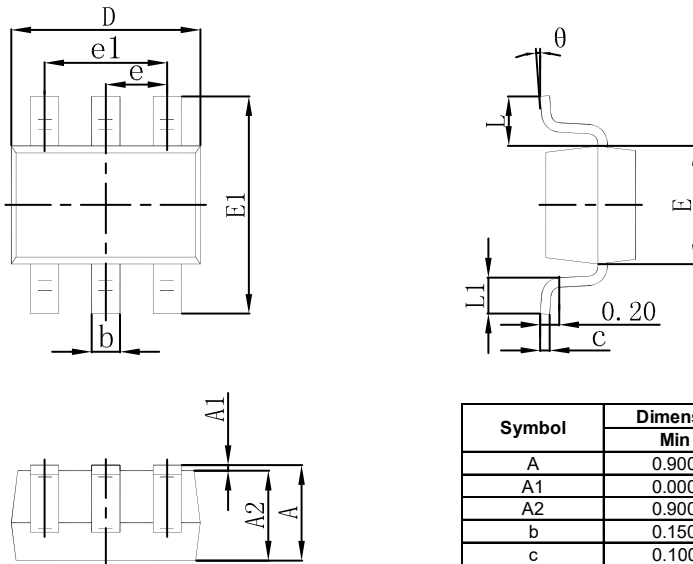


## Typical Characteristics



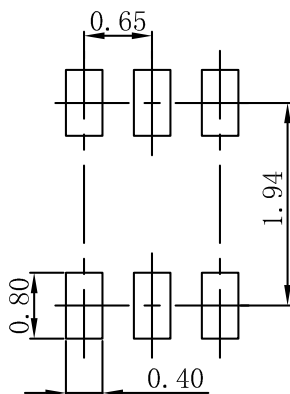


### SOT-363 Package Outline Dimensions



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
$\theta$	0°	8°	0°	8°

### SOT-363 Suggested Pad Layout



Note:

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



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