

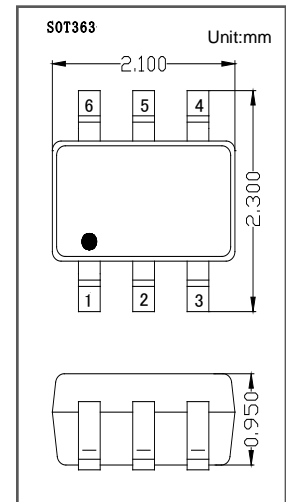
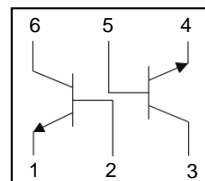
DATA SHEET (Preliminary)

MMDT5551

- ◇Epoxy meets UL 94 V-0 flammability rating
- ◇Lead Free Finish/RoHS Compliant
- ◇For Switching and AF Amplifier Applications
- ◇Rugged and reliable

Device Marking Code	
MMDT5551	K4N

Equivalent Circuit



Maximum Ratings (Ta = 25 °C)

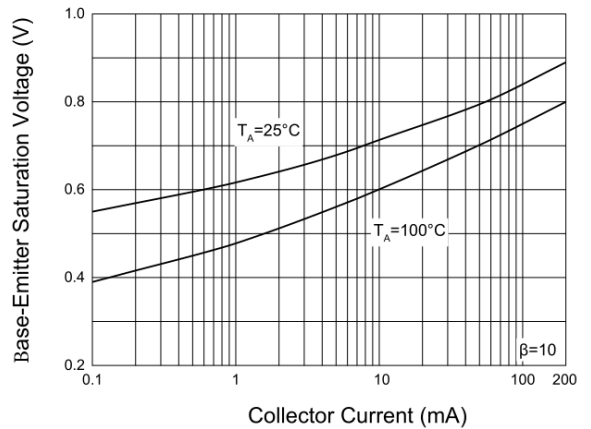
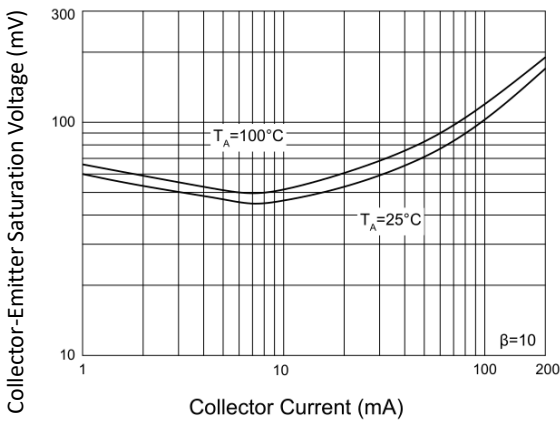
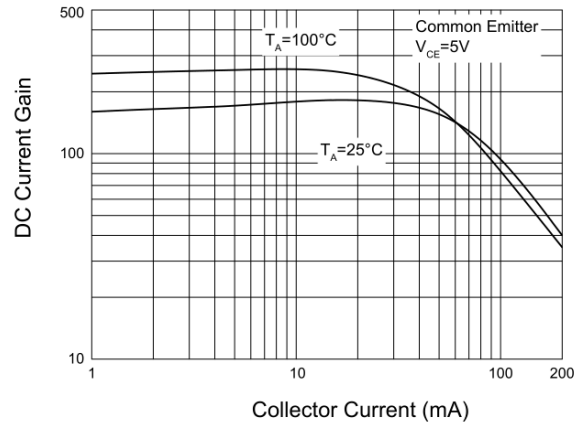
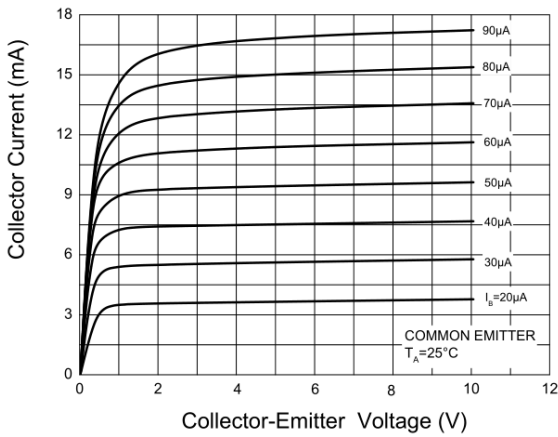
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6	V
P_C	Collector Power Dissipation	200	mW
I_C	Collector Current - Continuous	200	mA
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55 to 150	°C
$R_{\theta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

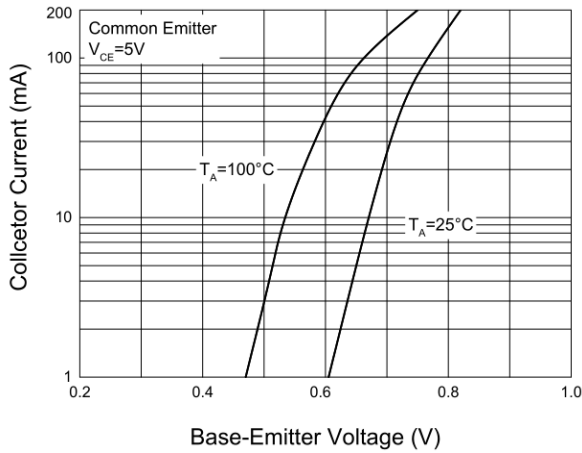
Electrical Characteristics (Ta = 25 °C)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C=100\mu A, I_E=0$	180			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=1mA, I_B=0$	160			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=10\mu A, I_C=0$	6			V
I_{CBO}	Collector Cut-Off Current	$V_{CB}=120V, I_E=0$			50	nA
I_{EBO}	Emitter Cut-Off Current	$V_{EB}=4V, I_C=0$			50	nA

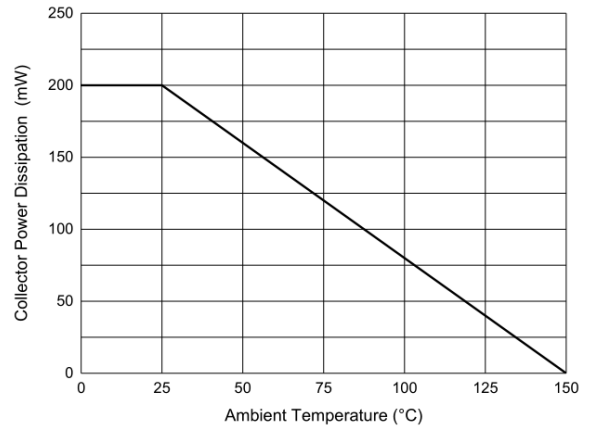
h_{FE}	DC Current Gain	$V_{CE}=5V, I_C=1mA$	80		
		$V_{CE}=5V, I_C=10mA$	100	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10mA, I_B=1mA$		0.15	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=10mA, I_B=1mA$		1	V
f_T	Transition Frequency	$V_{CE}=20V, I_C=10mA, f=100MHz$	100	300	MHz
C_{ob}	Output Capacitance	$V_{CB}=5V, I_E=0, f=1MHz$		6	pF
NF	Noise Figure	$V_{CE}=5V, I_C=200\mu A, f=1KHz, R_S=1K\Omega$		8	dB

Typical Characteristics





Base-Emitter Voltage Characteristics



Collector Power Derating Curve

Ordering Information

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
MMDT5551	SOT363	Tape & Reel 3000pcs /7" Reel	8mm	4mm	Conductive	

Package Dimensions

Package outline : SOT363-8L

TOP VIEW

SIDE VIEW

SYMBOL	DIMENSIONS IN MILLIMETER	
	MIN	MAX
A	0.900	1.000
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.100	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.400
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.460
θ	0°	8°

FRONT VIEW

SOLDRING PATTERN

Notice:

- Lead plating: Pb free solder
- Lead thickness includes solder plating
- Lead frame: CAC-5
- Other Tolerance: ±0.05
- Dimensions are exclusive of Burrs, Mold Flash and Tie Bar extrusions
- Unit: mm

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