

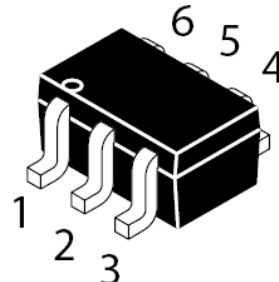
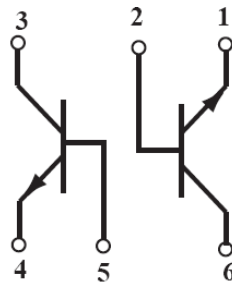
NPN/NPN Multi-Chip Transistor

FEATURES

- Ideal for Medium Power Amplification and Switching
- Complementary PNP Type Available(MMDT5401)

MECHANICAL DATA

- Case: SOT-363 Plastic
- Case material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Lead Free in RoHS 2002/95/EC Compliant



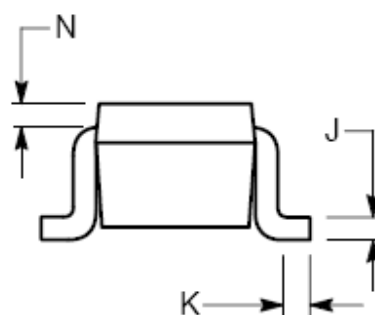
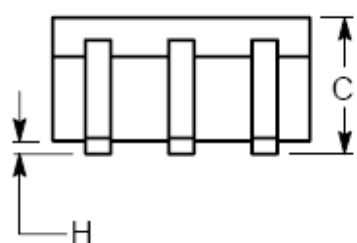
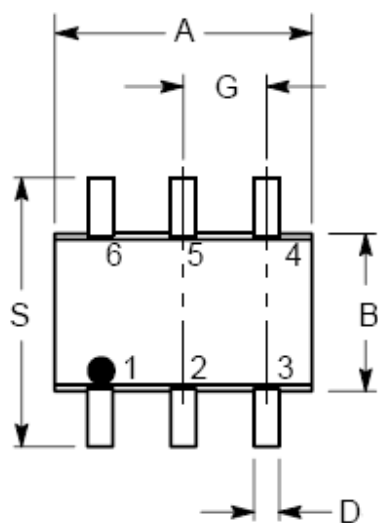
Maximum Ratings @ $T_A = 25^\circ\text{C}$

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	180	V
Collector-Emitter Voltage	V_{CEO}	160	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current -Continuous	I_C	200	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	$I_C=100\mu\text{A}, I_E=0$	V_{CBO}	180			V
Collector-emitter breakdown voltage	$I_C=1\text{mA}, I_B=0$	V_{CEO}	160			V
Emitter-base breakdown voltage	$I_E=10\mu\text{A}, I_C=0$	V_{EBO}	6			V
Collector-base cut-off current	$V_{CB}=120\text{V}, I_E=0$	I_{CBO}			0.05	μA
Emitter-base cut-off current	$V_{EB}=4\text{V}, I_C=0$	I_{EBO}			0.05	μA
DC current gain	$V_{CE}=5\text{V}, I_C=1\text{mA}$	h_{FE1}	80			
	$V_{CE}=5\text{V}, I_C=10\text{mA}$	h_{FE2}	100		300	
	$V_{CE}=5\text{V}, I_C=50\text{mA}$	h_{FE3}	30			
Collector-emitter saturation voltage	$I_C=10\text{mA}, I_B=1\text{mA}$	$V_{CE(sat)1}$			0.15	V
	$I_C=50\text{mA}, I_B=5\text{mA}$	$V_{CE(sat)2}$			0.2	V
Base-emitter saturation voltage	$I_C=10\text{mA}, I_B=1\text{mA}$	$V_{BE(sat)1}$			1	V
	$I_C=50\text{mA}, I_B=5\text{mA}$	$V_{BE(sat)2}$			1	V
Transition frequency	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	f_T	100		300	MHz
Collector output capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	C_{ob}			6	pF
Noise Figure	$V_{CE}=5\text{V}, I_C=0.2\text{mA}, R_S=1\text{k}\Omega, f=1\text{kHz}$	NF			8	dB

SOT-363 Outline Dimension



Symbol	Dimension In Millimeters	
	Min	Max.
A	1.89	2.20
B	1.15	1.35
C	0.80	1.10
D	0.10	0.30
G	0.65 BSC	
H	---	0.10
J	0.10	0.25
K	0.10	0.30
N	0.20 REF	
S	2.00	2.20

Device Marking :

Device P/N	Marking code
MMDT5551	G1

Electrical characteristic curves

Fig.1 Power Dissipation vs. Ambient Temperature

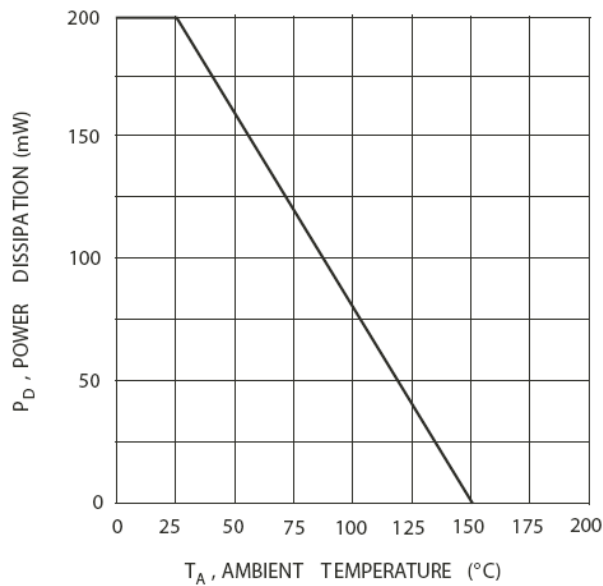


Fig.2 Collector Emitter Saturation Voltage vs. Collector Current

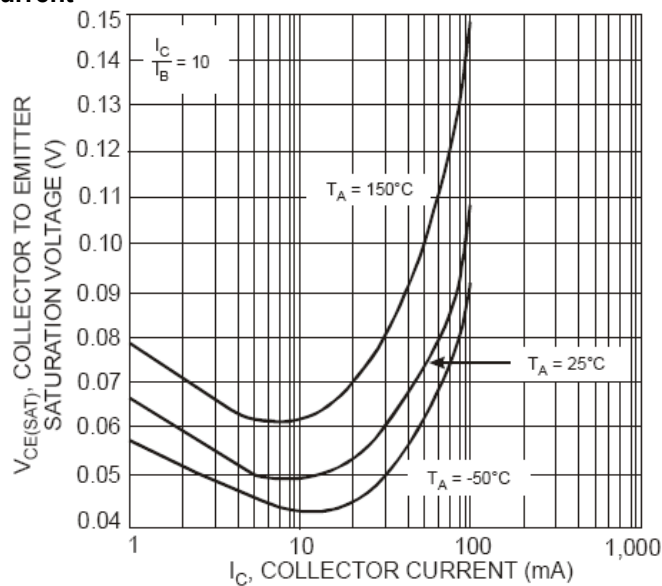


Fig.3 DC Current Gain vs. Collector Current

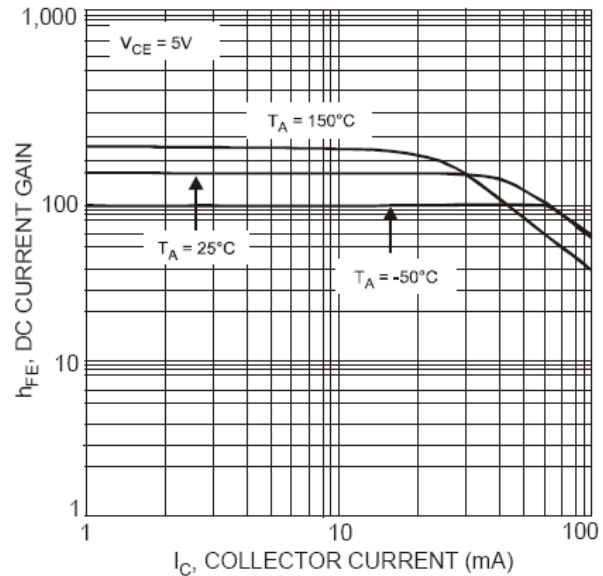


Fig.4 Base Emitter Voltage vs. Collector Current

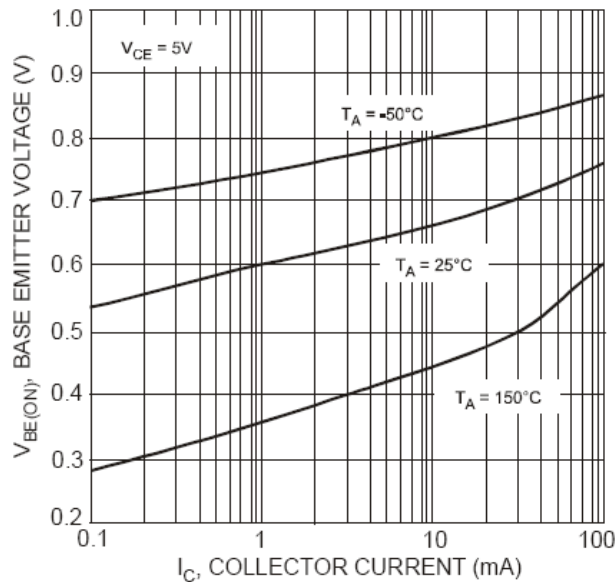
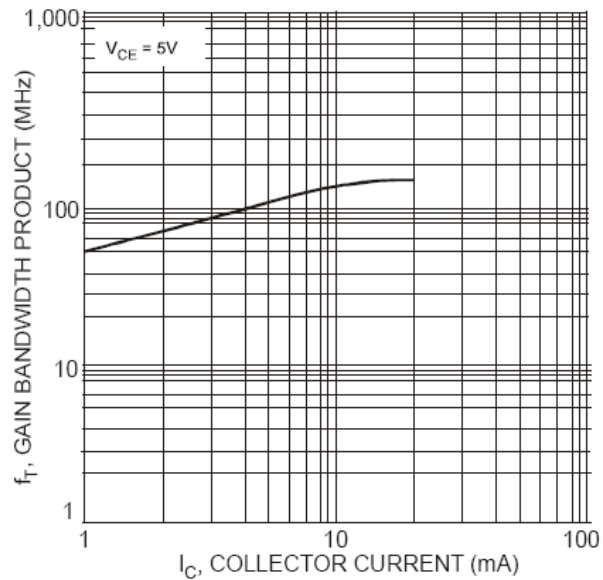


Fig.5 Gain Bandwidth Product vs. Collector Current



Important Notice and Disclaimer

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.

New Marking Rule Notification

Range: In order to have well management in process control, the new marking rule is applied to small signal device including Switching Diode, Transistor and Schottky Diode.

Package: SOT-363

