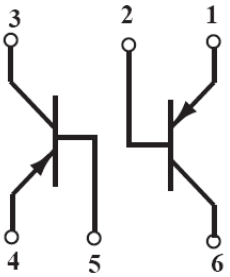
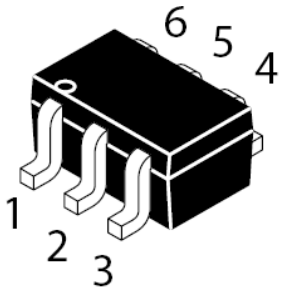
LITE-ON SEMICONDUCTORS

MMDT2907A

PNP/PNP Multi-Chip Transistor





FEATURES

- Ideal for Medium Power Amplification and Switching

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

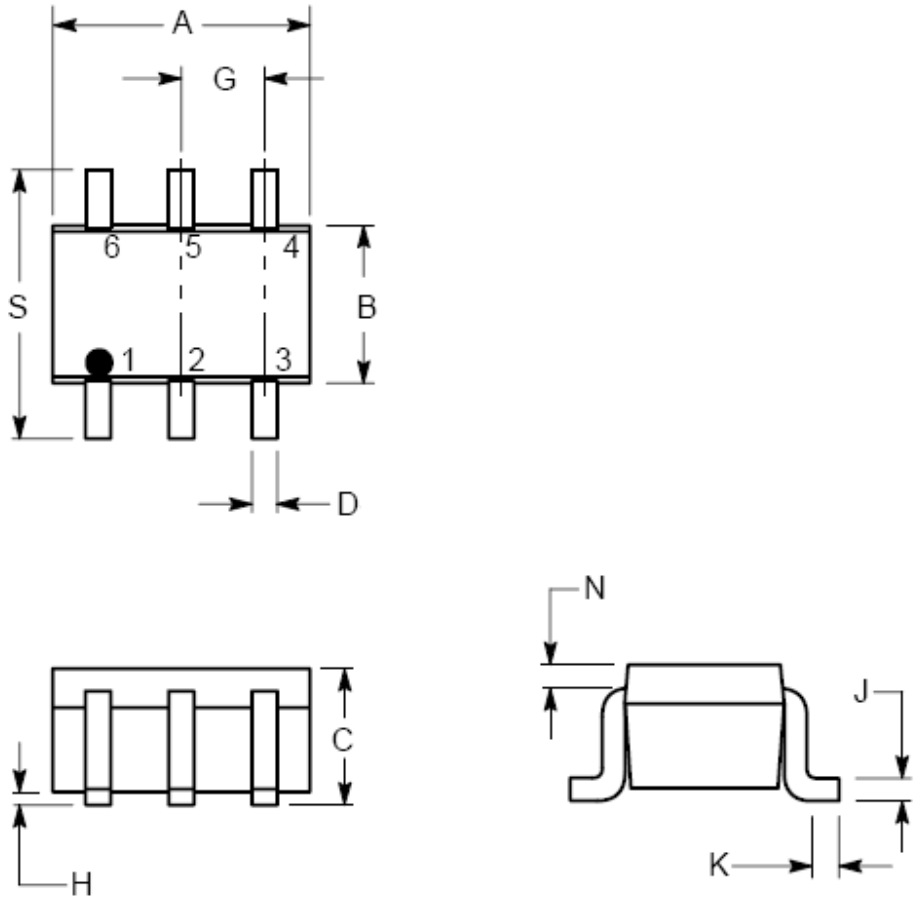
Maximum Ratings @ T_A = 25℃

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current -Continuous	I_C	-600	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{STG}	-55~+150	℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	I_C=-10μA,I_E=0	V_{CBO}	-60			V
Collector-emitter breakdown voltage	I_C=-10mA,I_B=0	V_{CEO}	-60			V
Emitter-base breakdown voltage	I_E=-10μA,I_C=0	V_{EBO}	-5			V
Collector-base cut-off current	V_{CB}=-50V,I_E=0	I_{CBO}			-10	nA
Emitter-base cut-off current	V_{EB}=-3V,I_C=0	I_{EBO}			-10	nA
Collector-emitter cut-off current	V_{CE}=-30V,$V_{BE(off)}$=-0.5V	I_{CEX}			-50	nA
DC current gain	V_{CE}=-10V,I_C=-0.1mA	h_{FE1}	75			
	V_{CE}=-10V,I_C=-1mA	h_{FE2}	100			
	V_{CE}=-10V,I_C=-10mA	h_{FE3}	100			
	V_{CE}=-10V,I_C=-150mA	h_{FE4}	100		300	
	V_{CE}=-10V,I_C=-500mA	h_{FE5}	50			
Collector-emitter saturation voltage	I_C=-150mA,I_B=-15mA	V_{CE}(sat)1			-0.4	V
	I_C=-500mA,I_B=-50mA	V_{CE}(sat)2			-1.6	V
Base-emitter saturation voltage	I_C=-150mA,I_B=-15mA	V_{BE}(sat)1			-1.3	V
	I_C=-500mA,I_B=-50mA	V_{BE}(sat)2			-2.6	V
Transition frequency	V_{CE}=-20V,I_C=-50mA, f=100MHz	f_T	200			MHz
Output Capacitance	V_{CB}=-10V, I_E= 0,f=1MHz	Cob			8	pF
Input Capacitance	V_{EB}=-2V, I_C= 0,f=1MHz	Cib			30	pF
Delay time	V_{CC}=-30V, I_C=-150mA , I_{B1}=-15mA	T_d			10	nS
Rise time		T_r			40	nS
Storage time	V_{CC}=-6V, I_C=-150mA I_{B1}=-I_{B2}=-15mA	T_s			225	nS
Fall time		T_f			60	nS

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
MMDT2907A	2F

Electrical characteristic curves

Fig.1 Power Dissipation vs Ambient Temperature

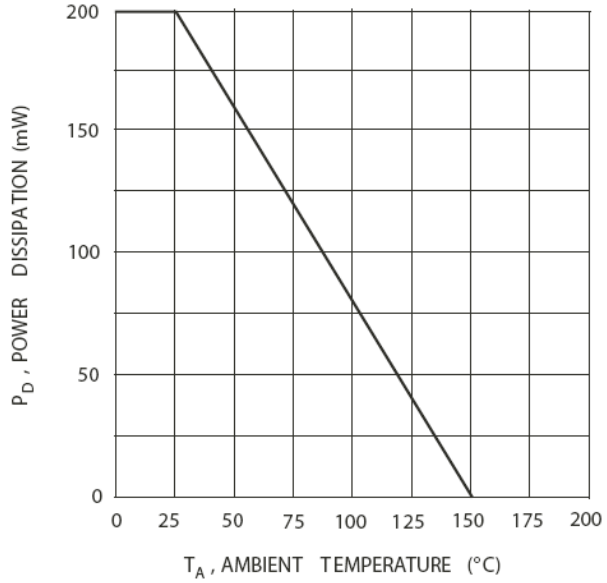


Fig.2 Capacitance

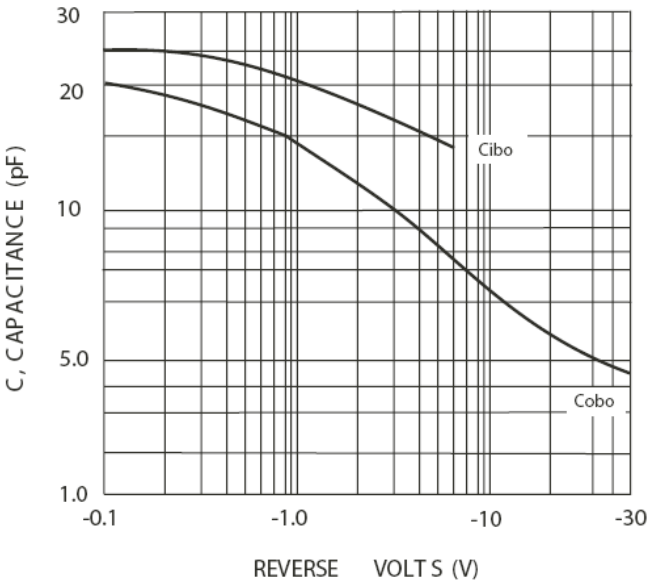


Fig.3 Collector Saturation Region

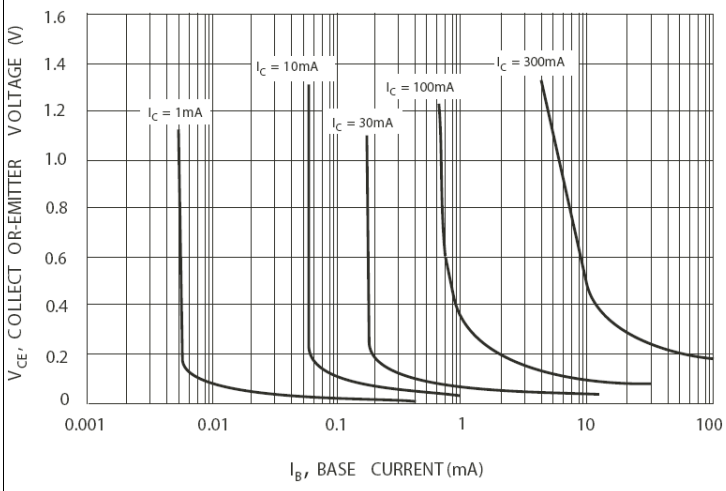


Fig.4 Collector Emitter Saturation Voltage vs Collector Current

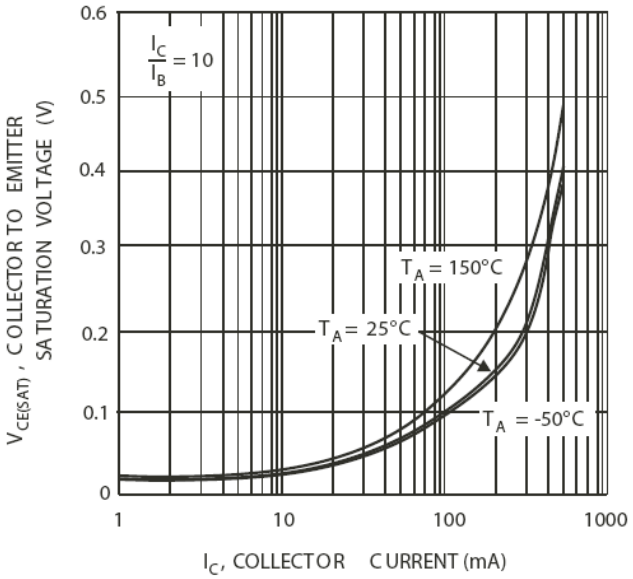


Fig.5 DC Current vs Collector Current

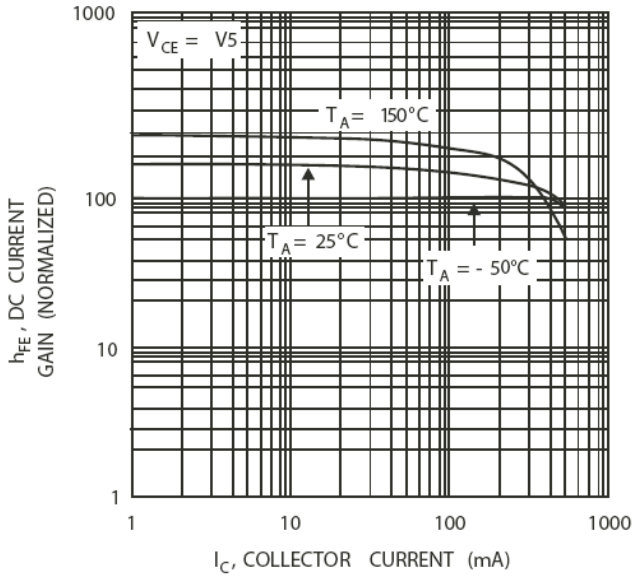


Fig.6 Base Emitter Voltage vs Collector Current

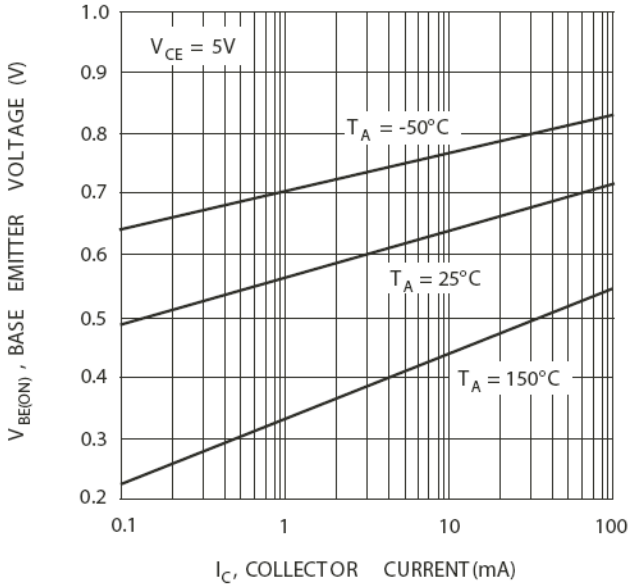
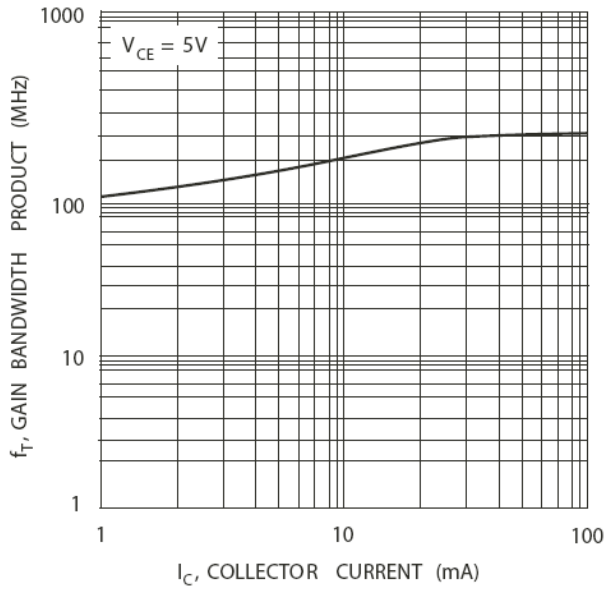


Fig.7 Gain Bandwidth Product vs Collector Current



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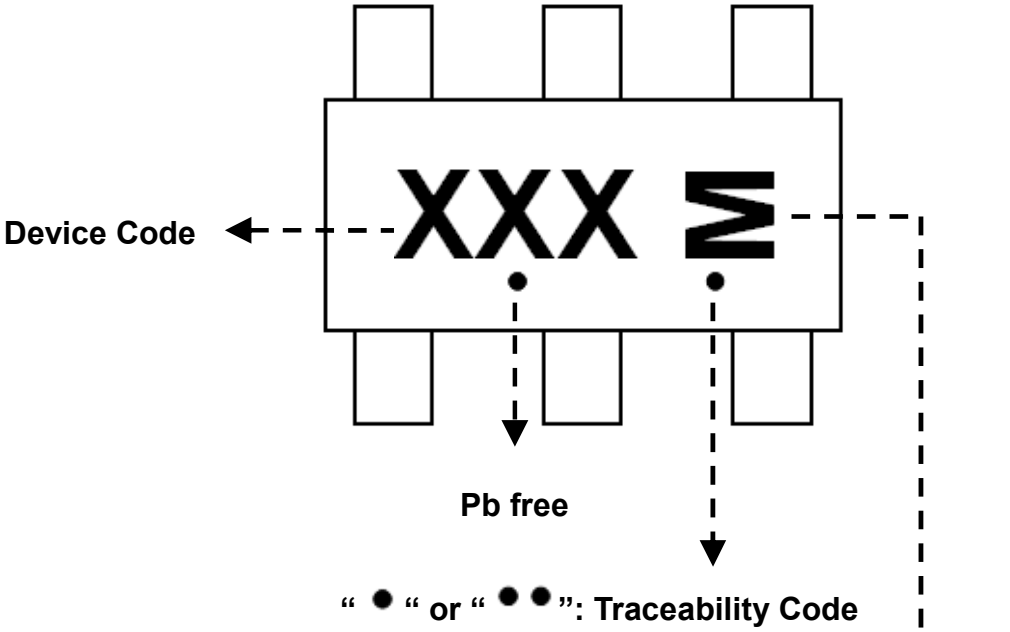
New Marking Rule Notification

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



Odd Year	Even Year
1	E
2	F
3	H
4	J
5	K
6	L
7	N
8	P
9	U
T	X
V	Y
C	Z