

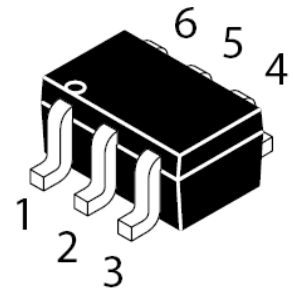
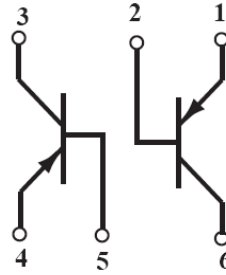
PNP/PNP Multi-Chip Transistor

FEATURES

- Ideal for low 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



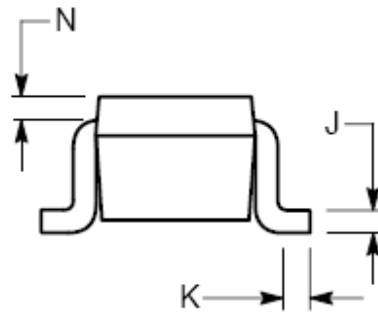
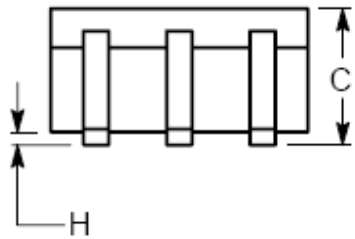
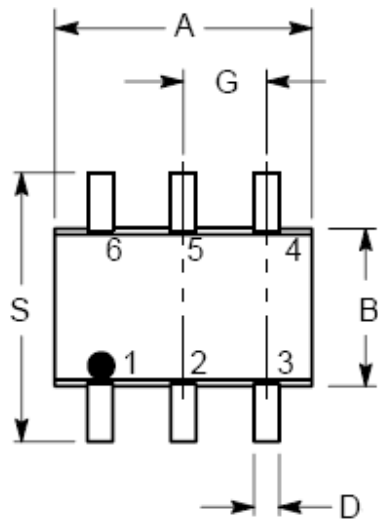
Maximum Ratings @ T_A = 25°C

Characteristic	Symbol	Value	Unit
Collector-Base Voltage	V _{CB0}	-40	V
Collector-Emitter Voltage	V _{CEO}	-40	V
Emitter-Base Voltage	V _{EBO}	-5	V
Collector Current -Continuous	I _C	-600	mA
Collector Power Dissipation	P _C	200	mW
Thermal Resistance, Junction to Ambient	R _{θJA}	625	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{STG}	-55~+150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	I _C =-100μA, I _E =0	V _{CB0}	-40			V
Collector-emitter breakdown voltage	I _C =-1mA, I _B =0	V _{CEO}	-40			V
Emitter-base breakdown voltage	I _E =-100μA, I _C =0	V _{EBO}	-5			V
Collector-base cut-off current	V _{CB} =-50V, I _E =0	I _{CB0}			-0.1	uA
Collector-emitter cut-off current	V _{CE} =-35V, I _B =0	I _{CEO}			-0.5	uA
Emitter-base cut-off current	V _{EB} =-5V, I _C =0	I _{EBO}			-0.1	uA
DC current gain	V _{CE} =-1V, I _C =-0.1mA	h _{FE1}	30			
	V _{CE} =-1V, I _C =-1mA	h _{FE2}	60			
	V _{CE} =-1V, I _C =-10mA	h _{FE3}	100			
	V _{CE} =-2V, I _C =-150mA	h _{FE4}	100		300	
	V _{CE} =-2V, I _C =-500mA	h _{FE5}	20			
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}			-0.75	V
Base-emitter saturation voltage	I _C =-150mA, I _B =-15mA	V _{BE(sat)1}	-0.75		-0.95	V
	I _C =-500mA, I _B =-50mA	V _{BE(sat)2}			-1.3	V
Transition frequency	V _{CE} =-10V, I _C =-20mA, f=100MHz	f _T	200			MHz
Collector output capacitance	V _{CB} =-10V, I _E =0, f=1MHz	C _{ob}			8.5	pF
Delay time	V _{CC} =-30V, V _{BE} =-2V	T _d			15	nS
Rise time	I _C =-150mA, I _{B1} =-15mA	T _r			20	nS
Storage time	V _{CC} =-30V, I _C =-150mA	T _s			225	nS
Fall time	I _{B1} =-I _{B2} =-15mA	T _f			30	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
MMDT4403	2T

Electrical characteristic curves

Fig.1 Power Derating Curve

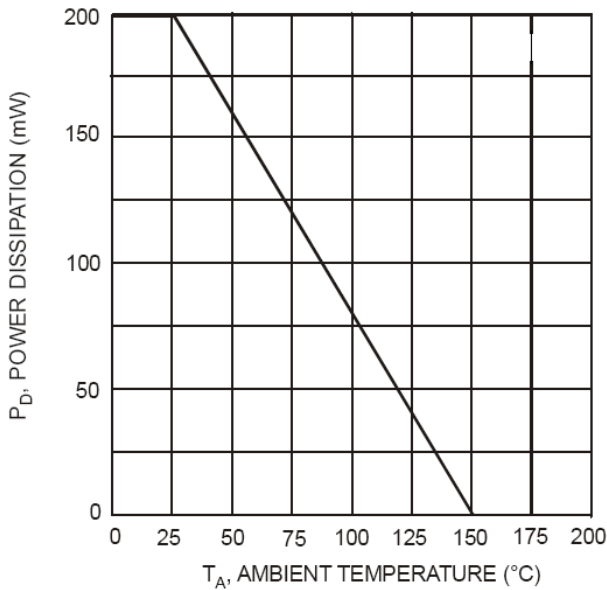


Fig.3 Base-Emitter Voltage vs. Collector Current

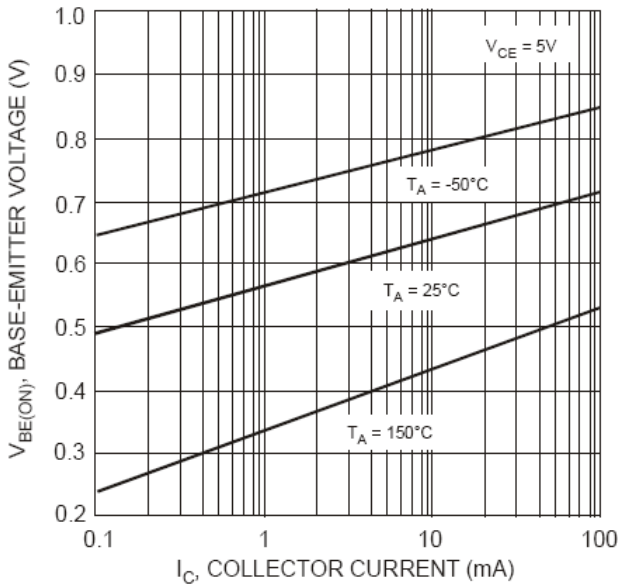


Fig.5 Gain-Bandwidth Product vs. Collector Current

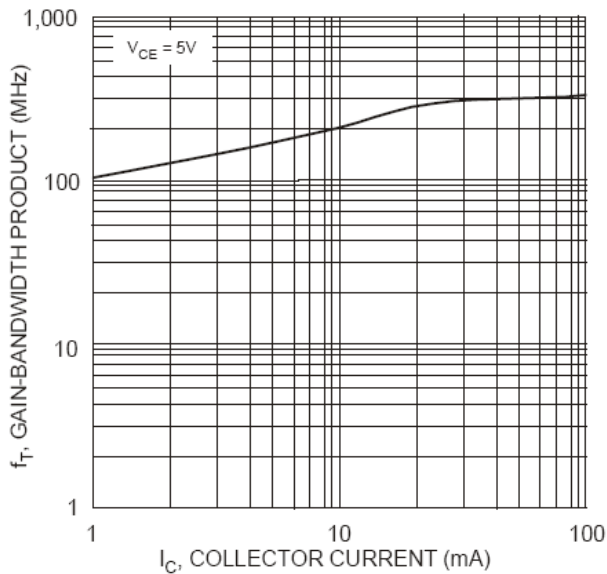


Fig.2 Collector-Emitter Saturation Voltage vs. Collector Current

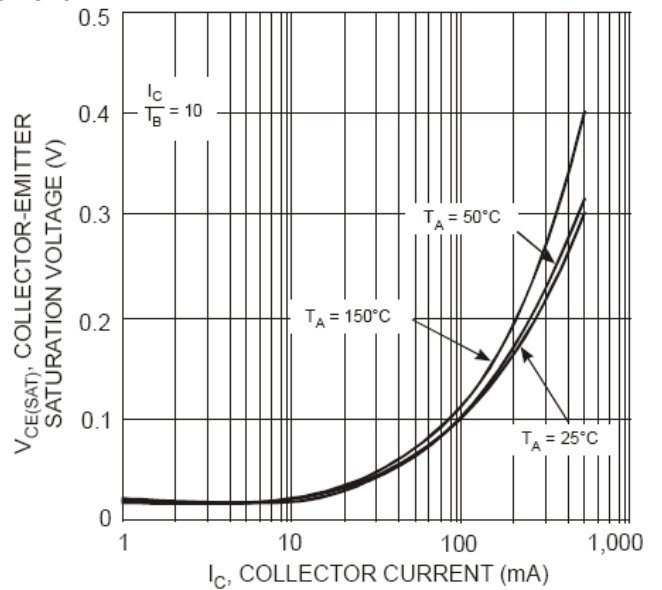


Fig.4 DC Current Gain vs. Collector Current

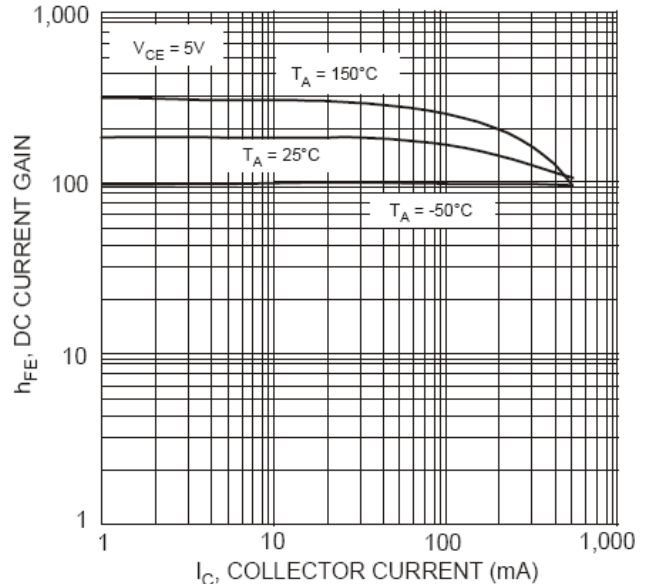


Fig.6 Capacitance

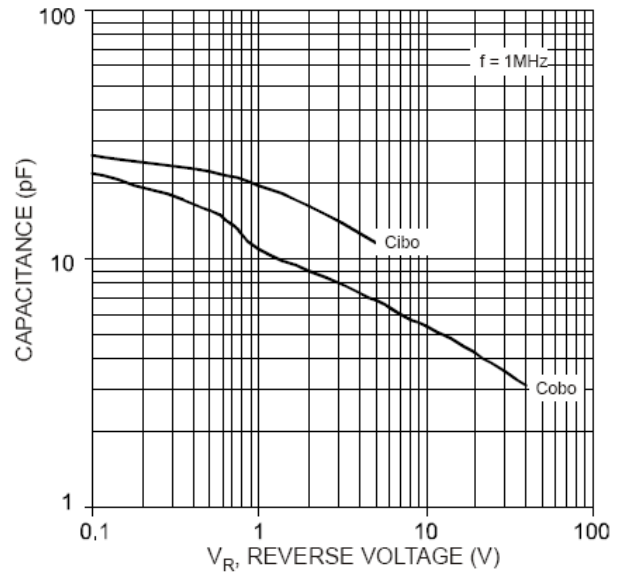
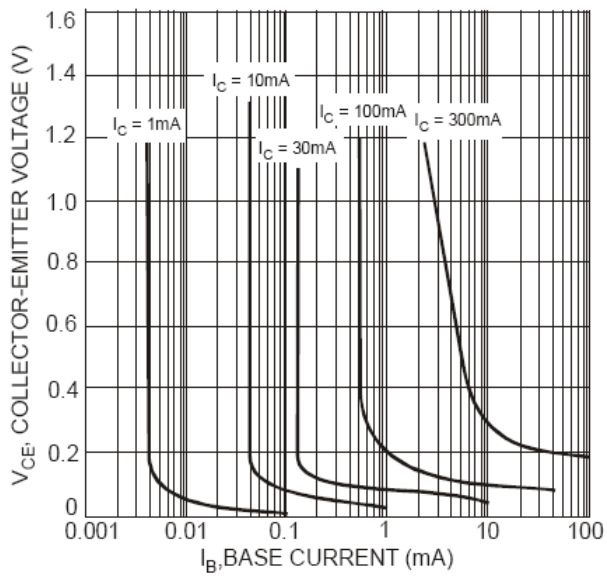


Fig.7 Collector Saturation Region



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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

