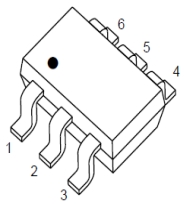
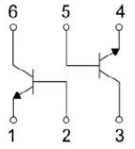
GP ELECTRONICS

MMDT3904

MMDT3904 Dual Transistor(NPN+NPN)

SOT-363





Feature

- Epitaxial planar die construction
- Ideal for low power amplification and switching

Marking: K6N

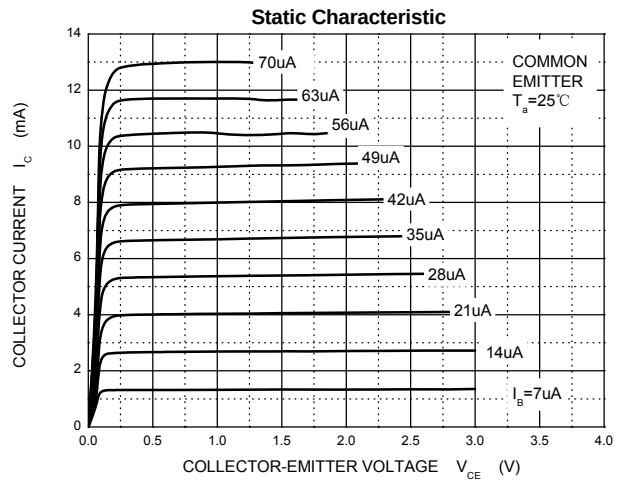
MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

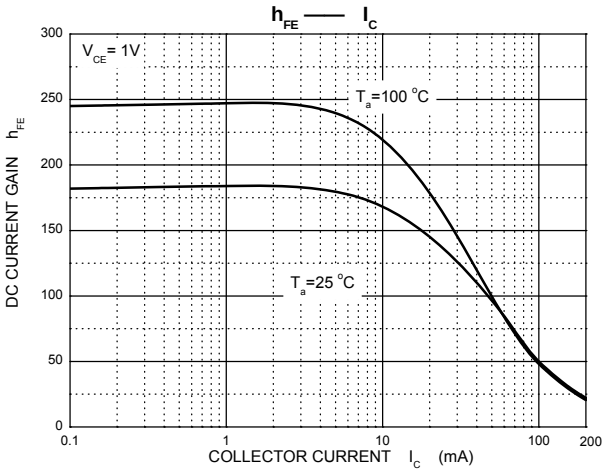
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	40	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current -Continuous	I_C	0.2	A
Power Dissipation	P_d	0.2	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

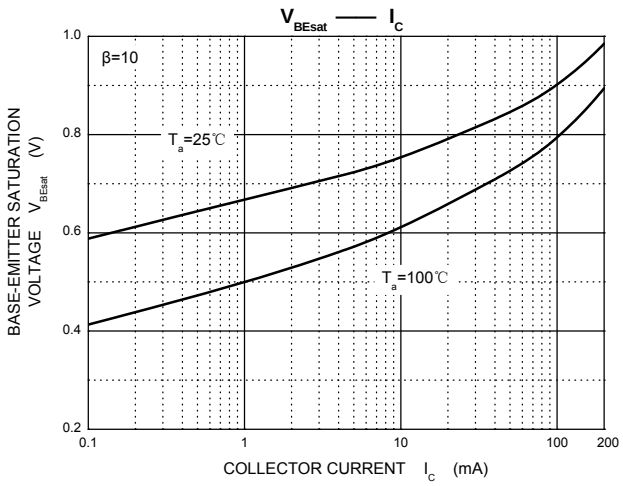
ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

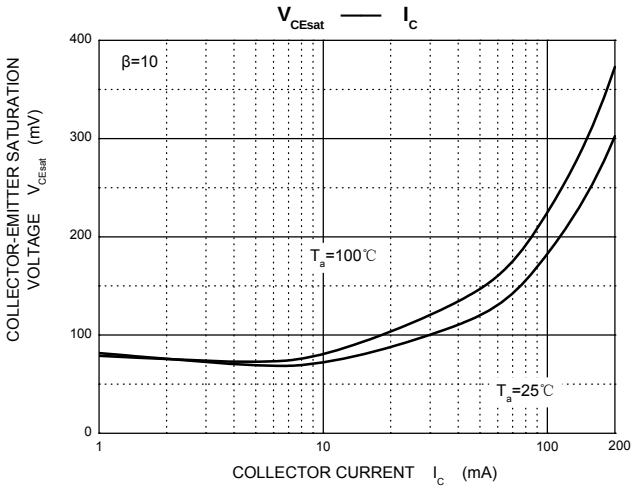
Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=10μA ,I_E=0	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA , I_B=0	40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA,I_C=0	5		V
Collector cut-off current	I_{CEO}	V_{CE}=40V, I_B=0V		100	nA
Baes cut-off current	I_{CBO}	V_{CB}=60V, I_E=0V		100	nA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0		100	nA
DC current gain	h_{FE}	V_{CE}=5V, I_C=1mA	40		
		V_{CE}=5V, I_C=1mA	70		
		V_{CE}=5V, I_C=1mA	100	300	
		V_{CE}=5V, I_C=1mA	60		
		V_{CE}=5V, I_C=1mA	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA, I_B=1mA		0.2	V
		I_C=50mA, I_B=5mA		0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=10mA, I_B=1mA	0.65	0.85	V
		I_C=50mA, I_B=5mA		0.95	V
Transition frequency	f_T	V_{CE}= 20V, I_C=10mA,f=100MHz	300		MHZ
Collector output capacitance	C_{ob}	V_{CB}=5V,I_E=0,f=1MHz		4	pF
Noise figure	NF	V_{CE}=5V,Ic=0.1mA,f=1kHz,R_S=1KΩ		5	dB

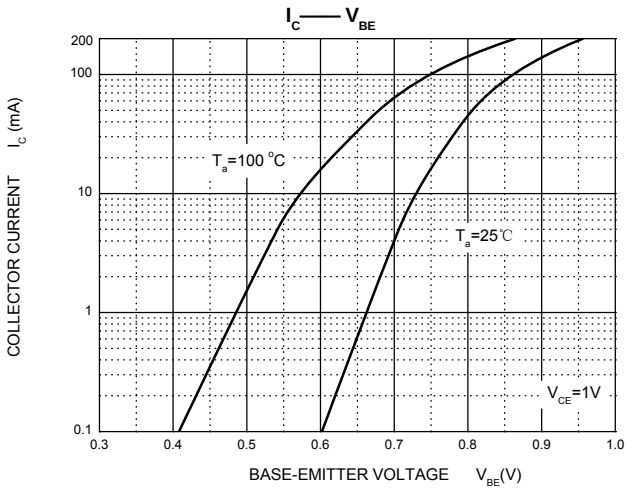
Typical Characteristics

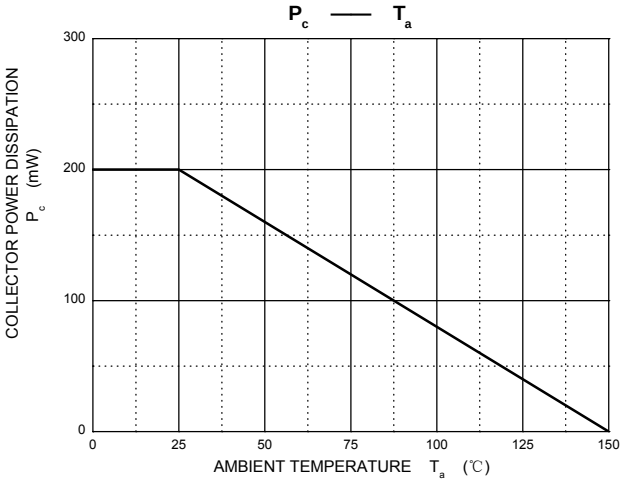




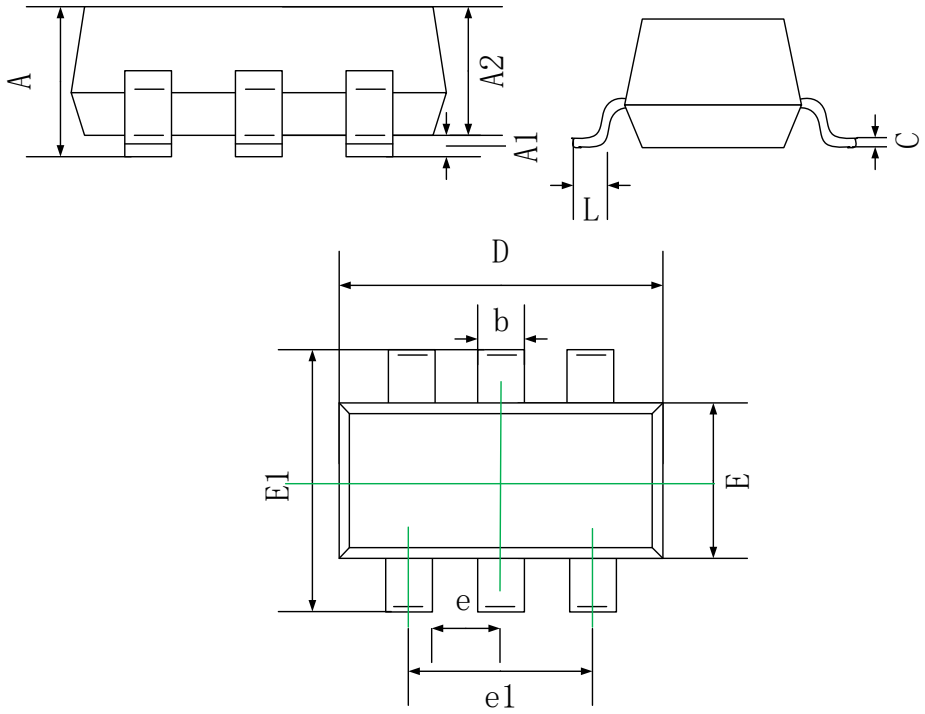






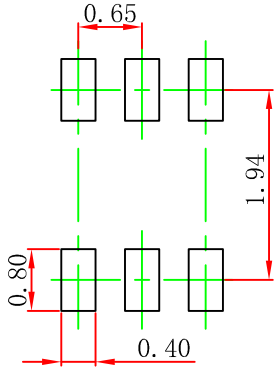


SOT-363 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.10
A1	0.00	0.10
A2	0.90	1.00
b	0.15	0.35
c	0.10	0.15
D	2.00	2.20
E	1.15	1.35
E1	2.15	2.40
e	0.65 REF.	
e1	1.20	1.40
L	0.525 REF.	
L1	0.26	0.46

SOT-363 Suggested Pad Layout



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