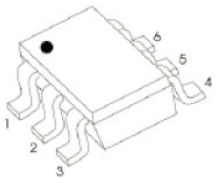
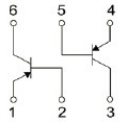
MMDT3906DW DUAL TRANSISTOR(PNP+PNP)

SOT-363 Plastic-Encapsulate Transistors

SOT-363





Marking: K3N

Features

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

Mechanical Data

- SOT-363 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

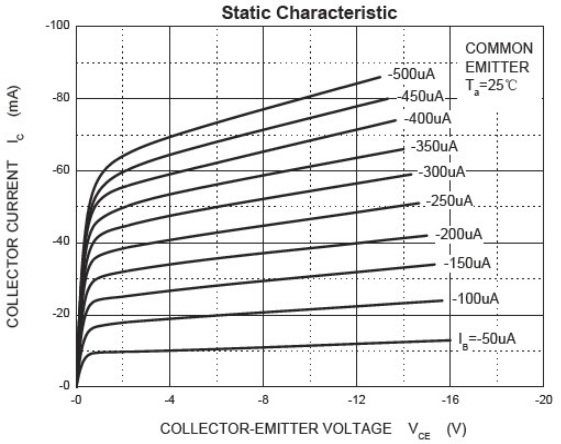
Parameters	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter -Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-200	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	℃
Storage Temperature	Tstg	-55-+150	℃
Thermal resistance From junction to ambient	$R_{\theta JA}$	625	℃/W

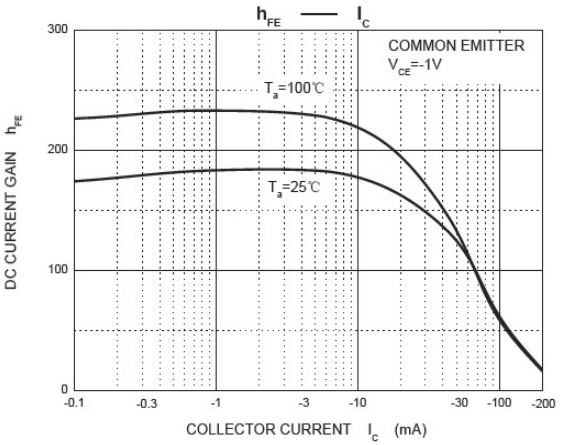
Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

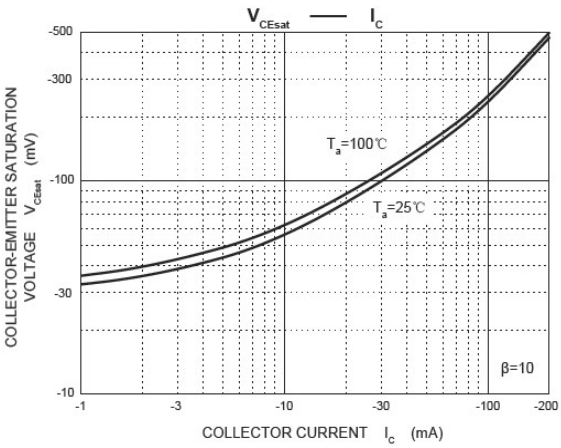
Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10uA, I_E=0	-40		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-1mA, I_B=0	-40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10uA, I_C=0	-5		V
Collector cut-off current	I_{CEX}	V_{CE}=-30V, $V_{EB(off)}$=-3V		-50	nA
Base cut-off current	I_{EBO}	V_{EB}=-5V, I_C=0		-50	nA
DC current gain	$h_{FE(1)}$	V_{CE}=-1V, I_C=-0.1mA	60		
	$h_{FE(2)}$	V_{CE}=-1V, I_C=-1mA	80		
	$h_{FE(3)}$	V_{CE}=-1V, I_C=-10mA	100	300	
	$h_{FE(4)}$	V_{CE}=-1V, I_C=-50mA	60		
	$h_{FE(5)}$	V_{CE}=-1V, I_C=-100mA	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-10mA, I_B=-1mA		-0.25	V
		I_C=-50mA, I_B=-5mA		-0.40	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	250		MHz
Collector output capacitance	Cob	V_{CB}=-5V, I_E=0, f=1MHz		4.5	pF
Noise figure	NF	V_{EB}=-5V, I_E=0, f=1MHz		4	dB
Delay time	td	VCC=-3V, VBE(off)=-0.5V, IC=-10mA, IB1=-1mA		35	nS
Rise time	tr			35	nS
Storage time	ts	VCC=-3V, IC=-10mA, IB1=IB2=-1mA		225	nS
Fall time	tf			75	nS

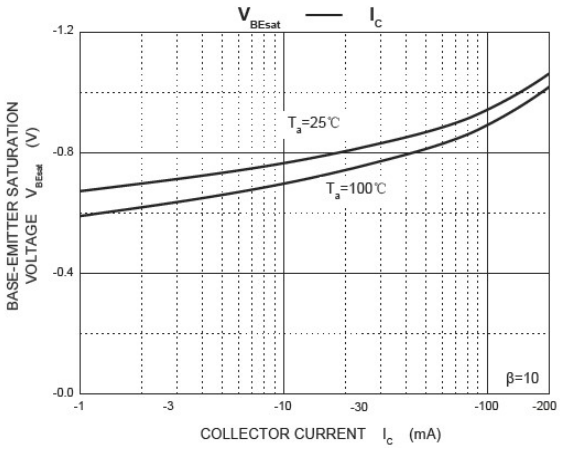
*Pulse test: pulse width≤300us,duty cycle≤2.0%

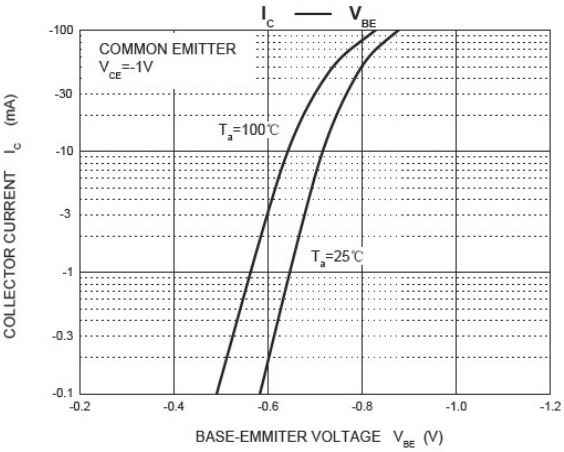
Typical characteristics

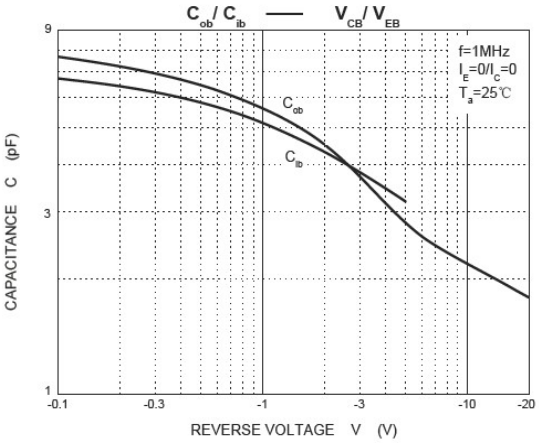


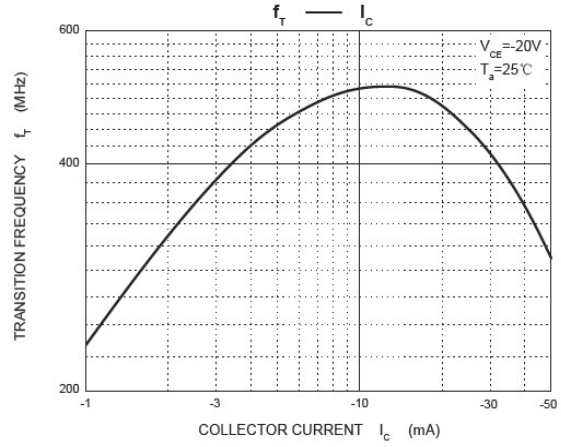


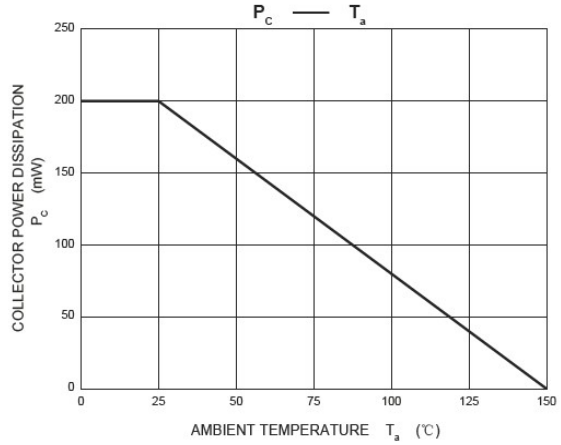






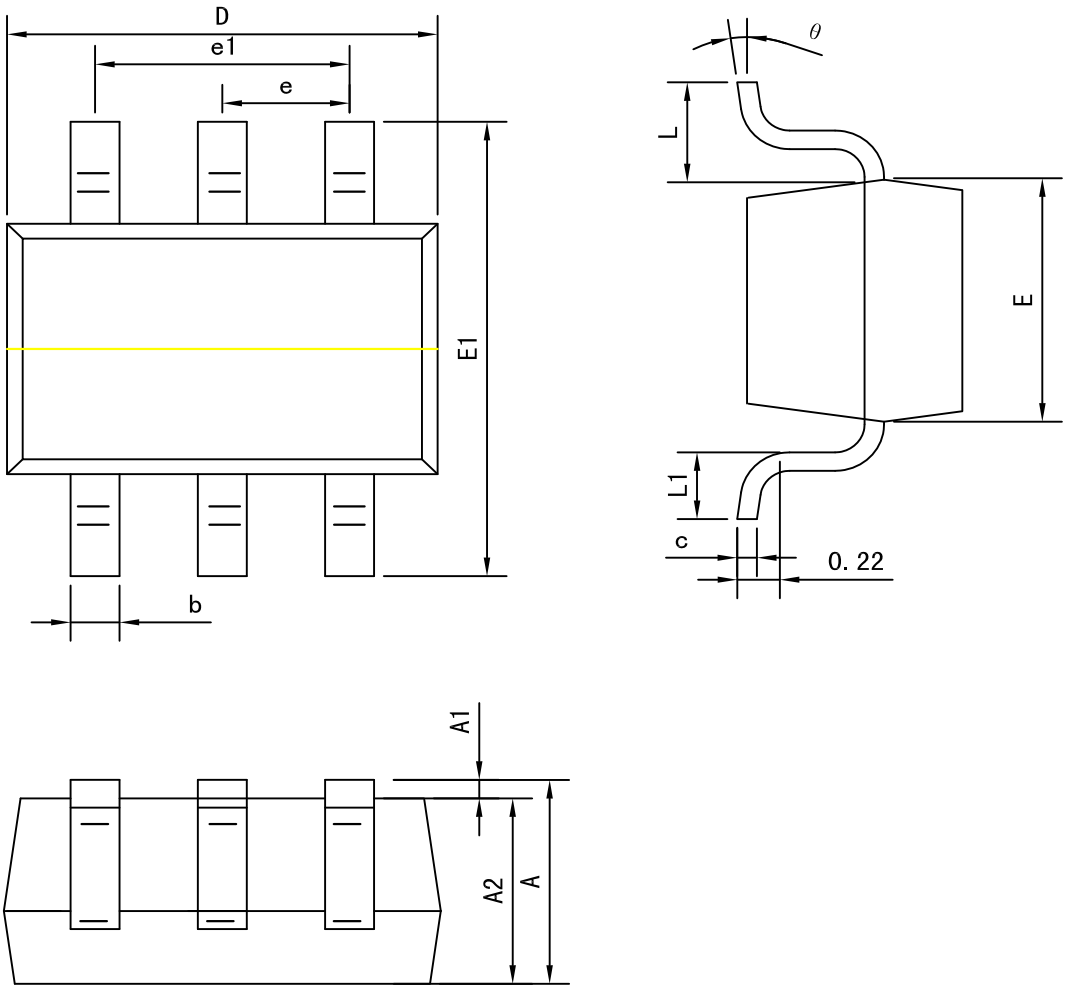






Package outline dimensions

SOT-363



Symbol	Dimension in Millimeters	
	Min	**Max**
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.100	0.350
c	0.080	0.250
D	1.800	2.200
E	1.150	1.350
E1	2.000	2.450
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
θ	0°	8°