

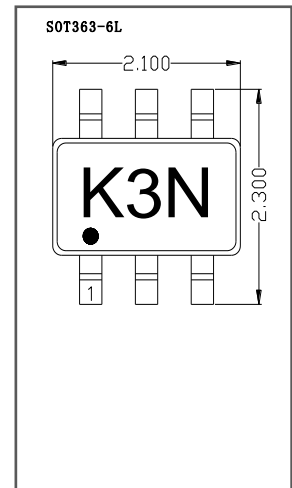
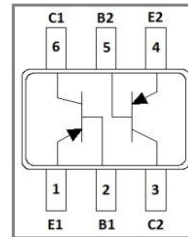
SOT-363 Plastic-Encapsulate Transistors

DUAL TRANSISTOR (PNP+PNP)

FEATURES

- Epoxy meets UL 94 V-0 flammability rating
- Lead Free Finish/RoHS Compliant
- For Switching and AF Amplifier Applications
- Rugged and reliable
- AEC-Q101 qualified (Automotive grade with suffix "Q")
- Exsemi technology

MARKING:K3N



MAXIMUM RATINGS (T_a = 25 °C)

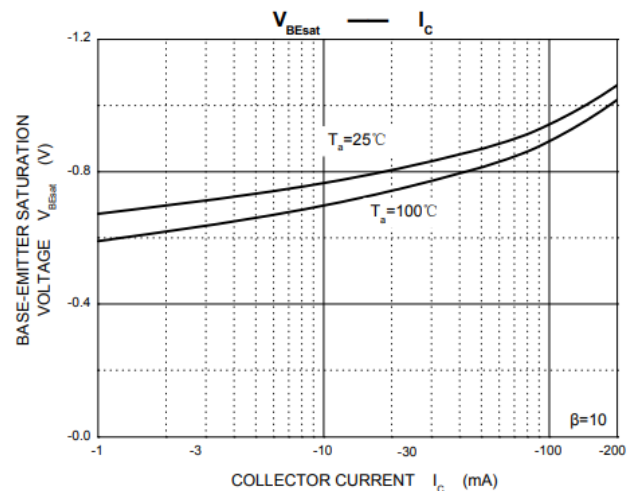
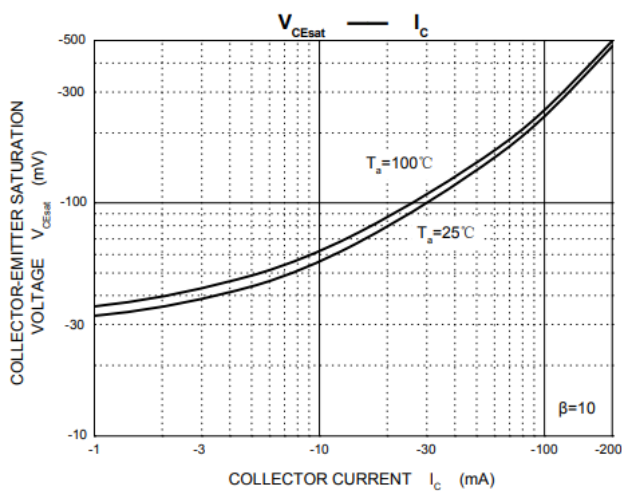
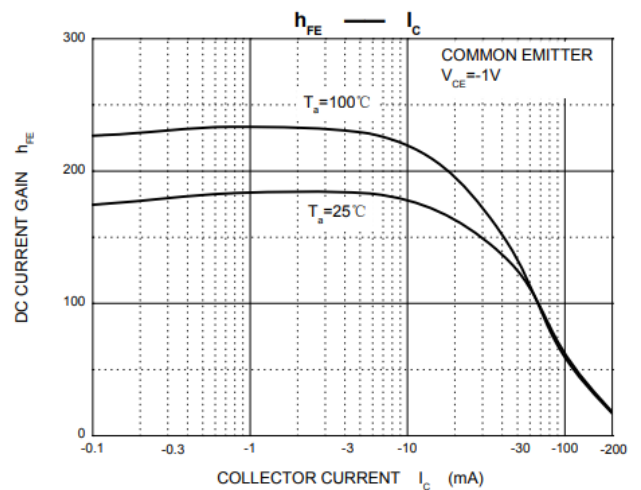
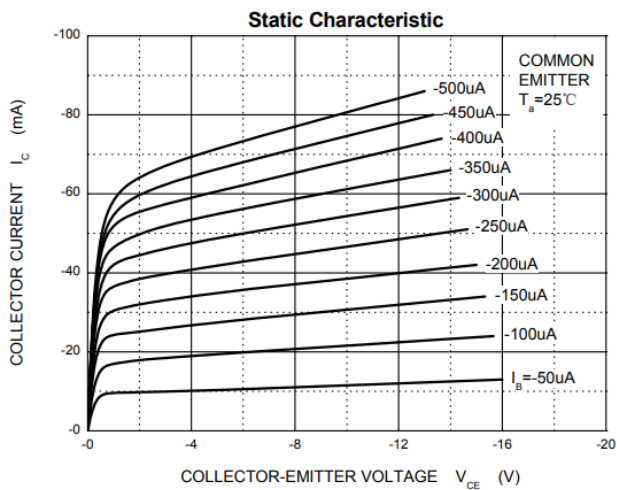
Symbol	Parameter	Value	Units
V _{CBO}	Collector-Base Voltage	-40	V
V _{CEO}	Collector-Emitter Voltage	-40	V
V _{EBO}	Emitter-Base Voltage	-5	V
P _C	Collector Power Dissipation	200	mW
I _C	Collector Current	-200	mA
T _J	Junction Temperature	150	°C
T _{STG}	Storage Temperature	-55 to 150	°C
R _{θJA}	Thermal Resistance, Junction to Ambient Air	625	°C/W

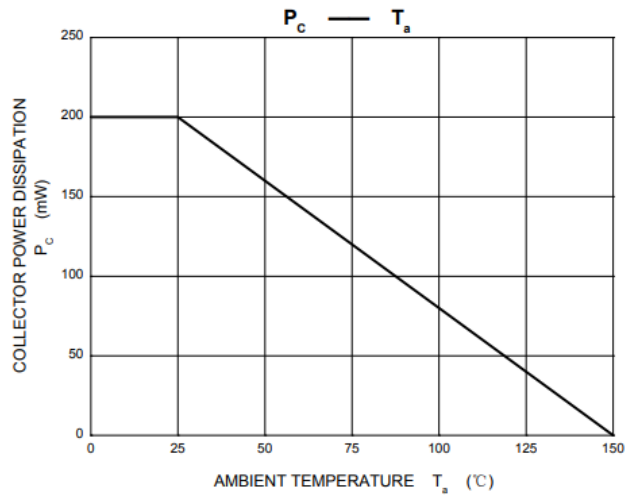
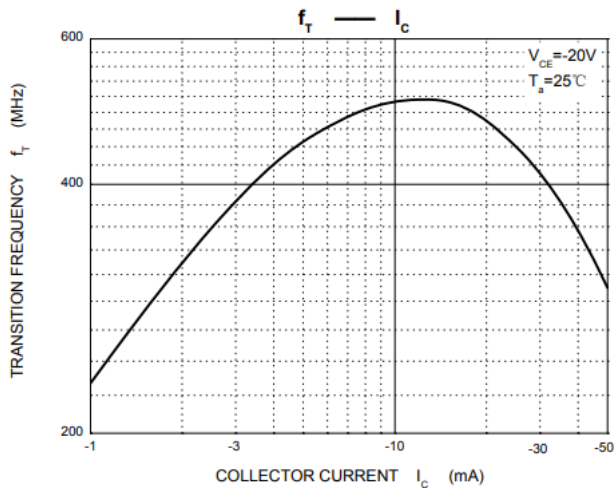
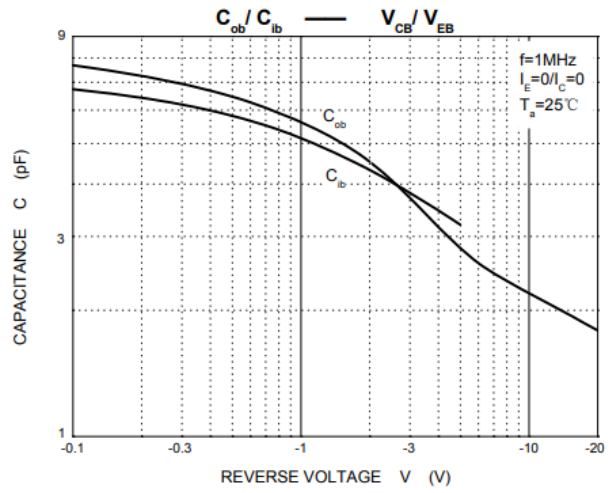
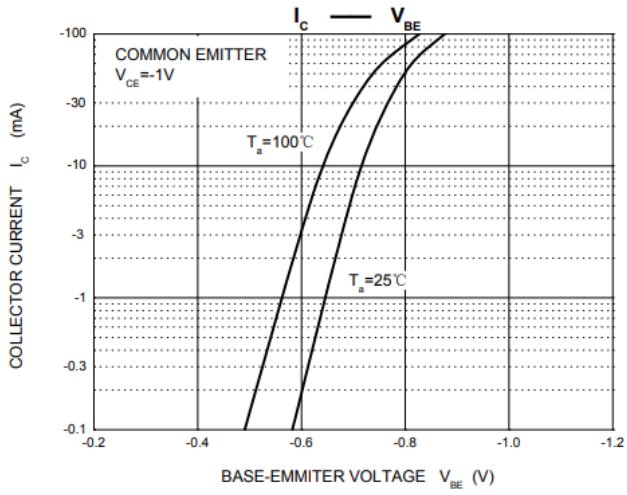
ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V _{(BR)CBO}	Collector-base breakdown voltage	I _C = -10μA, I _E = 0	-40			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C = -1mA, I _B = 0	-40			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E = -10μA, I _C = 0	-5			V
I _{CEX}	Collector cut-off current	V _{CE} = -30V, V _{EB(OFF)} = -3V			-50	nA
I _{CBO}	Collector cut-off current	V _{CB} = -30V, I _E = 0			-50	nA
I _{EBO}	Emitter-Base Cutoff Current	V _{EB} = -5V, I _E = 0			-50	nA
h _{FE}	DC current gain*	V _{CE} = -1V, I _C = -0.1mA	40			
		V _{CE} = -1V, I _C = -1mA	70			
		V _{CE} = -1V, I _C = -10mA	100		300	
		V _{CE} = -1V, I _C = -50mA	60			
		V _{CE} = -1V, I _C = -100mA	30			
V _{CE(sat)}	Collector-emitter saturation voltage	I _C = -10mA, I _B = -1mA			-0.25	V
		I _C = -50mA, I _B = -5mA			-0.4	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = -10mA, I _B = -1mA	-0.65		-0.85	V
		I _C = -50mA, I _B = -5mA			-0.95	

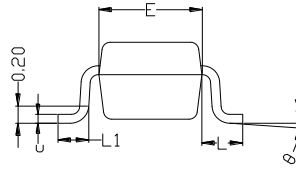
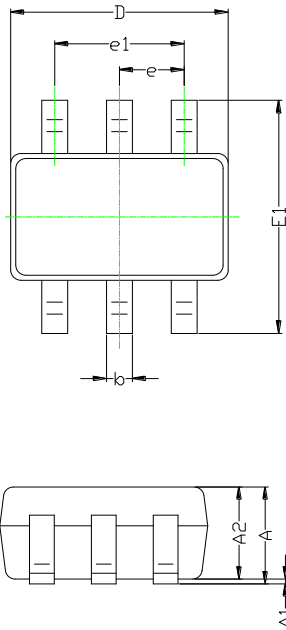
f_T	Current Gain-Bandwidth Product	$V_{CE} = -20V, I_C = -10mA$ $f = 100MHz$	250			MHz
C_{ob}	Collector output capacitance	$V_{CB} = -5V, I_E = 0, f = 1MHz$			4.5	pF
N_F	Noise figure	$V_{CE} = -5V, I_C = -0.1mA, f = 1$ $K_{Hz}, R_g = 1K\Omega$			4	dB
t_d	Delay time	$V_{CC} = -3V, V_{BE} = -0.5V$ $I_C = -10mA,$ $I_{B1} = -I_{B2} = -1mA$			35	nS
t_r	Rise time				35	nS
t_s	Storage time	$V_{CC} = -3V, I_C = -10mA$			225	nS
t_f	Fall time	$I_{B1} = -I_{B2} = -1mA$			75	nS

Typical Characteristics



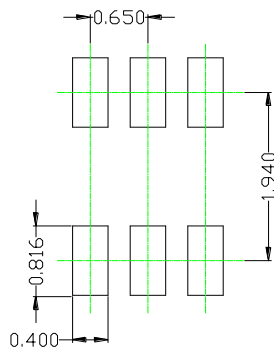


SOT-363 Package Outline Dimensions



SYMBOL	DIMENSIONS IN MILLIMETER	
	MIN	MAX
A	0.900	1.000
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.100	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.400
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.460
θ	0°	8°

SOT-363 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

Ordering information

Device	Package	Shipping
MMDT3906	SOT-363-6L	3000/Tape&Reel