



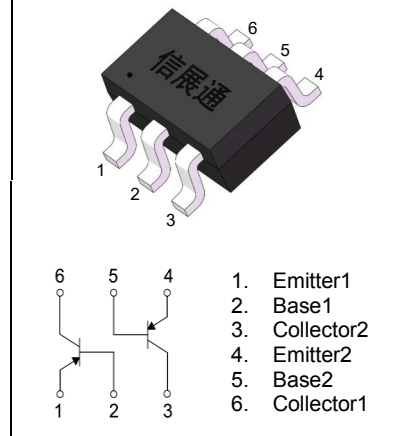
FEATURES

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

MAKING: K3N



SOT-363



Maximum Ratings @Ta=25°C

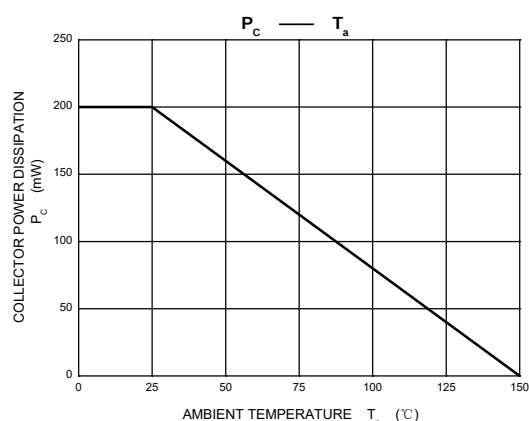
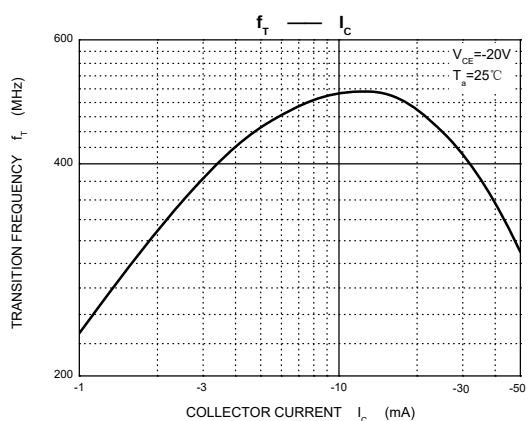
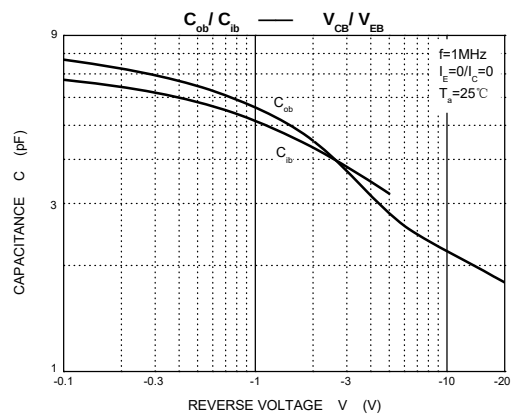
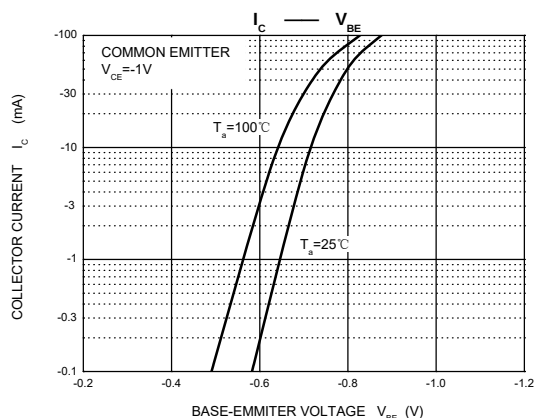
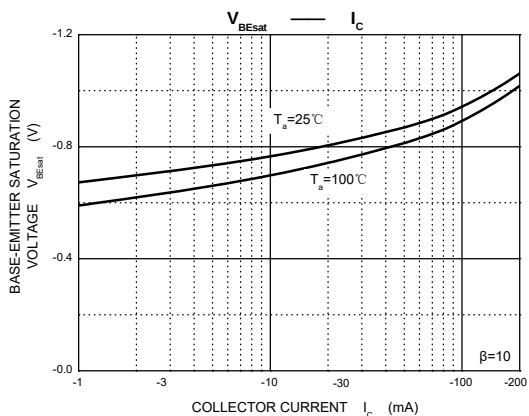
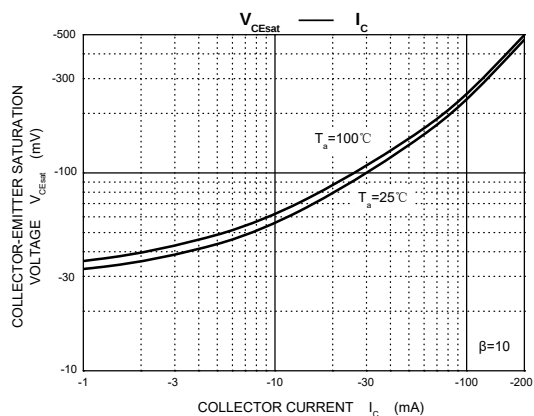
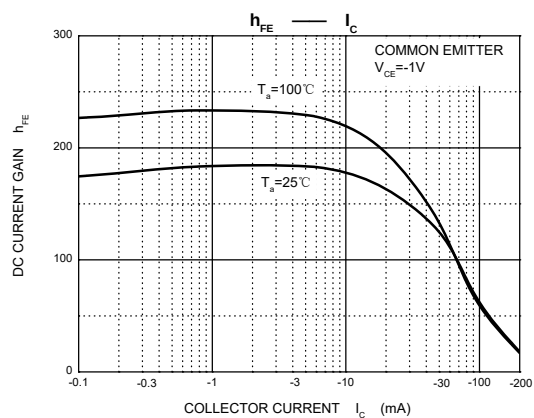
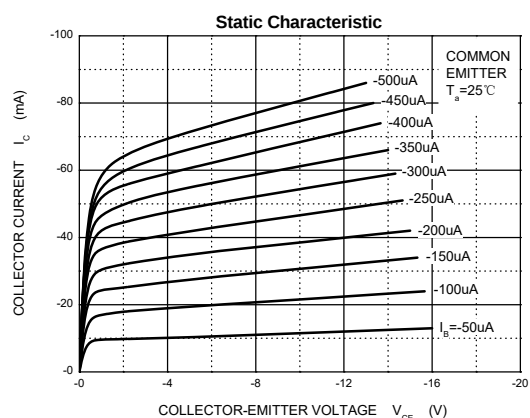
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-0.2	A
P_C	Collector Power Dissipation	0.2	W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-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	$V_{CE(sat)1}$	$I_C = -10mA, I_B = -1mA$			-0.25	V
	$V_{CE(sat)2}$	$I_C = -50mA, I_B = -5mA$			-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C = -10mA, I_B = -1mA$	-0.65		-0.85	V
	$V_{BE(sat)2}$	$I_C = -50mA, I_B = -5mA$			-0.95	V
Transition frequency	f_T	$V_{CE} = -20V, I_C = -10mA, f = 100MHz$	250			MHz
Collector output capacitance	C_{ob}	$V_{CB} = -5V, I_E = 0, f = 1MHz$			4.5	pF
Noise figure	NF	$V_{CE} = -5V, I_C = -0.1mA, f = 1KHz, R_g = 1K\Omega$			4	dB
Delay time	t_d	$V_{CC} = -3V, V_{BE} = 0.5V$			35	nS
Rise time	t_r	$I_C = -10mA, I_{B1} = -I_{B2} = -1mA$			35	nS
Storage time	t_s	$V_{CC} = -3V, I_C = -10mA$			225	nS
Fall time	t_f	$I_{B1} = -I_{B2} = -1mA$			75	nS

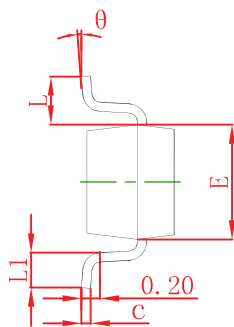
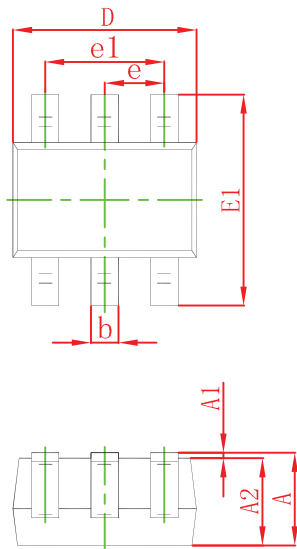


Typical Characteristics



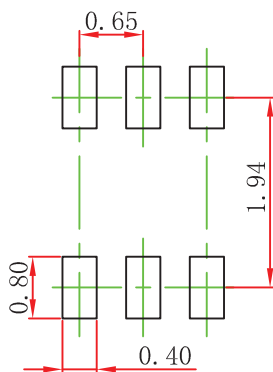


SOT-363 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

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.