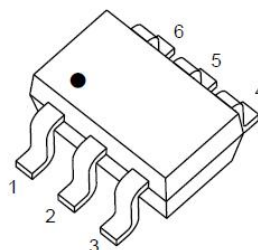


DUAL TRANSISTOR (PNP+PNP)

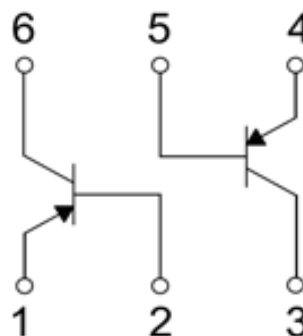
FEATURES

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

SOT-363



CIRCUIT DIAGRAM



MARKING:K3N

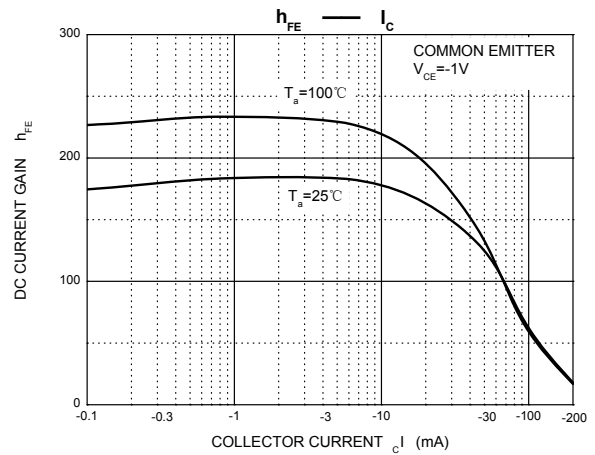
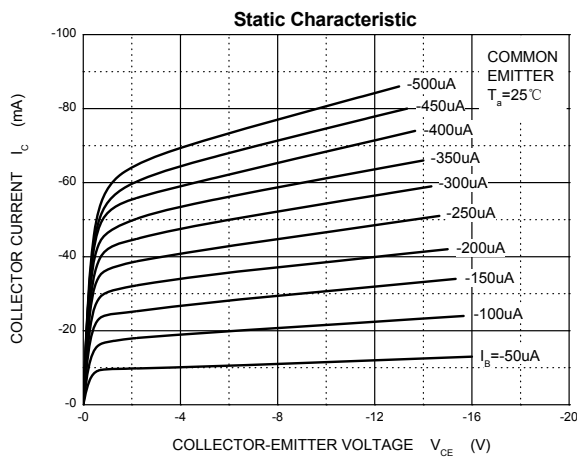
MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

| 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 |
| R _{θJA} | Thermal Resistance, Junction to Ambient Air | 625 | °C/W |
| T _J | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature | -55-150 | °C |

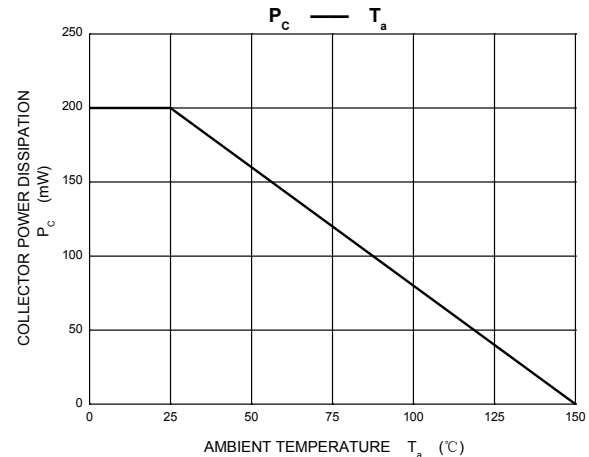
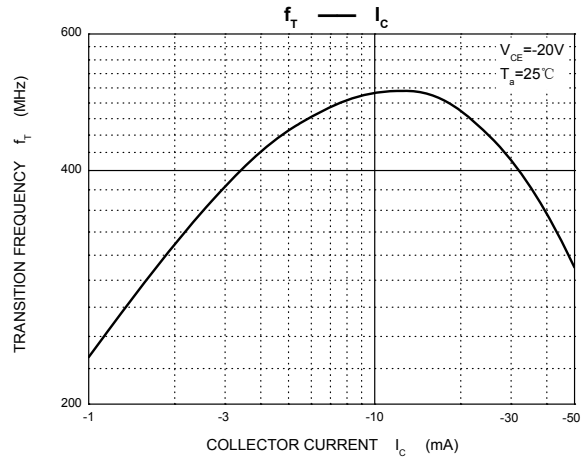
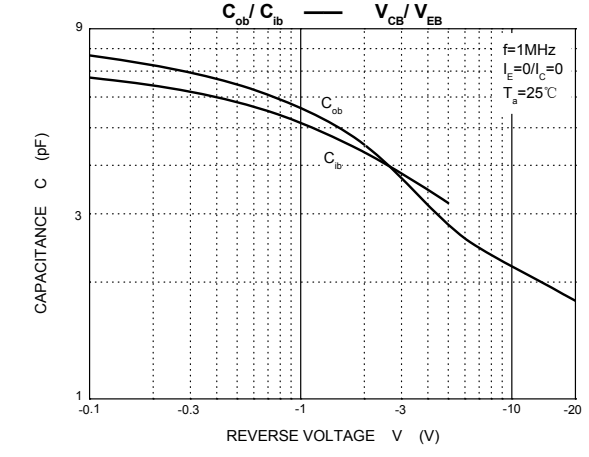
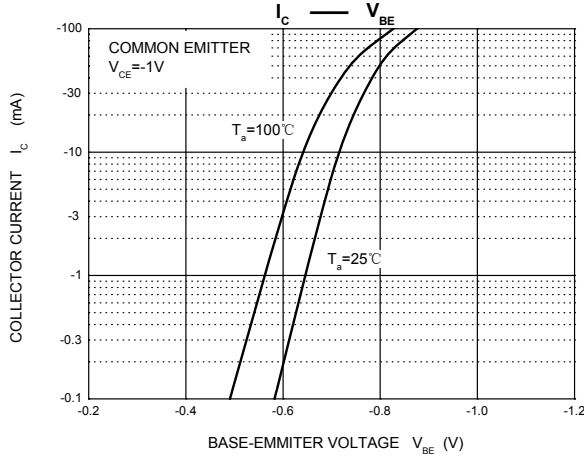
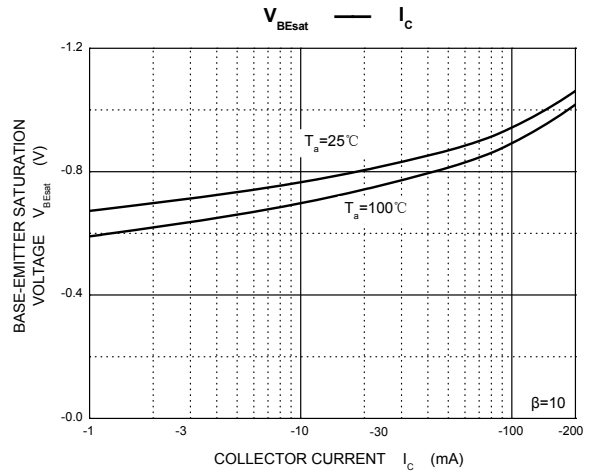
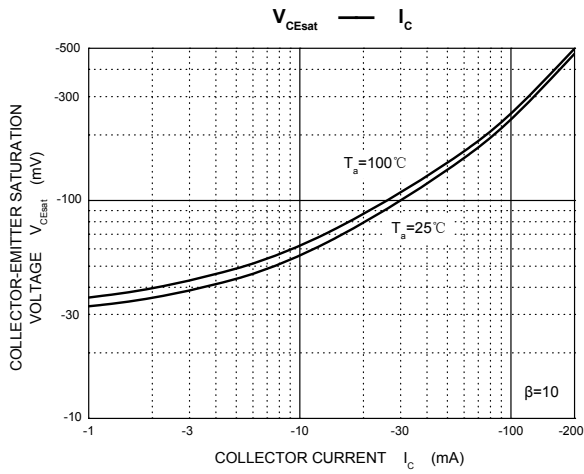
ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

| 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 |

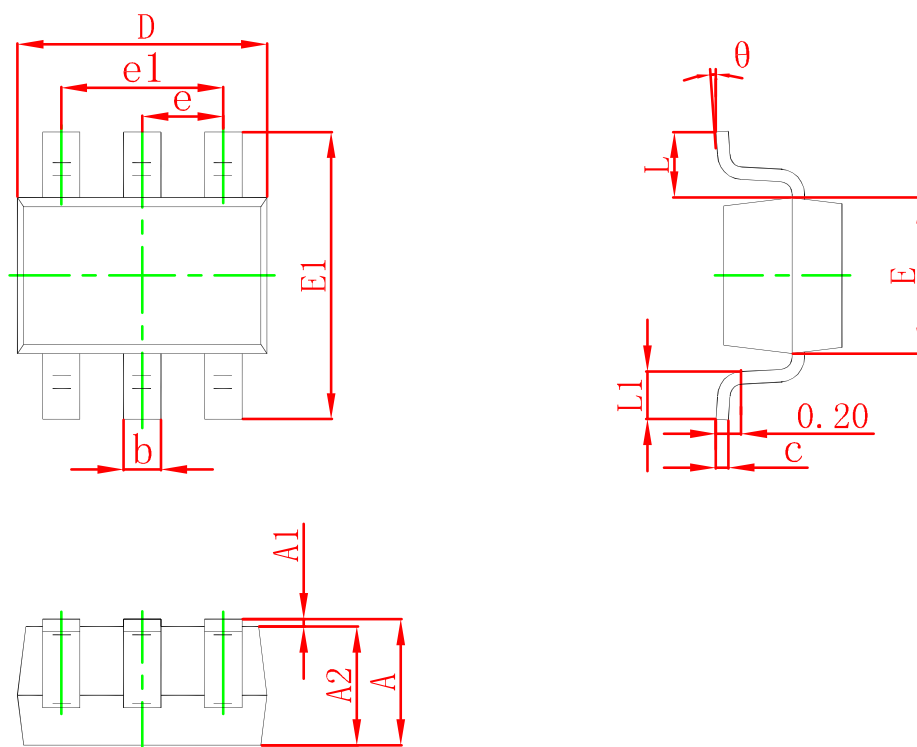
TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS



SOT-363 PACKAGE OUTLINE DRAWING



| 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° |