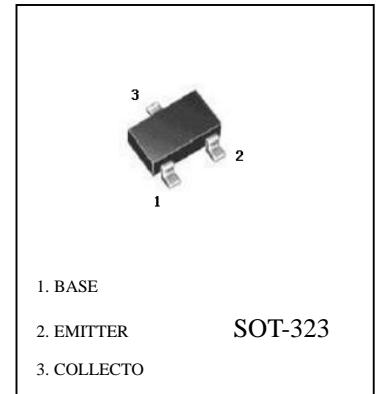


FEATURES

Epitaxial planar die construction.
 Complementary PNP type available(MMST5401).
 Also available in lead free version.

Marking:K4N

MMST5551 (NPN)



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

| Parameter | Symbol | Value | Unit |
|--|------------------|-------------|------|
| Collector-Base Voltage | V _{CBO} | 180 | V |
| Collector-Emitter Voltage | V _{CEO} | 160 | V |
| Emitter-Base Voltage | V _{EBO} | 6 | V |
| Collector Current -Continuous | I _C | 600 | mA |
| Collector Power Dissipation | P _C | 300 | mW |
| Thermal resistance junction to ambient | R _{JA} | 625 | °C/W |
| Storage Temperature | T _{stg} | -55 to +150 | °C |

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

| Parameter | Symbol | Test conditions | Min | Max | Unit |
|--------------------------------------|----------------------|--|-----|-------------|------|
| Collector-base breakdown voltage | V _{CBO} | I _C =100μA, I _E =0 | 180 | | |
| Collector-emitter breakdown voltage | V _{CEO} | I _C =0.1mA, I _B =0 | 160 | | |
| Emitter-base breakdown voltage | V _{EBO} | I _E =10μA, I _C =0 | 6 | | |
| Collector cut-off current | I _{CBO} | I _E = 0; V _{CB} = 120V | - | 50 | nA |
| Emitter cut-off current | I _{EBO} | I _C = 0; V _{EB} = 4V | - | 50 | nA |
| DC current gain | h _{FE} | V _{CE} = 5V; I _C = 1mA | 80 | - | |
| | | V _{CE} = 5V; I _C = 10mA | 80 | 250 | |
| | | V _{CE} = 5V; I _C = 50 Ma | 30 | - | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C = 50 mA; I _B = 5 mA I _C = 10 mA; I _B = 1 mA | - | 0.2 0.15 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C = 50 mA; I _B = 5 mA I _C = 10 mA; I _B = 1 mA | - | 1 1 | V |
| Transition frequency | f _T | I _C = 10mA; V _{CE} = 10V; f = 100MHz | 80 | - | MHz |

MMST5551 Typical Characteristics

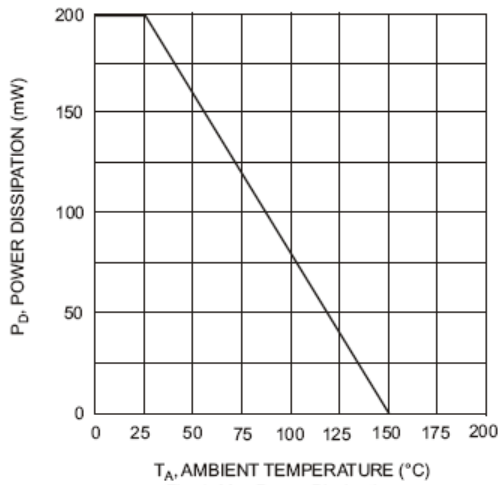


Fig. 1, Max Power Dissipation vs Ambient Temperature

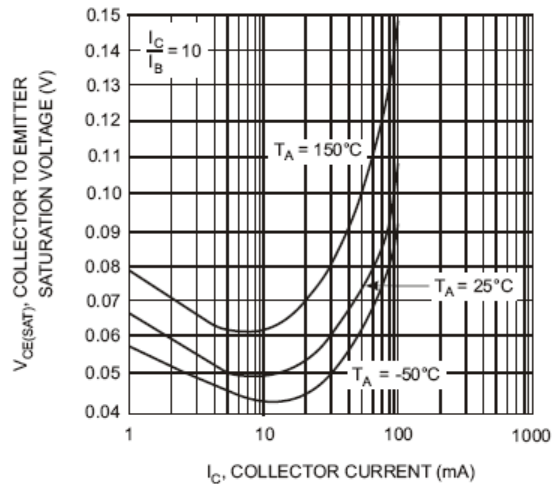


Fig. 2, Collector Emitter Saturation Voltage vs. Collector Current

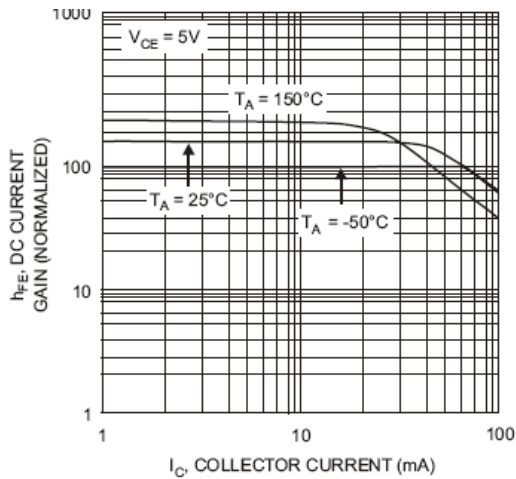


Fig. 3, DC Current Gain vs Collector Current

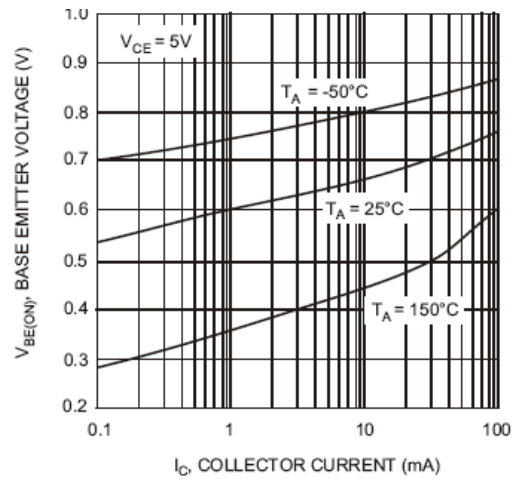


Fig. 4, Base Emitter Voltage vs. Collector Current

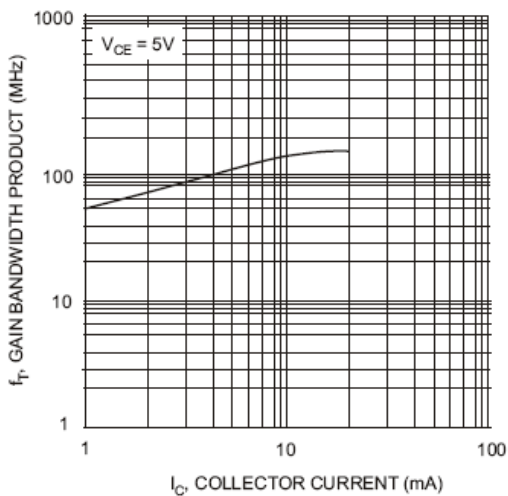


Fig. 5, Gain Bandwidth Product vs. Collector Current