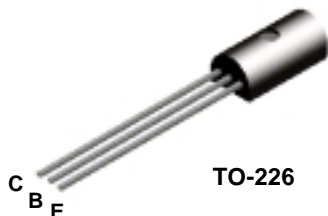


FPN630 FPN630A



PNP Low Saturation Transistor

These devices are designed for high current gain and low saturation voltage with collector currents up to 3.0 A continuous. Sourced from Process PC.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------------------------------|--|-------------|-------|
| V _{CEO} | Collector-Emitter Voltage | 30 | V |
| V _{CBO} | Collector-Base Voltage | 35 | V |
| V _{EBO} | Emitter-Base Voltage | 5.0 | V |
| I _C | Collector Current - Continuous | 3.0 | A |
| T _J , T _{stg} | Operating and Storage Junction Temperature Range | -55 to +150 | °C |

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.
- 3) All voltages (V) and currents (A) are negative polarity for PNP transistors.

Thermal Characteristics

TA = 25°C unless otherwise noted

| Symbol | Characteristic | Max | Units |
|------------------|---|------------------|-------|
| | | FPN630 / FPN630A | |
| P _D | Total Device Dissipation | 1.0 | W |
| R _{θJC} | Thermal Resistance, Junction to Case | 50 | °C/W |
| R _{θJA} | Thermal Resistance, Junction to Ambient | 125 | °C/W |

PNP Low Saturation Transistor
(continued)

FPN630 / FPN630A

Electrical Characteristics

TA = 25°C unless otherwise noted

| Symbol | Parameter | Test Conditions | Min | Max | Units |
|--------|-----------|-----------------|-----|-----|-------|
|--------|-----------|-----------------|-----|-----|-------|

OFF CHARACTERISTICS

| | | | | | |
|-------------------|-------------------------------------|--|-----|-----------|----------|
| BV _{CEO} | Collector-Emitter Breakdown Voltage | I _C = 10 mA, I _B = 0 | 30 | | V |
| BV _{CBO} | Collector-Base Breakdown Voltage | I _C = 100 μA, I _E = 0 | 35 | | V |
| BV _{EBO} | Emitter-Base Breakdown Voltage | I _E = 100 μA, I _C = 0 | 5.0 | | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 30 V, I _E = 0 V _{CB} = 30 V, I _E = 0, T _A = 100°C | | 100 10 | nA μA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 4.0 V, I _C = 0 | | 100 | nA |

ON CHARACTERISTICS*

| | | | | | |
|----------------------|--------------------------------------|--|---------------------------|------------------------|----------------|
| h _{FE} | DC Current Gain | I _C = 100 mA, V _{CE} = 2.0 V I _C = 1.0 A, V _{CE} = 2.0 V I _C = 2.0 A, V _{CE} = 2.0 V | 630 630A | 100 250 60 40 | |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 1.0 A, I _B = 100 mA I _C = 2.0 A, I _B = 200 mA | 630 630A | 300 250 500 | mV mV mV |
| V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = 1.0 A, I _B = 100 mA | | 1.25 | V |
| V _{BE(on)} | Base-Emitter Saturation Voltage | I _C = 1.0 A, V _{CE} = 2.0 V | | 1.0 | V |

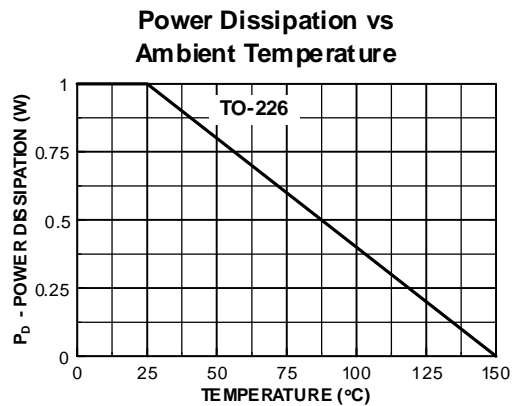
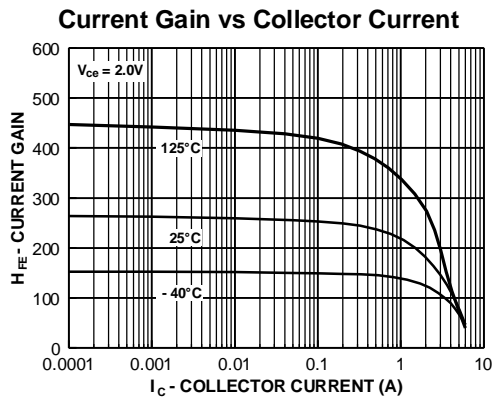
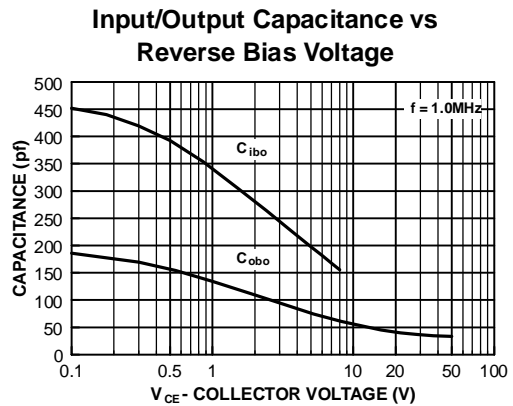
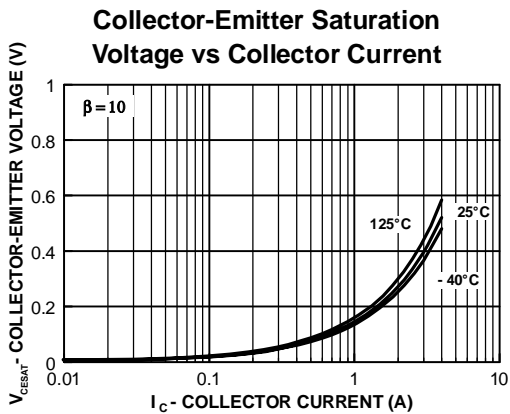
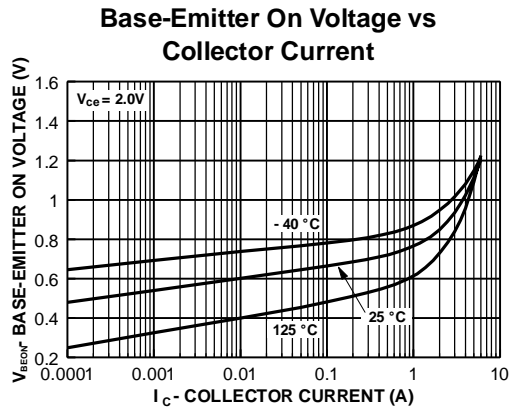
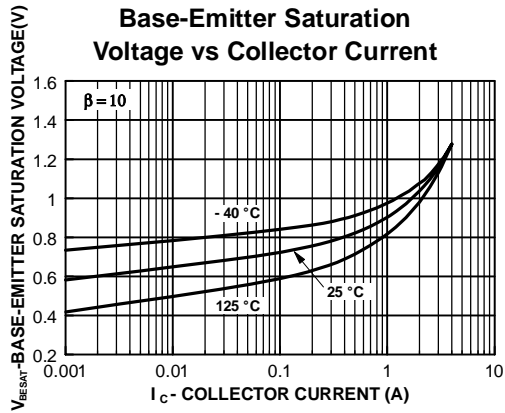
SMALL SIGNAL CHARACTERISTICS

| | | | | | |
|------------------|----------------------|--|-----|-----|-----|
| C _{obo} | Output Capacitance | V _{CB} = 10 V, I _E = 0, f = 1.0 MHz | | 100 | pF |
| F _T | Transition Frequency | I _C = 100 mA, V _{CE} = 5.0 V, f = 100 MHz | 100 | | MHz |

*Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%

NOTE: All voltages (V) and currents (A) are negative polarity for PNP transistors.

Typical Characteristics



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PRODUCT STATUS DEFINITIONS

Definition of Terms

| Datasheet Identification | Product Status | Definition |
|--------------------------|------------------------|---|
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