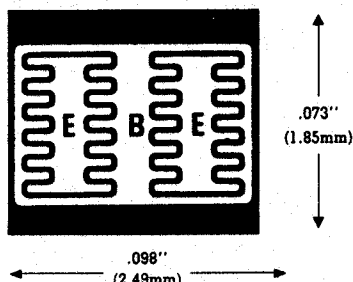


CHIP NUMBER

271



Base: .010" x .050" (0.25mm x 1.27mm)
 Emitter: .009" x .042" (0.23mm x 1.07mm)

PNP EPITAXIAL PLANAR POWER TRANSISTOR** (FORMERLY 71)

CONTACT METALLIZATION

Base and emitter: > 30,000 Å Aluminum

Collector: Gold

(Polished silicon or "Chrome Nickel Silver" also available)

Also available on:

MOLY PEDESTAL

Size: .140" Diameter (3.56mm)

Thickness: .010" (0.25mm)

BeO PEDESTAL

Size: .142" x .178" (3.61mm x 4.52mm)

Thickness: .023" (0.58mm)

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- the chip be eutectically mounted with gold silicon preform 98/2%.
- 8 mil (0.203mm) aluminum wire be ultrasonically attached to the base and emitter contacts.

TYPICAL ELECTRICAL CHARACTERISTICS AT 25°C

The following typical electrical characteristics apply for a completely finished component employing the chip number 271 in a TO-5 or equivalent case:

| V _{CEO} | V _{CE(s)} @ | I _C | I _B | h _{FE} @ | I _C | V _{CE} |
|------------------|----------------------|----------------|----------------|-------------------|----------------|-----------------|
| > 60V | < 0.3V | 1A | 0.1A | > 20 | 5A | 5V |
| > 80V | < 0.3V | 1A | 0.1A | > 20 | 5A | 5V |
| > 100V | < 0.3V | 1A | 0.1A | > 20 | 5A | 5V |
| > 120V | < 0.3V | 1A | 0.1A | > 20 | 5A | 5V |
| > 150V | < 0.5V | 1A | 0.1A | > 20 | 5A | 5V |

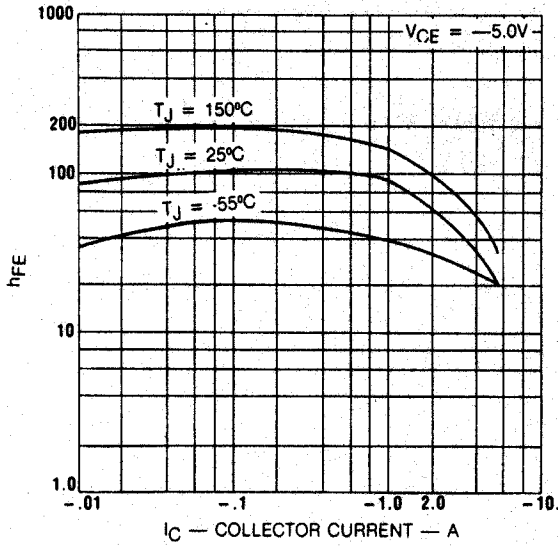
| V _{CEO} | V _{CEX} | V _{EBO} | f _T | C _{OBO} | θ _{JC} |
|------------------|------------------|------------------|----------------|------------------|-----------------|
| > 60V | 70V | > 5V | 30MHz | < 150pF | < 3.3°C/W |
| > 80V | 90V | > 5V | 30MHz | < 150pF | < 3.3°C/W |
| > 100V | 110V | > 5V | 30MHz | < 150pF | < 3.3°C/W |
| > 120V | 130V | > 5V | 30MHz | < 150pF | < 3.3°C/W |
| > 150V | 160V | > 5V | 30MHz | < 150pF | < 3.3°C/W |

TYPICAL DEVICE TYPES: 2N3720, 2N4901 - 2N4906, SDT3322 - SDT3329

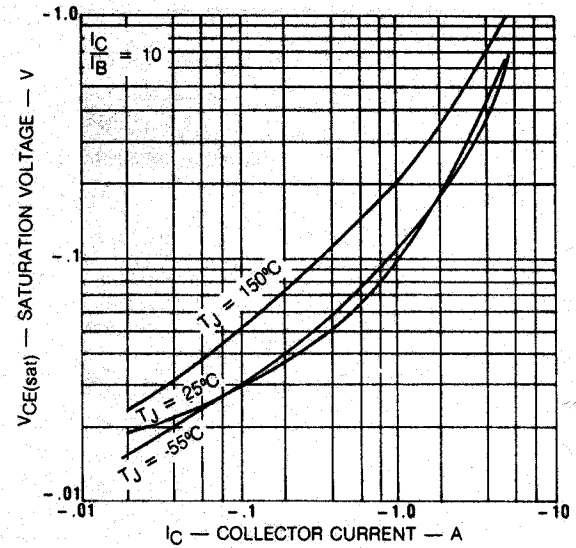
*h_{FE} available at I_C = 1A, V_{CE} = 5V, 20-80, 40-120

**The respective NPN complement is chip number 184.

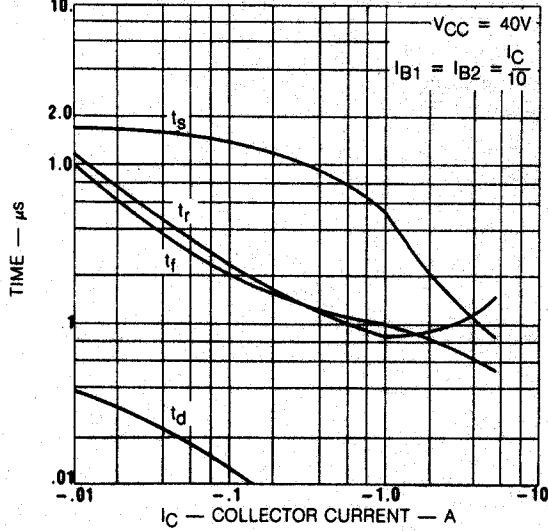
TYPICAL STATIC FORWARD CURRENT TRANSFER RATIO



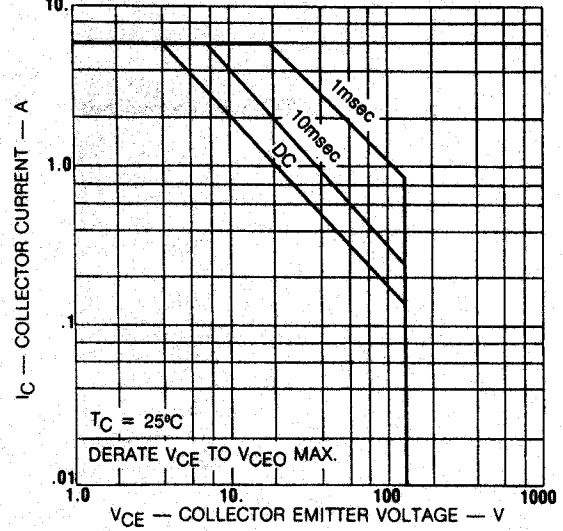
TYPICAL COLLECTOR EMITTER SATURATION VOLTAGE



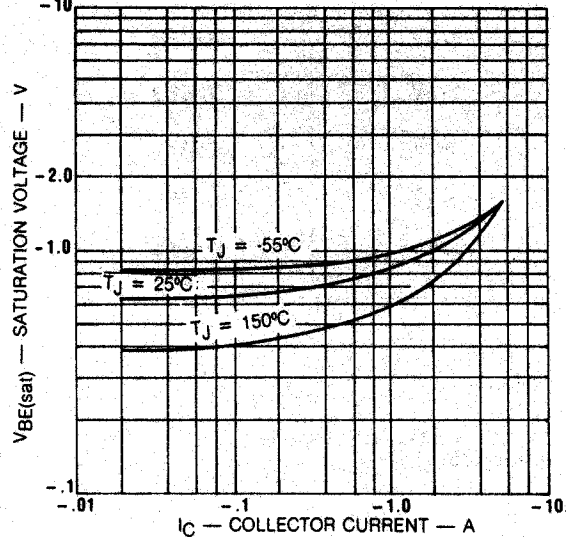
TYPICAL SWITCHING TIME



MAXIMUM OPERATING CONDITIONS



TYPICAL BASE EMITTER SATURATION VOLTAGE



NOTE:
PERFORMANCE CURVES
REPRESENT LOW TO
MIDDLE V_{CEO} VOLTAGE
RANGE OF THIS PRODUCT