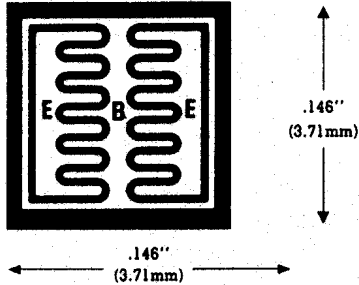


CHIP NUMBER

185



Base: .012" x .112" (0.30mm x 2.85mm)
 Emitter: .012" x .096" (0.30mm x 2.44mm)

**NPN EPITAXIAL/TRIPLE DIFFUSED
 PLANAR POWER TRANSISTOR** (FORMERLY 85)**

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: .220" Diameter (5.59mm)
 Thickness: .010" (0.25mm)

BeO PEDESTAL

Size: .175" x .250" (4.45mm x 6.53mm)
 Thickness: .032" (0.81mm)

ASSEMBLY RECOMMENDATIONS

It is advisable that:

- a) the chip be eutectically mounted with gold silicon preform 98/2%.
- b) 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 185 in a TO-3 or equivalent case:

| V _{CEO} | V _{CE(s)} @ | I _C | I _B | h _{FE} @ | I _C | V _{CE} |
|------------------|----------------------|----------------|----------------|-------------------|----------------|-----------------|
| > 60V | <0.5V | 5A | 0.5A | >20 | 10A | 5V |
| > 80V | <0.5V | 5A | 0.5A | >20 | 10A | 5V |
| >100V | <0.5V | 5A | 0.5A | >20 | 10A | 5V |
| >150V | <0.5V | 5A | 0.5A | >15 | 10A | 5V |
| >175V | <0.5V | 5A | 0.5A | >15 | 10A | 5V |
| * >200V | <0.5V | 5A | 0.5A | > 5 | 10A | 5V |

| V _{CEO} | V _{CEX} | V _{EBO} | f _T | C _{OBO} | θ _{JC} |
|------------------|------------------|------------------|----------------|------------------|-----------------|
| > 60V | 80V | >8V | 40MHz | < 300pF | <1.25°C/W |
| > 80V | 100V | >8V | 40MHz | < 300pF | <1.25°C/W |
| >100V | 120V | >8V | 40MHz | < 300pF | <1.25°C/W |
| >150V | 170V | >8V | 40MHz | < 300pF | <1.25°C/W |
| >175V | 190V | >8V | 40MHz | < 300pF | <1.25°C/W |
| >200V | 210V | >8V | 40MHz | < 300pF | <1.25°C/W |

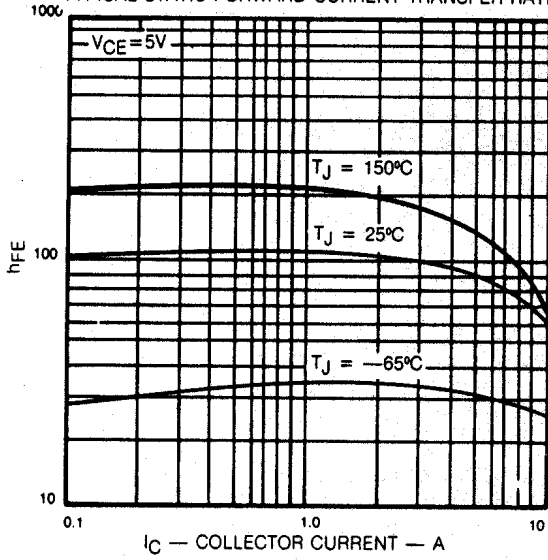
TYPICAL DEVICE TYPES: 2N4070, 2N4071, JAN2N4150, JAN2N5237, JAN2N5238, SDT7A05, SDT7601 - SDT7618, SDT85305

*h_{FE} available at I_C = 5A, V_{CE} = 5V, >10

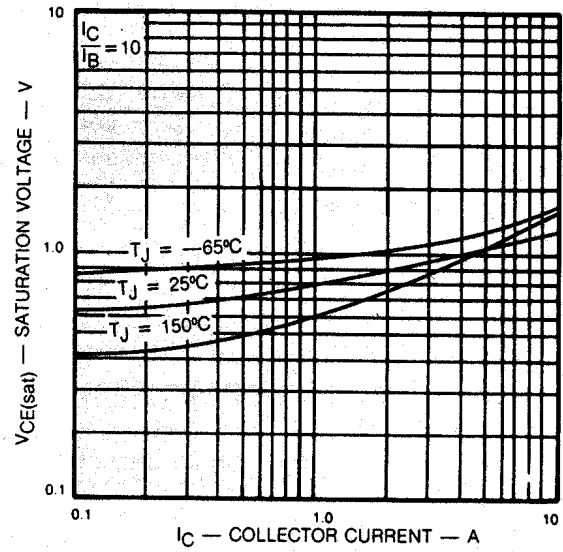
**The respective PNP complement is chip number 263.

MEDIUM TO HIGH VOLTAGE, FAST SWITCHING CHIP TYPE 185

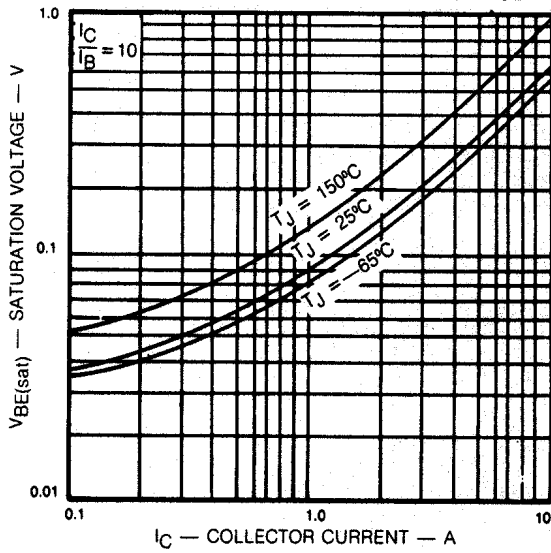
TYPICAL STATIC FORWARD CURRENT TRANSFER RATIO



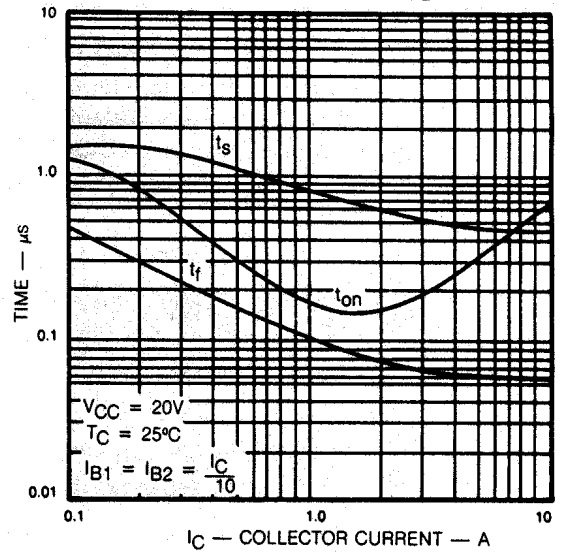
TYPICAL COLLECTOR EMITTER SATURATION VOLTAGE



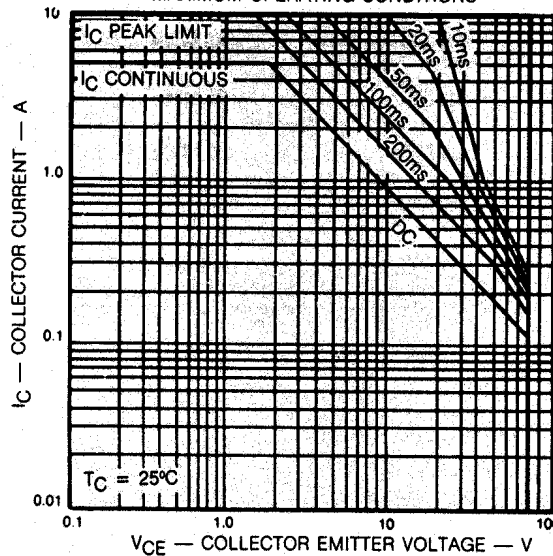
TYPICAL BASE EMITTER SATURATION VOLTAGE



TYPICAL SWITCHING TIME



MAXIMUM OPERATING CONDITIONS



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