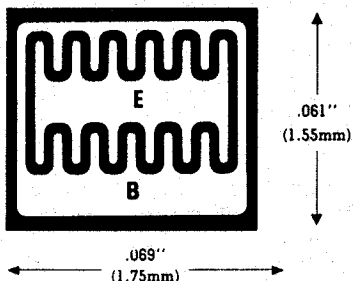


CHIP NUMBER

191



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

NPN EPITAXIAL PLANAR POWER TRANSISTOR (FORMERLY 91)**

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:
- 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 191 in a TO-5 or equivalent case:

V _{CEO}	V _{CE(s)} @	I _C	I _B	h _{FE} @	I _C	V _{CE}
> 60V	< 0.35V	0.5A	50mA	> 15	2.0A	5V
> 100V	< 0.35V	0.5A	50mA	> 15	2.0A	5V
> 150V	< 0.35V	0.5A	50mA	> 10	2.0A	5V
* > 200V	< 0.35V	0.5A	50mA	> 10	2.0A	5V
* > 300V ①	< 0.35V	0.5A	50mA	> 20	0.5A	5V

V _{CEO}	V _{CEX}	V _{EBO}	f _T	C _{OBO}	θ _{JC}
> 60V	70V	> 8V	50MHz	< 50pF	< 25°C/W
> 100V	110V	> 8V	50MHz	< 50pF	< 25°C/W
> 150V	160V	> 8V	50MHz	< 50pF	< 25°C/W
* > 200V	210V	> 8V	50MHz	< 50pF	< 25°C/W
* > 300V ①	300V	> 8V	40MHz	< 50pF	< 25°C/W

TYPICAL DEVICE TYPES: 2N4863, SDT5501 - SDT5556

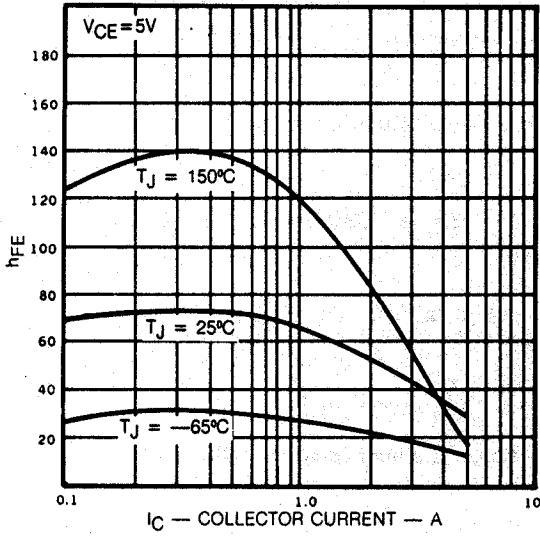
*h_{FE} available at I_C 500mA, V_{CE} = 5V > 20

**The respective PNP complement is chip number 269.

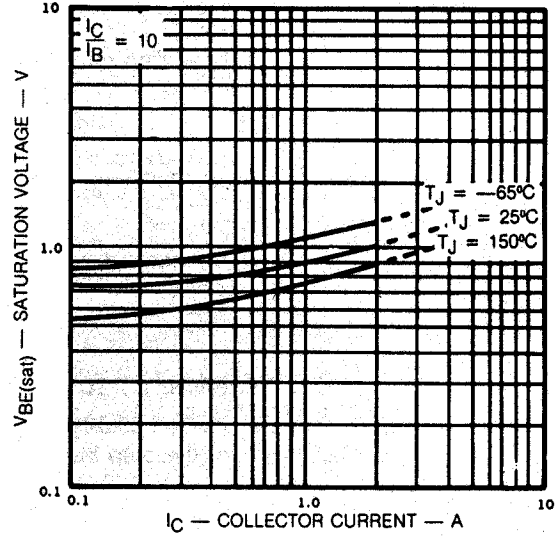
① Triple diffused only.

MEDIUM TO HIGH VOLTAGE, FAST SWITCHING
CHIP TYPE 191

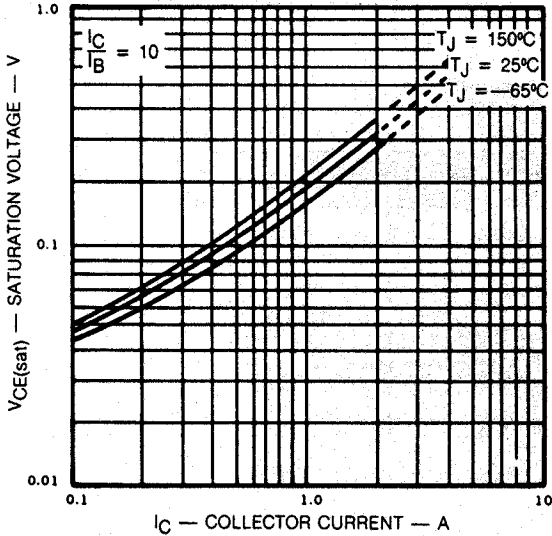
TYPICAL STATIC FORWARD CURRENT TRANSFER RATIO



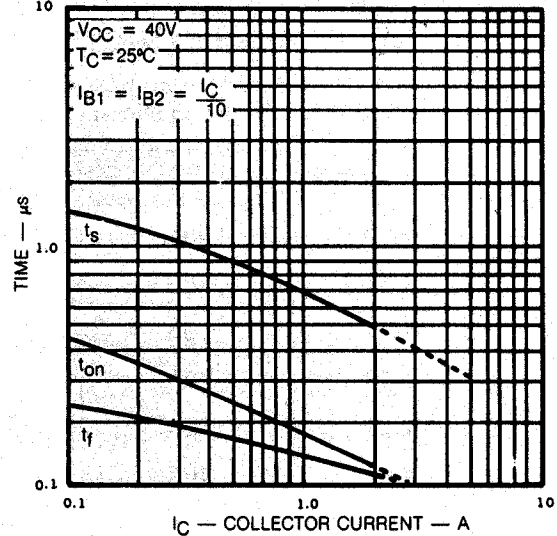
TYPICAL BASE EMITTER SATURATION VOLTAGE



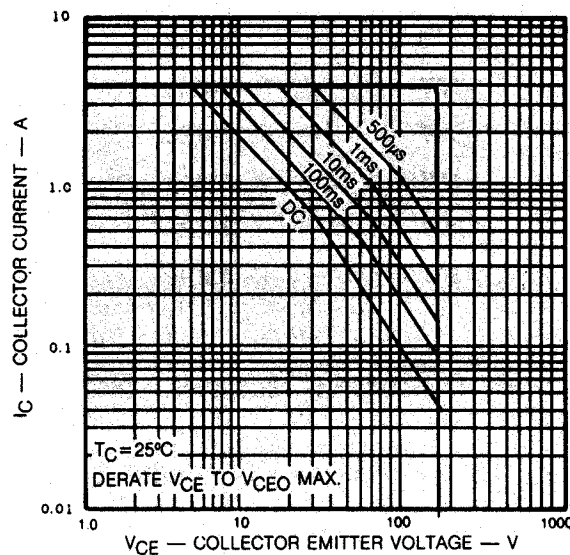
TYPICAL COLLECTOR EMITTER SATURATION VOLTAGE



TYPICAL SWITCHING TIME



MAXIMUM OPERATING CONDITIONS



NOTE:
PERFORMANCE CURVES
REPRESENT LOW TO
MIDDLE V_{CE0} VOLTAGE
RANGE OF THIS PRODUCT