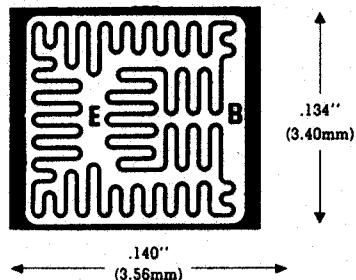


### CHIP NUMBER

# 140



Base: .012" x .066" (0.31mm x 1.68mm)  
 Emitter: .012" x .046" (0.31mm x 1.17mm)

## NPN TRIPLE DIFFUSED PLANAR POWER TRANSISTOR (FORMERLY 40)

### 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 6.35mm)

Thickness: .028" (0.71mm)

### 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 140 in a TO-3 or equivalent case:

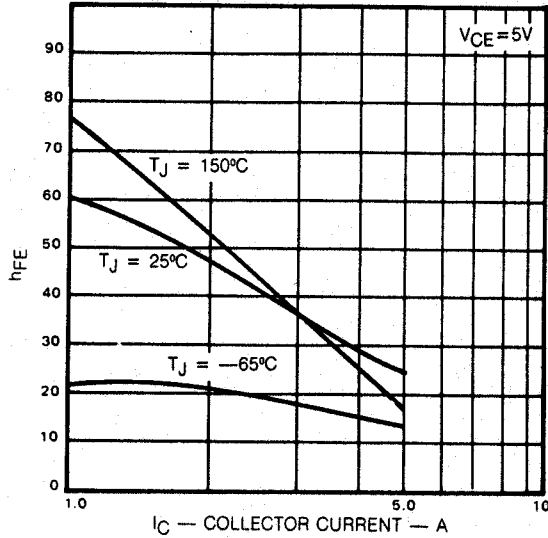
V <sub>CEO</sub>	V <sub>CE(s)</sub> @	I <sub>C</sub>	I <sub>B</sub>	h <sub>FE</sub> @	I <sub>C</sub>	V <sub>CE</sub>
> 200V	< 0.4V	3A	0.3A	> 10	5A	5V
> 300V	< 0.4V	3A	0.6A	> 10	5A	5V
* > 400V	< 0.4V	1A	0.1A	> 5	5A	5V
* > 500V	< 0.4V	1A	0.1A	> 20	1A	5V

V <sub>CEO</sub>	V <sub>CEX</sub>	V <sub>EBO</sub>	f <sub>T</sub>	C <sub>OBO</sub>	θ <sub>JC</sub>
> 200V	250V	> 8V	30MHz	< 100pF	< 1.25°C/W
> 300V	350V	> 8V	30MHz	< 100pF	< 1.25°C/W
> 400V	450V	> 8V	30MHz	< 100pF	< 1.25°C/W
> 500V	500V	> 8V	30MHz	< 100pF	< 1.25°C/W

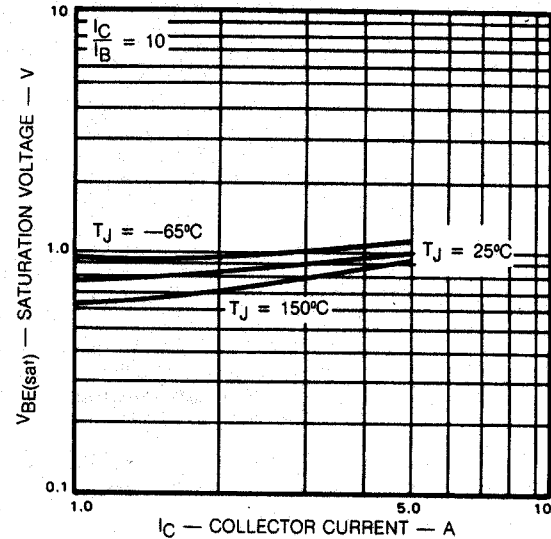
TYPICAL DEVICE TYPES: JAN2N5664 - JAN2N5667, SDT40301 - SDT40304

\*h<sub>FE</sub> available at I<sub>C</sub> = 1A, V<sub>CE</sub> = 5V > 20

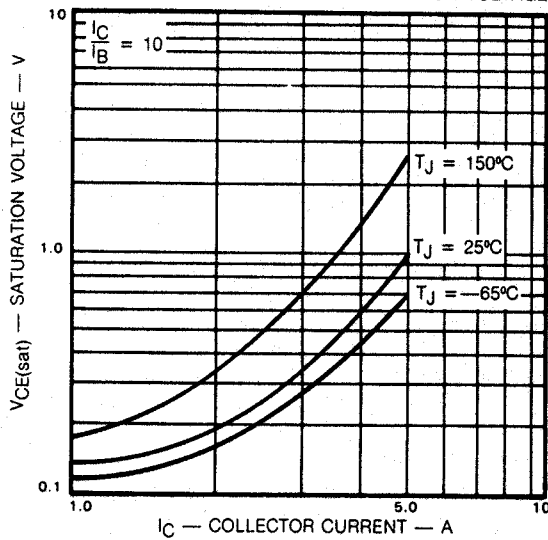
TYPICAL STATIC FORWARD CURRENT TRANSFER RATIO



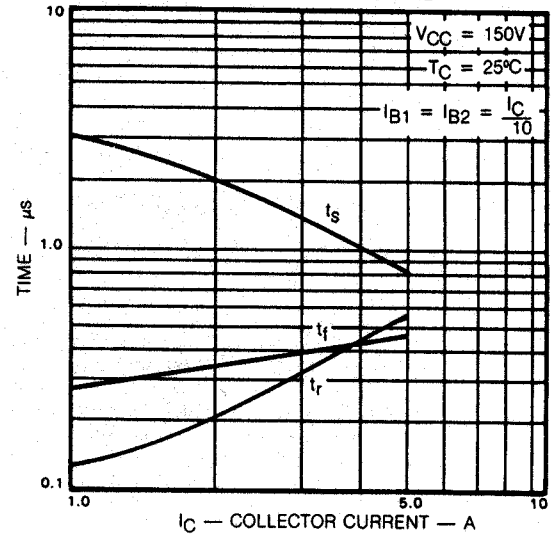
TYPICAL BASE-EMITTER SATURATION VOLTAGE



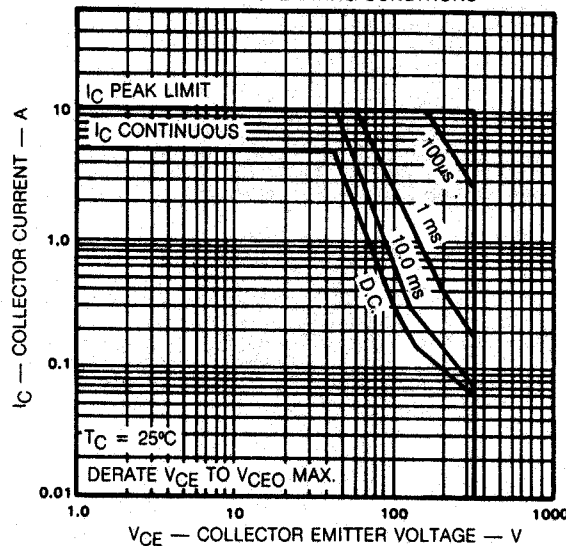
TYPICAL COLLECTOR-EMITTER SATURATION VOLTAGE



TYPICAL SWITCHING TIME



MAXIMUM OPERATING CONDITIONS



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