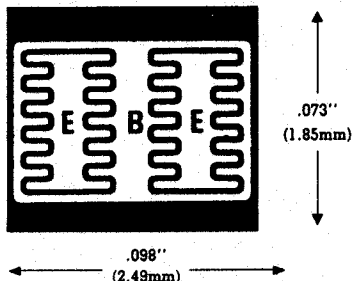


CHIP NUMBER

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:

- 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 271 in a TO-5 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>
> 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

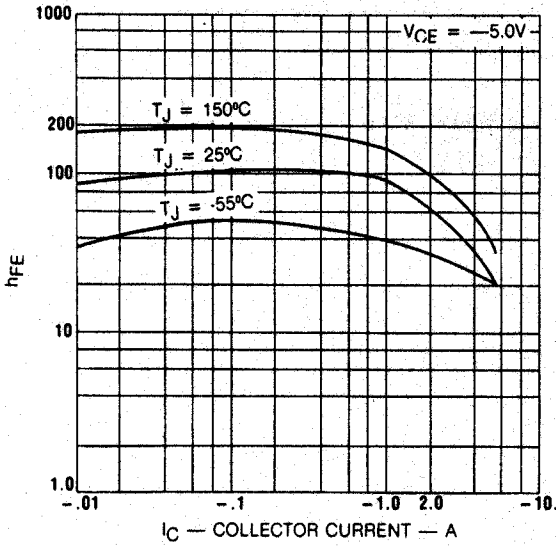
V <sub>CEO</sub>	V <sub>CEX</sub>	V <sub>EBO</sub>	f <sub>T</sub>	C <sub>OBO</sub>	θ <sub>JC</sub>
> 60V	70V	>5V	30MHz	<150pF	<3.3°C/W
> 80V	90V	>5V	30MHz	<150pF	<3.3°C/W
>100V	110V	>5V	30MHz	<150pF	<3.3°C/W
>120V	130V	>5V	30MHz	<150pF	<3.3°C/W
>150V	160V	>5V	30MHz	<150pF	<3.3°C/W

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

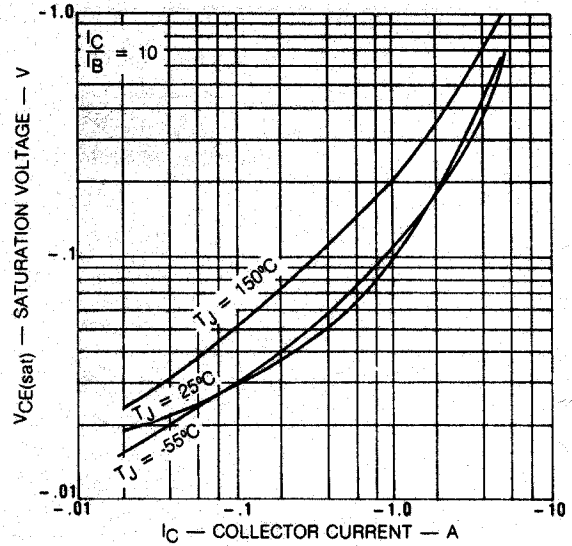
\*h<sub>FE</sub> available at I<sub>C</sub> = 1A, V<sub>CE</sub> = 5V, 20-80, 40-120

\*\*The respective NPN complement is chip number 184.

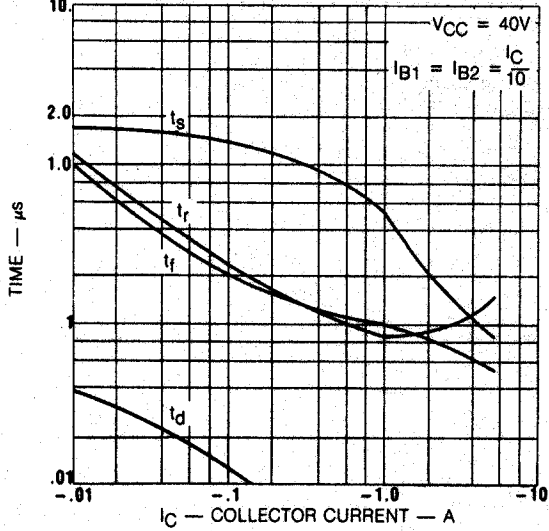
TYPICAL STATIC FORWARD CURRENT TRANSFER RATIO



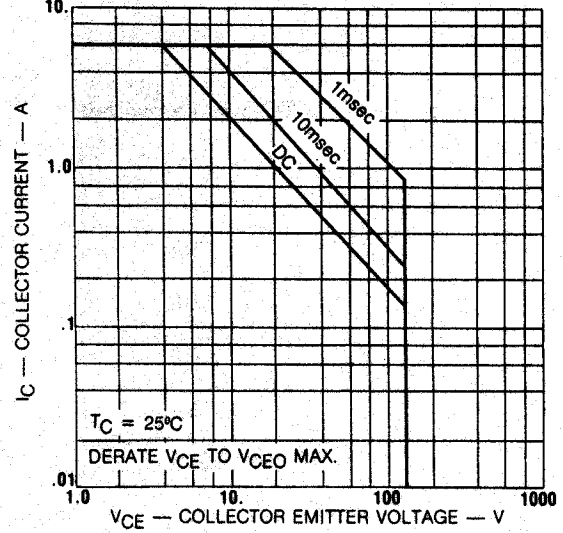
TYPICAL COLLECTOR EMITTER SATURATION VOLTAGE



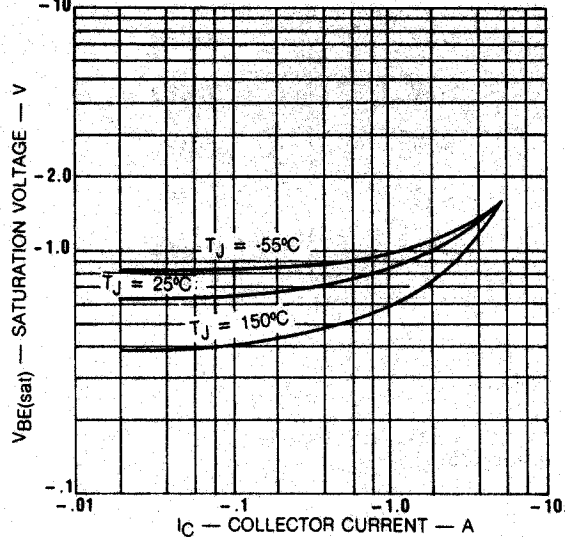
TYPICAL SWITCHING TIME



MAXIMUM OPERATING CONDITIONS



TYPICAL BASE EMITTER SATURATION VOLTAGE



**NOTE:**  
PERFORMANCE CURVES  
REPRESENT LOW TO  
MIDDLE CEO VOLTAGE  
RANGE OF THIS PRODUCT