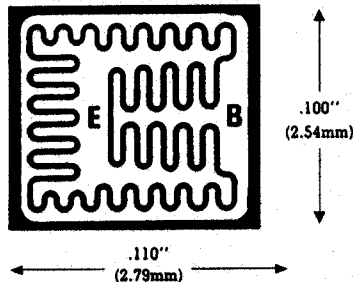


### CHIP NUMBER

# 116



Base: .0115" x .050" (0.29mm x 1.27mm)  
Emitter: .012" x .055" (0.31mm x 1.40mm)

## NPN EPITAXIAL/TRIPLE DIFFUSED PLANAR POWER TRANSISTOR (FORMERLY 16)

### 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: .032" (0.8mm)

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

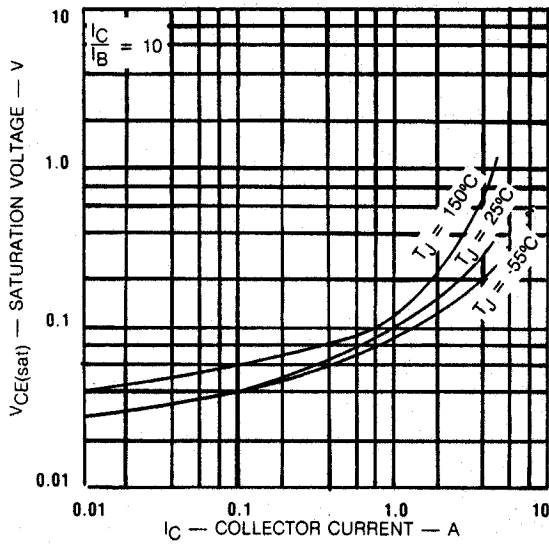
V <sub>CEO</sub>	V <sub>CE(s)</sub> @	I <sub>C</sub>	I <sub>B</sub>	h <sub>FE</sub> @	I <sub>C</sub>	V <sub>CE</sub>
> 60V	< 0.3V	1A	0.1A	> 10	5A	5V
> 100V	< 0.3V	1A	0.1A	> 10	5A	5V
> 150V	< 0.3V	1A	0.1A	> 10	5A	5V
> 200V	< 0.3V	1A	0.1A	> 5	5A	5V
> 300V	< 0.3V	1A	0.1A	> 5	5A	5V

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	100V	> 15V	12MHz	< 150pF	< 1.5°C/W
> 100V	120V	> 15V	12MHz	< 150pF	< 1.5°C/W
> 150V	170V	> 15V	12MHz	< 150pF	< 1.5°C/W
> 200V	220V	> 15V	12MHz	< 150pF	< 1.5°C/W
> 300V	320V	> 15V	12MHz	< 150pF	< 1.5°C/W

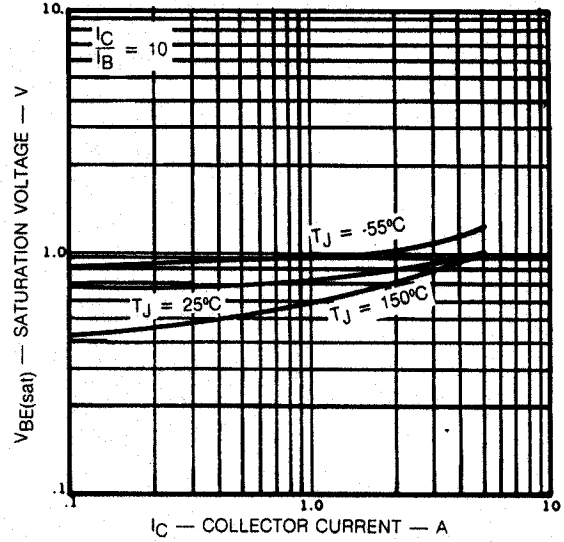
TYPICAL DEVICE TYPES: SDT1641-SDT1668, SDT4901-SDT4905

h<sub>FE</sub> ranges available at I<sub>C</sub> = 1A, V<sub>CE</sub> = 5V, 20-80, 30-120, 40-160

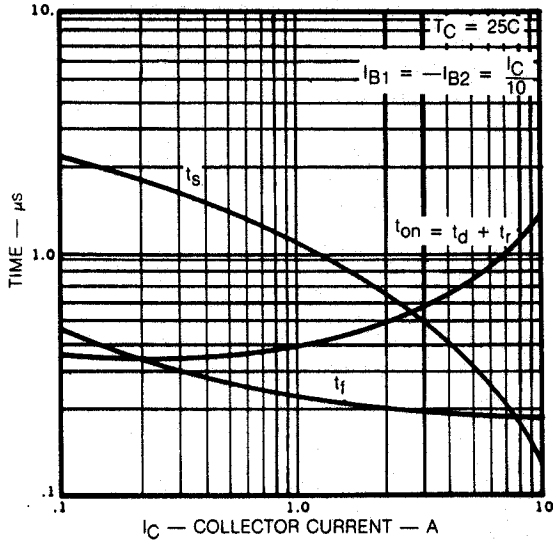
TYPICAL COLLECTOR-EMITTER SATURATION VOLTAGE



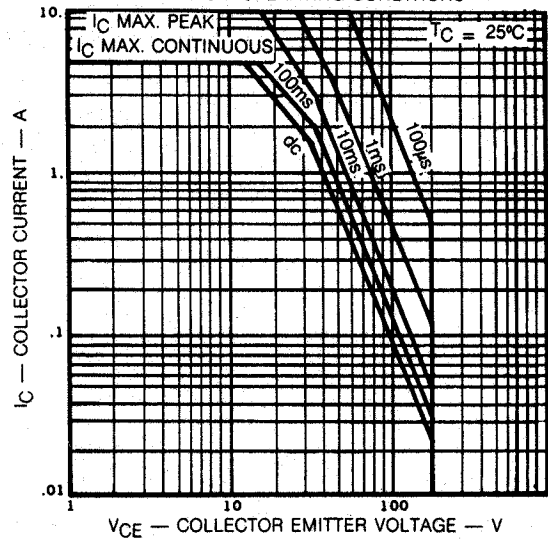
TYPICAL BASE-EMITTER SATURATION VOLTAGE



TYPICAL SWITCHING TIME



MAXIMUM OPERATING CONDITIONS



TYPICAL STATIC FORWARD CURRENT TRANSFER RATIO

