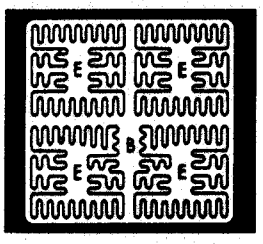
CHIP NUMBER

196



Base: .062" x 0.22" (1.58mm x 0.56mm)
Emitter: .062" x .022" (1.58mm x 0.56mm)

NPN EPITAXIAL PLANAR POWER TRANSISTOR (FORMERLY 96)

CONTACT METALLIZATION

Base and emitter: > 50,000 Å Aluminum
Collector: Gold
(Polished silicon or "Chrome Nickel Silver" also available)
Also available on:
MOLY PEDESTAL
Size: .389" x .389" (9.88mm x 9.88mm)
Thickness: .020" (0.51mm)
BeO PEDESTAL
Size: .430" x .500" (10.92mm x 12.70mm)
Thickness: .060" (1.52mm)

ASSEMBLY RECOMMENDATIONS

It is advisable that:
a) the chip be eutectically mounted with gold silicon preform 98/2%.
b) 12 mil (0.305mm) 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 196 in a TO-3 or equivalent case:

V_{CEO}	$V_{CE(s)}$ @	I_C	I_B	h_{FE} @	I_C	V_{CE}
> 60V	<1.0V	70A	7A	>5	90A	10V
>100V	<1.5V	70A	7A	>5	90A	10V
>140V	<2.0V	70A	7A	>5	90A	10V
*>200V ①	<2.0V	40A	8A	>5	50A	10V
*>250V ①	<2.0V	40A	8A	>5	50A	10V
*>300V ①	<2.0V	40A	8A	>5	50A	10V

V_{CEO}	V_{CEX}	V_{EBO}	f_T	C_{OBO}	θ_{JC}
> 60V	80V	>10V	15MHz	<800pF	<0.5°C/W
>100V	120V	>10V	15MHz	<800pF	<0.5°C/W
>140V	160V	>10V	15MHz	<800pF	<0.5°C/W
>200V ①	225V	>10V	15MHz	<800pF	<0.5°C/W
>250V ①	275V	>10V	15MHz	<800pF	<0.5°C/W
>300V ①	325V	>10V	15MHz	<800pF	<0.5°C/W

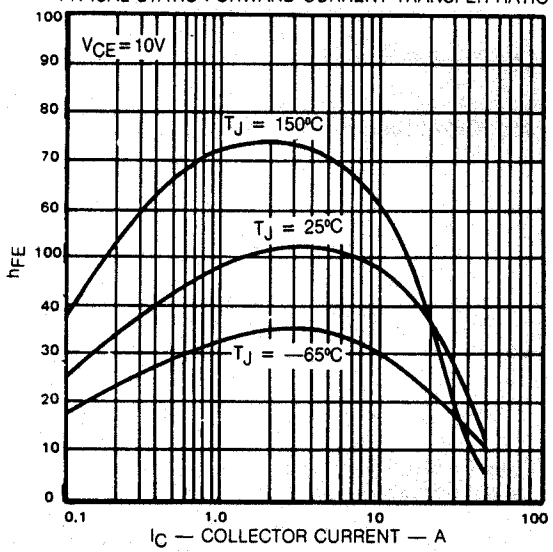
TYPICAL DEVICE TYPES: JAN2N5250, JAN2N5251, SDT96301 - SDT96308, 2N6325
*h_{FE} available at I_C = 30A, V_{CE} = 5V, >10

①Available only in triple diffused construction.

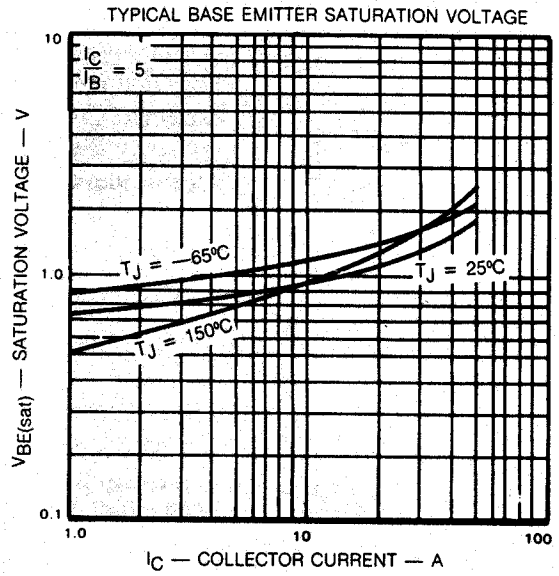
MEDIUM TO HIGH VOLTAGE, HIGH CURRENT

CHIP TYPE 196

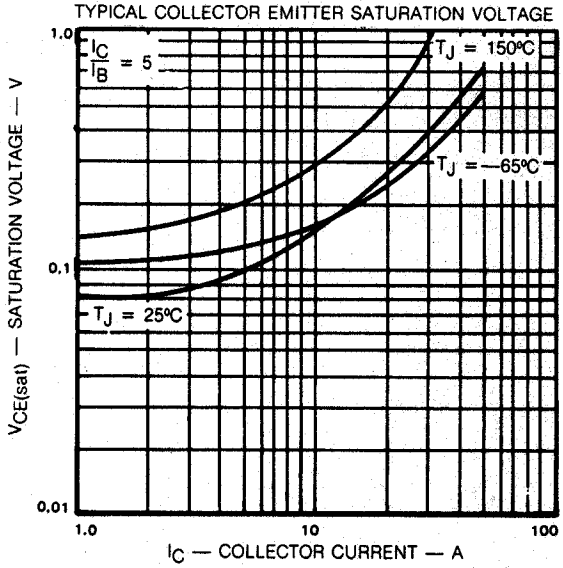
TYPICAL STATIC FORWARD CURRENT TRANSFER RATIO



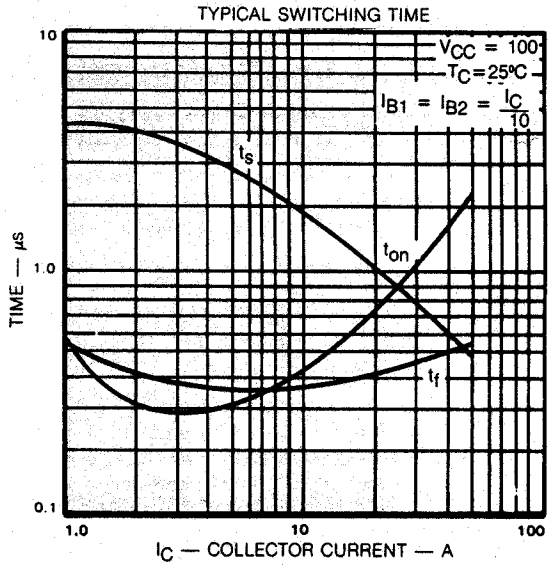
TYPICAL BASE EMITTER SATURATION VOLTAGE



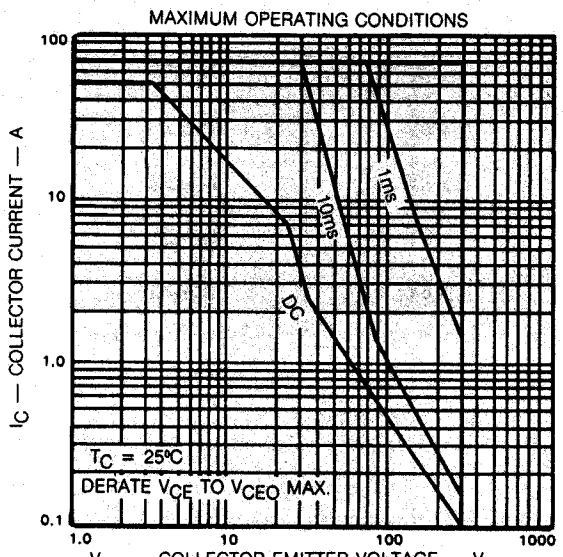
TYPICAL COLLECTOR EMITTER SATURATION VOLTAGE



TYPICAL SWITCHING TIME



MAXIMUM OPERATING CONDITIONS



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