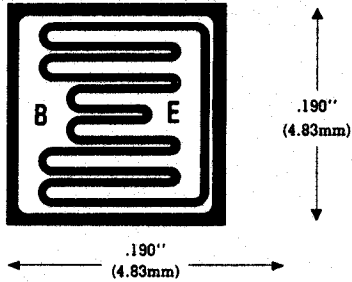


CHIP NUMBER

NPN TRIPLE DIFFUSED PLANAR POWER TRANSISTOR
(FORMERLY 42)

142



Base: .045" x .047" (1.14mm x 1.2mm)
Emitter: .015" x .119" (0.38mm x 3.02mm)

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: .250" x .312" (6.35mm x 7.93mm)
Thickness: .010" (0.25mm)

BeO PEDESTAL

Size: .250" x .312" (6.35mm x 7.93mm)
Thickness: .042" (1.07mm)

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 142 in a TO-3 or equivalent case:

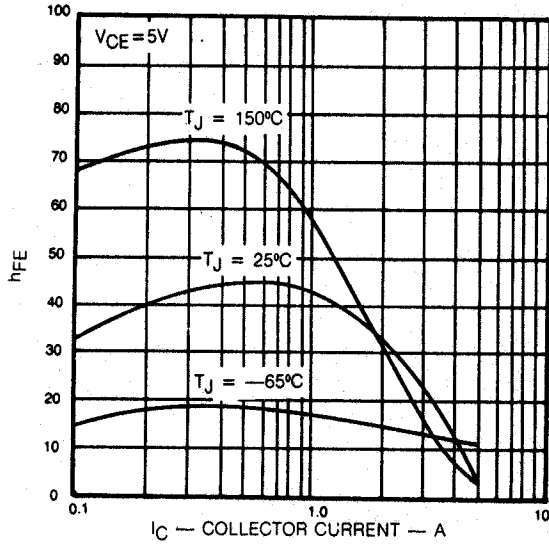
V _{CEO}	V _{CE(s)} @	I _C	I _B	h _{FE} @	I _C	V _{CE}
> 200V	< 0.5V	1.0A	0.1A	> 10	3A	5V
> 300V	< 0.5V	1.0A	0.1A	> 10	3A	5V
> 400V	< 0.5V	1.0A	0.1A	> 10	3A	5V

V _{CEO}	V _{CEX}	V _{EBO}	f _T	C _{OBO}	θ _{JC}
> 200V	500V	> 20V	2.5MHz	< 140pF	< 1.0°C/W
> 300V	600V	> 20V	2.5MHz	< 140pF	< 1.0°C/W
> 400V	700V	> 20V	2.5MHz	< 140pF	< 1.0°C/W

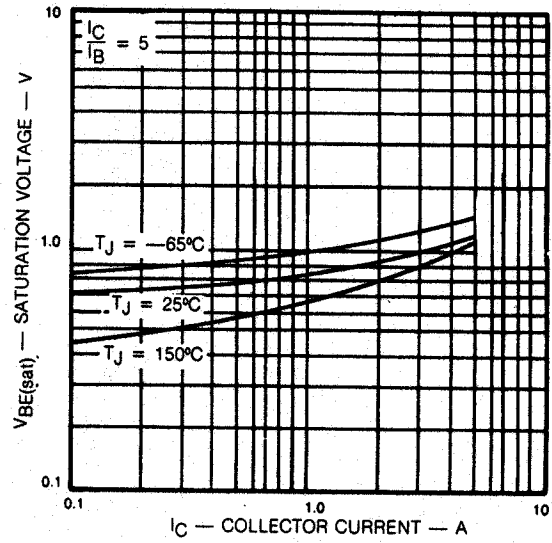
TYPICAL DEVICE TYPES: JAN2N3902, JAN2N5157, SDT401, SDT430, 2N5466, 2N5468
h_{FE} available at I_C = 1A, V_{CE} = 5V > 20

CHIP TYPE 142

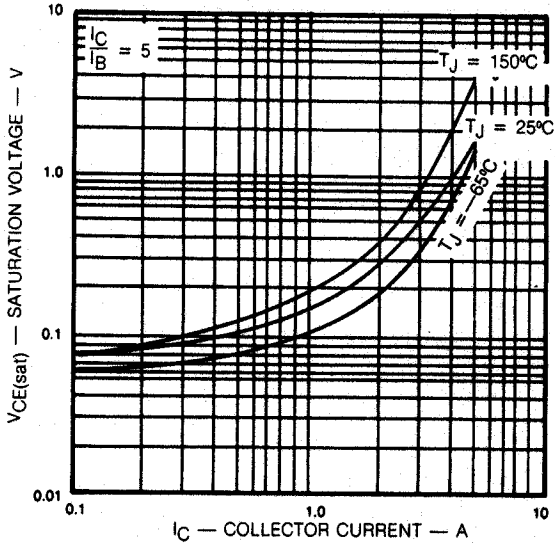
TYPICAL STATIC FORWARD CURRENT TRANSFER RATIO



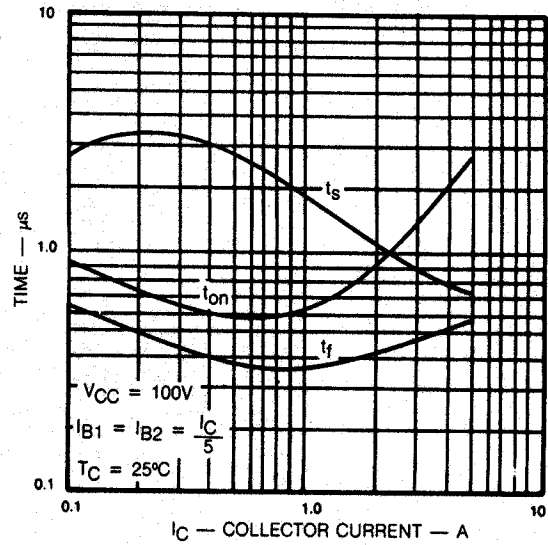
TYPICAL BASE EMITTER SATURATION VOLTAGE



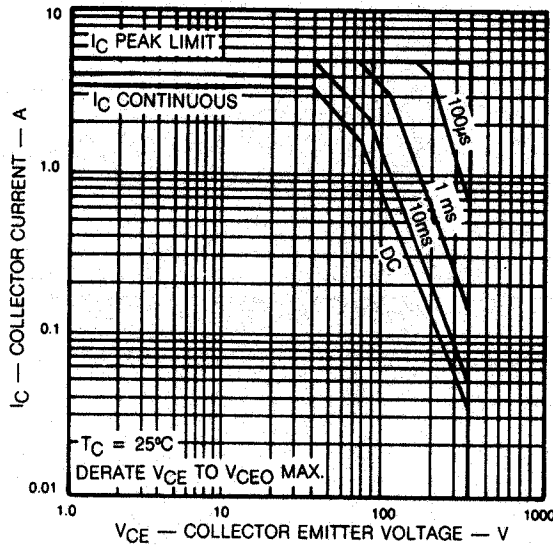
TYPICAL COLLECTOR EMITTER SATURATION VOLTAGE



TYPICAL SWITCHING TIME



MAXIMUM OPERATING CONDITIONS



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