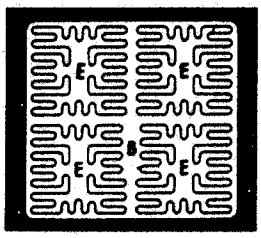
CHIP NUMBER

114



Base: .0156" x .060" (0.40mm x 1.52mm)
Emitter: .016" x .056" (0.41mm x 1.42mm)

NPN TRIPLE DIFFUSED PLANAR POWER TRANSISTOR

(FORMERLY 14)

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: .375" Diameter (9.53mm)
Thickness: .020" (0.51mm)

BeO PEDESTAL
Size: .250" x .312" (6.35mm x 7.92mm)
Thickness: .042" (1.07mm)

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 114 in a TO-3 or equivalent case:

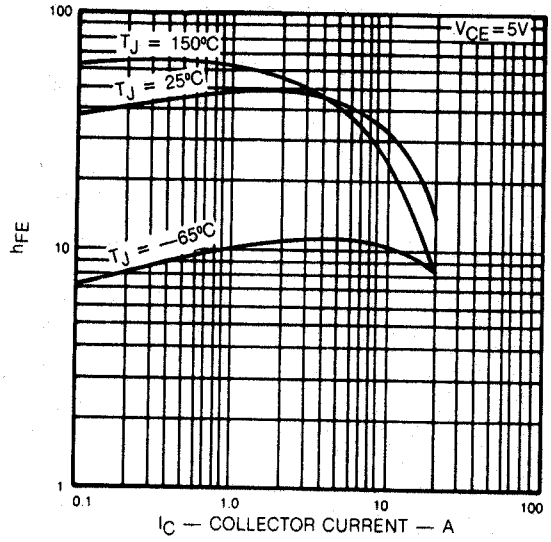
V_{CEO}	$V_{CE(s)}$ @	I_C	I_B	h_{FE} @	I_C	V_{CE}
> 80V	<0.5V	15A	1.5A	>20	20A	5V
>100V	<0.5V	15A	1.5A	>20	20A	5V
>130V	<0.5V	15A	1.5A	>20	20A	5V
*>200V	<0.5V	10A	1.0A	> 5	20A	5V
*>300V	<0.5V	10A	1.0A	> 5	20A	5V
*>400V	<1.0V	10A	1.0A	> 5	20A	5V

V_{CEO}	V_{CEX}	V_{EBO}	f_T	C_{OBO}	θ_{JC}
> 80V	150V	>10V	12MHz	<600pF	<1.0°C/W
>100V	170V	>10V	12MHz	<600pF	<1.0°C/W
>130V	200V	>10V	12MHz	<600pF	<1.0°C/W
>200V	250V	>10V	12MHz	<600pF	<1.0°C/W
>300V	350V	>10V	12MHz	<600pF	<1.0°C/W
>400V	450V	>10V	12MHz	<600pF	<1.0°C/W

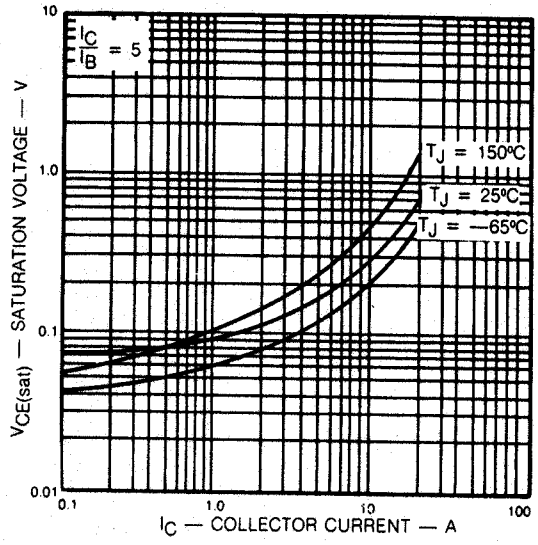
TYPICAL DEVICE TYPES: SDT14304, SDT14305, SDT14414, JAN2N3846, JAN2N3847

*h_{FE} available at I_C = 5A, V_{CE} = 5V, >20

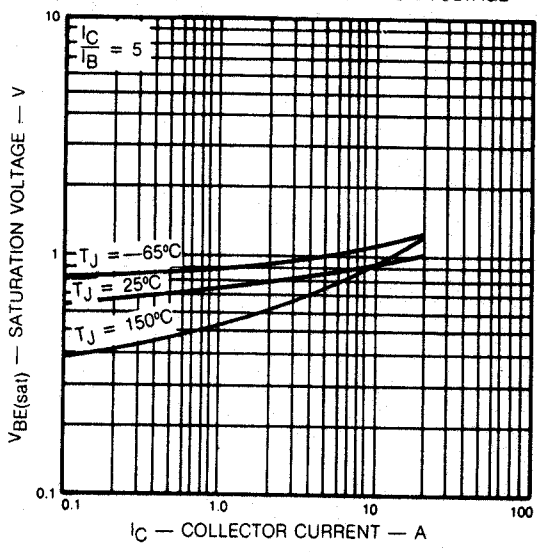
TYPICAL STATIC FORWARD CURRENT TRANSFER RATIO



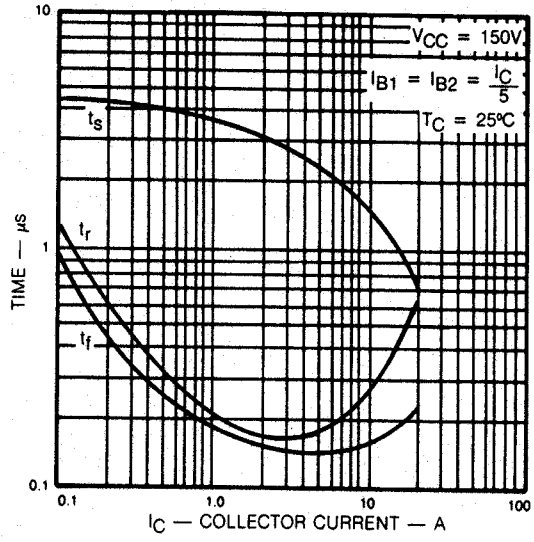
TYPICAL COLLECTOR EMITTER SATURATION VOLTAGE



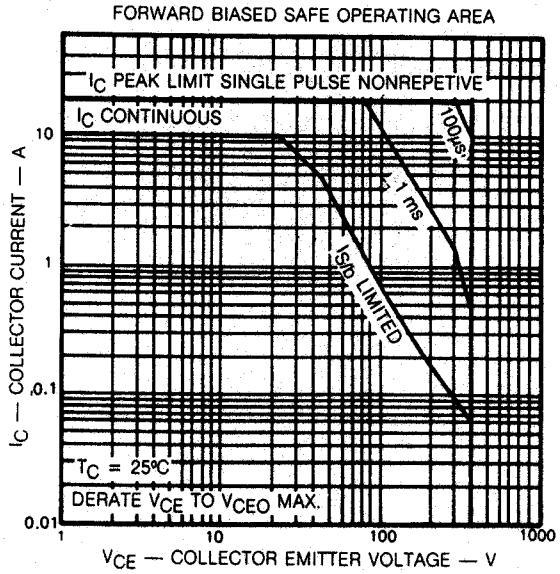
TYPICAL BASE EMITTER SATURATION VOLTAGE



TYPICAL SWITCHING TIME



FORWARD BIASED SAFE OPERATING AREA



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