

TRIPLE DIFFUSED PLANER TYPE  
 ULTRA HIGH  $\beta$  TRANSISTOR  
 INDUSTRIAL USE POWER SUPPLY

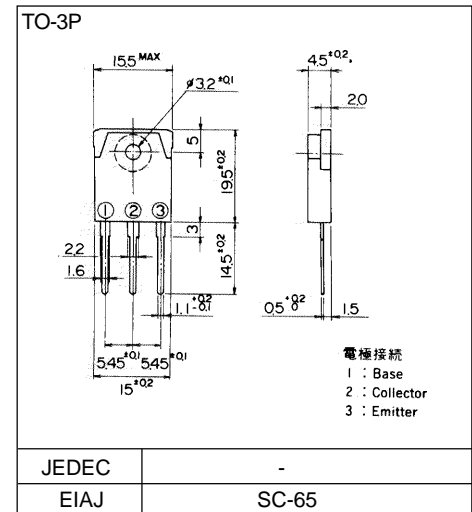
## Features

- Ultra high  $\beta$
- Excellent linearity in hFE
- Excellent safe operating area
- High reliability

## Applications

- Color & B/W TV power supply
- Active power filter
- Industrial use power supply (Series regulator)
- General purpose power amplifiers

## Outline Drawings



## Maximum ratings and characteristics

### Absolute maximum ratings (T<sub>c</sub>=25°C unless otherwise specified)

Item	Symbol	Ratings	Unit
Collector-Base voltage	V <sub>CB0</sub>	150	V
Collector-Emitter voltage	V <sub>CE0</sub>	100	V
Emitter-Base voltage	V <sub>EB0</sub>	6	V
Collector current	I <sub>C</sub>	10	A
Base current	I <sub>B</sub>	1	A
Collector power dissipation	P <sub>C</sub>	80	W
Operating junction temperature	T <sub>j</sub>	+150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

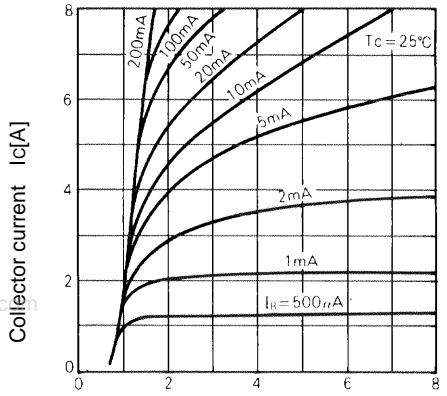
### Electrical characteristics (T<sub>c</sub> =25°C unless otherwise specified)

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Collector-Base voltage	V <sub>CB0</sub>	I <sub>C0</sub> = 1mA	150			V
Collector-Emitter voltage	V <sub>CE0</sub>	I <sub>CE0</sub> = 10mA	100			V
Emitter-Base voltage	V <sub>EB0</sub>	I <sub>EB0</sub> = 1mA	6			V
Collector-Base leakage current	I <sub>CB0</sub>	V <sub>CB0</sub> = 150V			1.0	mA
Emitter-Base leakage current	I <sub>EB0</sub>	V <sub>EB0</sub> = 6V			1.0	mA
D.C. current gain	h <sub>FE</sub>	I <sub>C</sub> = 3A, V <sub>CE</sub> = 4V	700			
Collector-Emitter saturation voltage	V <sub>CE(Sat)</sub>	I <sub>C</sub> = 1.5A, I <sub>B</sub> = 50mA			1.5	V
Base-Emitter saturation voltage	V <sub>BE(Sat)</sub>				2.0	V

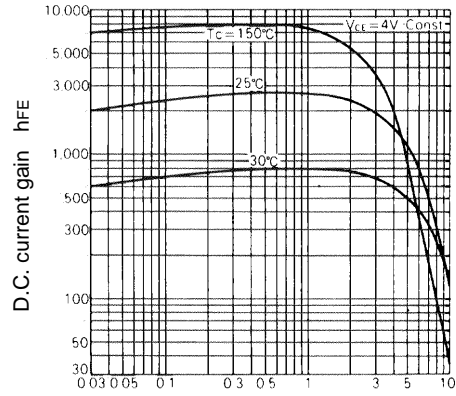
### Thermal characteristics

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal resistance	R <sub>th(j-c)</sub>	Junction to case			1.55	°C/W

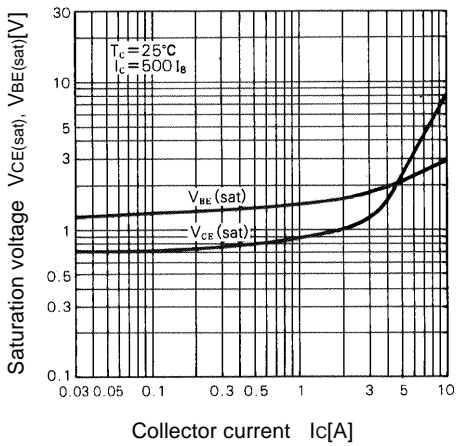
Characteristics



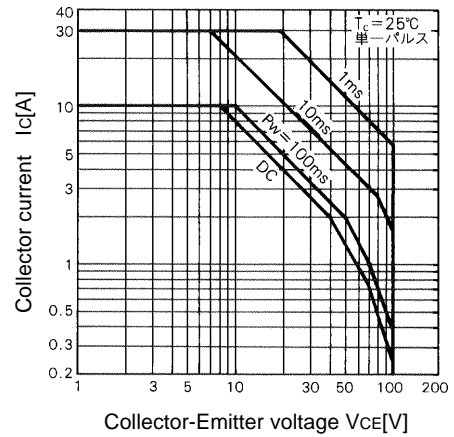
Collector Output Characteristics



DC Current Gain



Base and Collector Saturation Voltage



Safe Operating Area