

TRIPLE DIFFUSED PLANER TYPE
HIGH POWER DARLINGTON
HIGH SPEED SWITCHING

Features

- Excellent linearity hFE
- High collector current
- Excellent safe operating area
- High reliability

Applications

- Audio amp
- Series regulators
- General purpose power amplifiers
(Complementary to 2SB757)

Maximum ratings and characteristics

- Absolute maximum ratings (Tc=25°C unless otherwise specified)

Item	Symbol	Ratings	Unit
Collector-Base voltage	V _{CB0}	40	V
Collector-Emitter voltage	V _{CE0}	40	V
Emitter-Base voltage	V _{EB0}	5	V
Collector current	I _c	15	A
Base current	I _B	5	A
Collector power dissipation	P _c	80	W
Operating junction temperature	T _j	+150	°C
Storage temperature	T _{stg}	-55 to +150	°C

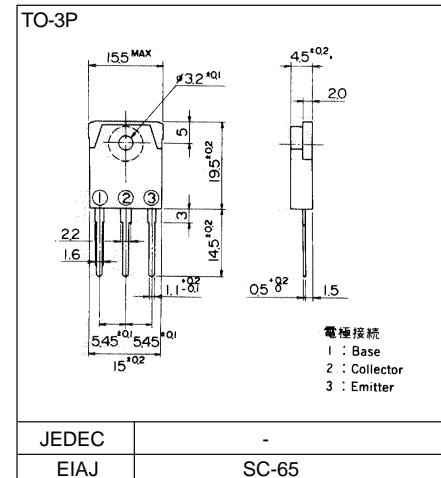
- Electrical characteristics (T_c =25°C unless otherwise specified)

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Collector-Base voltage	V _{CB0}	I _c = 0.1mA	40			V
Collector-Emitter voltage	V _{CE0}	I _{CE0} = 10mA	40			V
Emitter-Base voltage	V _{EB0}	I _{EB0} = 0.1mA	5			V
Collector-Base leakage current	I _{CB0}	V _{CB0} = 40V			0.01	mA
Emitter-Base leakage current	I _{EB0}	V _{EB0} = 5V			0.1	mA
D.C. current gain	h _{FE}	I _c = 5A, V _{CE} = 2V	40		240	
Collector-Emitter saturation voltage	V _{CE(Sat)}	I _c = 5A, I _B = 0.5A			0.8	V
Base-Emitter saturation voltage	V _{BE(Sat)}				1.8	V
*1	t _{on}	I _c = 15A, I _{B1} = -I _{B2} = 1.5A			1.0	μs
Switching time	t _{stg}	R _L = 2 ohm ,P _w = 20μs Duty=<2%			2.0	μs
	t _f				1.0	μs

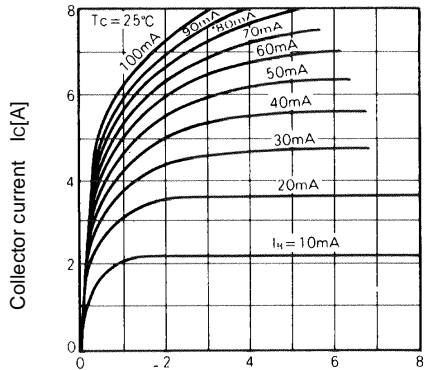
- Thermal characteristics

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal resistance	R _{th(j-c)}	Junction to case			1.56	°C/W

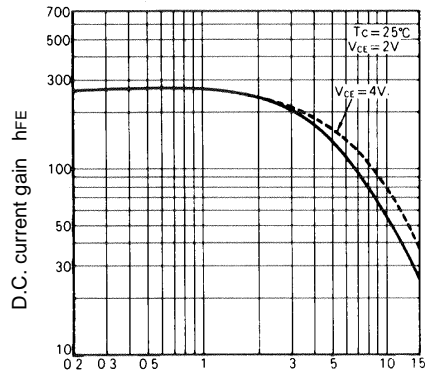
Outline Drawings



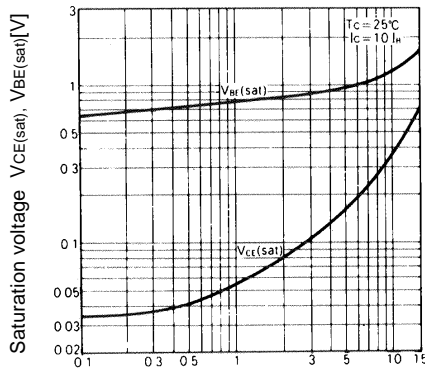
Characteristics



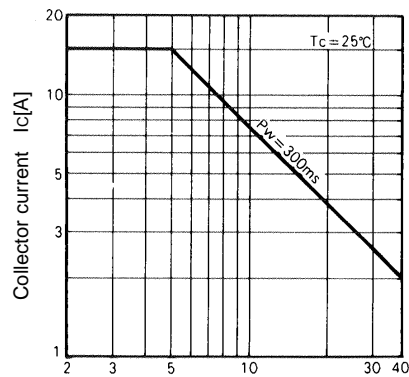
Collector Output Characteristics



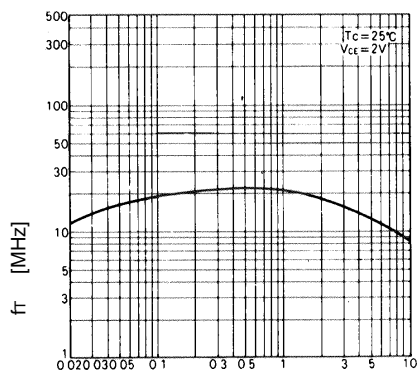
DC Current Gain



Base and Collector Saturation Voltage



Safe Operating Area



Gain Bandwidth Product

*1 Switching Time Test Circuit

