

TRIPLE DIFFUSED PLANER TYPE
HIGH VOLTAGE, HIGH SPEED SWITCHING

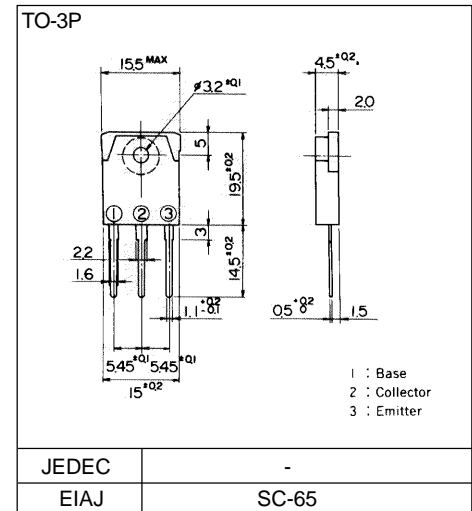
■ Features

- High voltage, High speed switching
- High reliability

■ Applications

- Switching regulators
- Ultrasonic generators
- High frequency invertors
- General purpose power amplifiers

■ Outline Drawings



■ Maximum ratings and characteristics

● Absolute maximum ratings (T_c=25°C unless otherwise specified)

Item	Symbol	Ratings	Unit
Collector-Base voltage	V _{CB0}	1000	V
Collector-Emitter voltage	V _{CE0}	1000	V
Emitter-Base voltage	V _{EB0}	10	V
Collector current	I _C	5	A
Base current	I _B	3	A
Collector power dissipation	P _C	80	W
Operating junction temperature	T _j	+150	°C
Storage temperature	T _{stg}	-55 to +150	°C

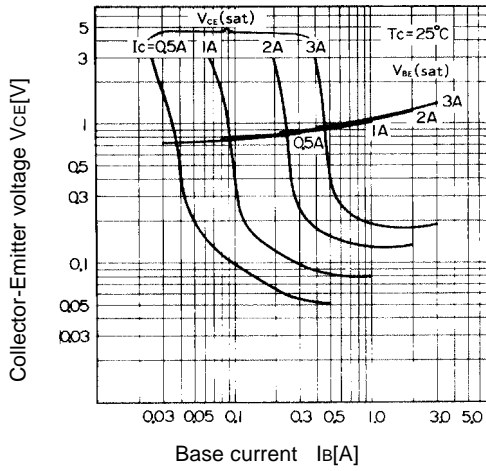
● Electrical characteristics (T_c =25°C unless otherwise specified)

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Collector-Base voltage	V _{CB0}	I _{CBO} = 1mA	1000			V
Collector-Emitter voltage	V _{CER}	I _C = 1A, R _{BE} = 15 ohm	1000			V
Emitter-Base voltage	V _{EB0}	I _{EBO} = 1mA	10			V
Collector-Base leakage current	I _{CBO}	V _{CB0} = 1000V			1.0	mA
Emitter-Base leakage current	I _{EB0}	V _{EB0} = 10V			1.0	mA
D.C. current gain	h _{FE}	I _C = 2A, V _{CE} = 5V	10			
Collector-Emitter saturation voltage	V _{CE(Sat)}	I _C = 2A, I _B = 400mA			1.0	V
Base-Emitter saturation voltage	V _{BE(Sat)}				1.5	V
*1 Switching time	t _{on}	I _C = 3A, I _{B1} = 600mA I _{B2} = -1200mA, R _L = 20 ohm P _w = 20μs Duty=<2%			1.0	μs
	t _{stg}				4.0	μs
	t _f				0.8	μs

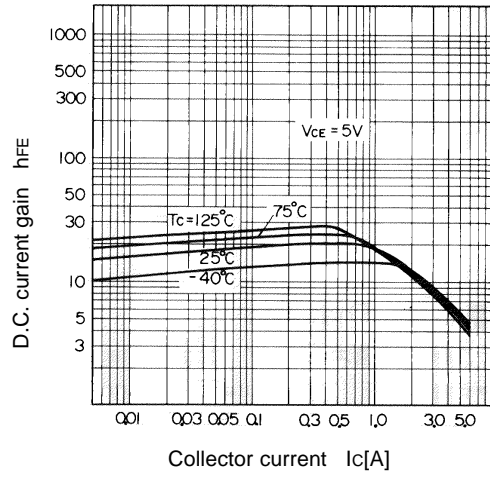
● Thermal characteristics

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal resistance	R _{th(j-c)}	Junction to case			1.5	°C/W

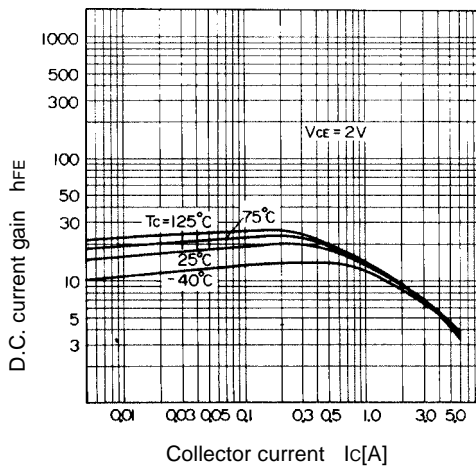
Characteristics



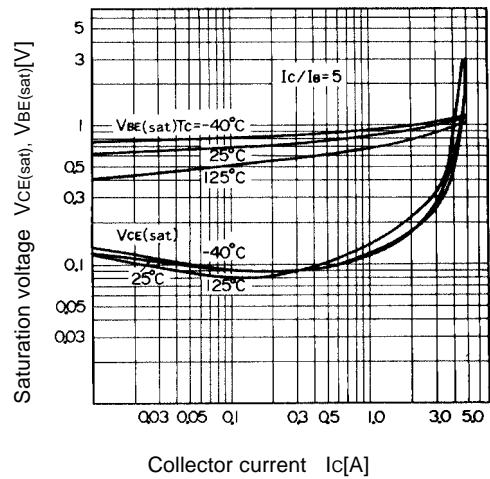
Collector Output Characteristics



DC Current Gain



DC Current Gain



Base and Collector Saturation Voltage

*1 Switching Time Test Circuit

