

TRIPLE DIFFUSED PLANER TYPE HIGH VOLTAGE,HIGH SPEED SWITCHING

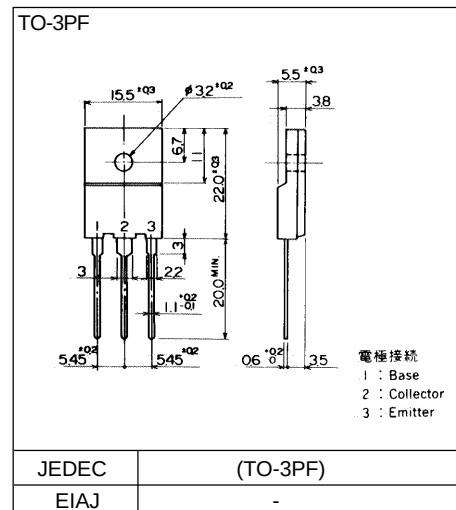
■ Features

- 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 (Tc=25°C unless otherwise specified)

Item	Symbol	Ratings	Unit
Collector-Base voltage	V _{CB0}	450	V
Collector-Emitter voltage	V _{CE0}	400	V
Collector-Emitter voltage	V _{CE0(SUS)}	400	V
Emitter-Base voltage	V _{EB0}	7	V
Collector current	I _C	10	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

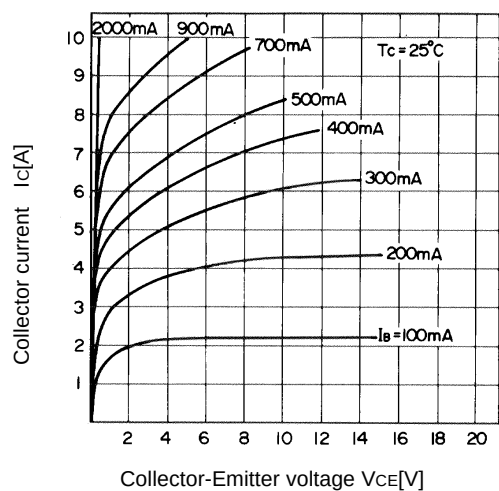
● Electrical characteristics (Tc =25°C unless otherwise specified)

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Collector-Base voltage	V _{CB0}	I _{CB0} = 1mA	450			V
Collector-Emitter voltage	V _{CE0}	I _{CE0} = 10mA	400			V
Collector-Emitter voltage	V _{CE0(SUS)}	I _{CE0} = 1A	400			V
Emitter-Base voltage	V _{EB0}	I _{EB0} = 0.1mA	7			V
Collector-Base leakage current	I _{CB0}	V _{CB0} = 450V			1.0	mA
Emitter-Base leakage current	I _{EB0}	V _{EB0} = 7V			0.1	mA
D.C. current gain	h _{FE}	I _C = 4A, V _{CE} = 5V	10			
Collector-Emitter saturation voltage	V _{CE(Sat)}	I _C = 4A, I _B = 800mA			1.2	V
Base-Emitter saturation voltage	V _{BE(Sat)}				1.5	V
*1	t _{on}	I _C = 7.5A, I _{B1} = 1.5A I _{B2} = -1.5A, R _L = 20 ohm P _W = 20μs Duty=<2%			1.0	μs
Switching time	t _{stg}				2.0	μs
	t _r				1.0	μs

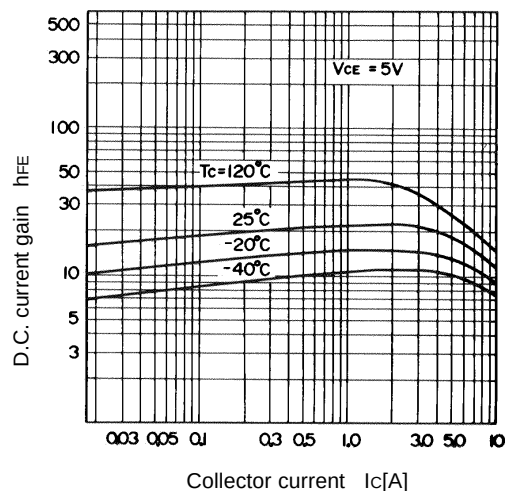
● Thermal characteristics

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

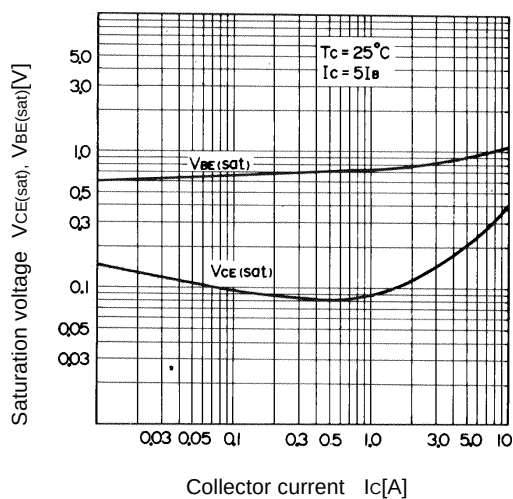
Characteristics



Collector Output Characteristics



DC Current Gain



Base and Collector Saturation Voltage

