

TRIPLE DIFFUSED PLANER TYPE
HIGH VOLTAGE, HIGH SPEED SWITCHING

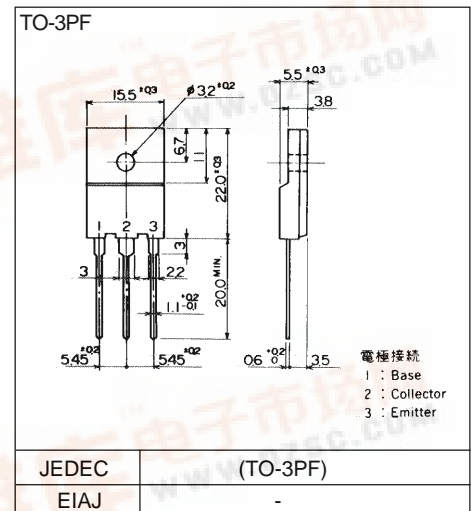
Features

- High voltage, High speed switching
- Low saturation voltage
- 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	VCBO	500	V
Collector-Emitter voltage	VCEO	400	V
Emitter-Base voltage	VEBO	7	V
Collector current	IC	15	A
Base current	IB	5	A
Collector power dissipation	PC	80	W
Operating junction temperature	Tj	+150	°C
Storage temperature	Tstg	-55 to +150	°C

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

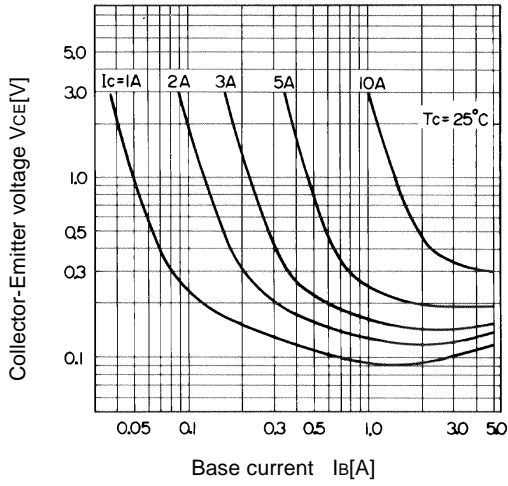
Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Collector-Base voltage	VCBO	ICBO = 1mA	500			V
Collector-Emitter voltage	VCEO(SUS)	IC = 200mA	400			V
Emitter-Base voltage	VEBO	IEBO = 1mA	7			V
Collector-Base leakage current	ICBO	VCBO = 500V			1.0	mA
D.C. current gain	hFE	IC = 6A, VCE = 5V	10			
Collector-Emitter saturation voltage	VCE(Sat)	IC = 6A, IB = 1A			1.0	V
Base-Emitter saturation voltage	VBE(Sat)				1.5	V
*1	ton	IC = 7.5A, IB1 = 1.5A		0.25	0.5	μs
Switching time	tstg	IB2 = -3A, RL = 20 ohm		1.0	1.5	μs
	tf	Pw = 20μs Duty=<2%		0.07	0.15	μs

Thermal characteristics

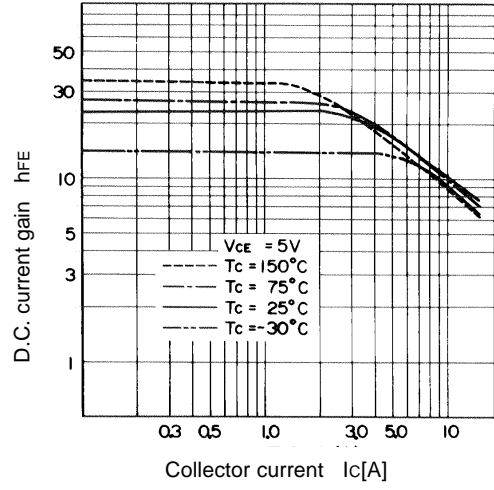
Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal resistance	Rth(j-c)	Junction to case			1.56	°C/W



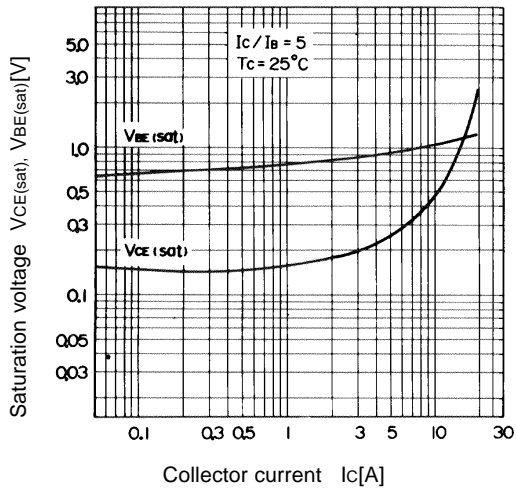
Characteristics



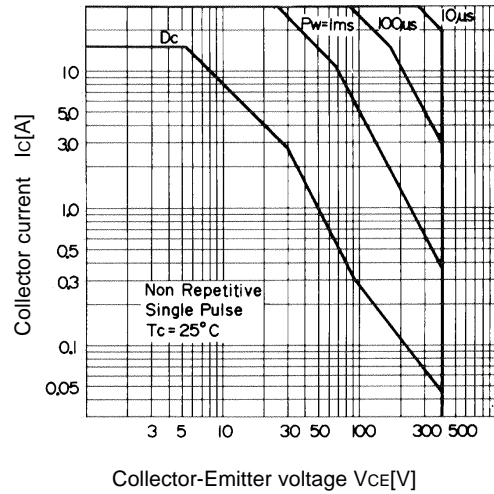
Collector Output Characteristics



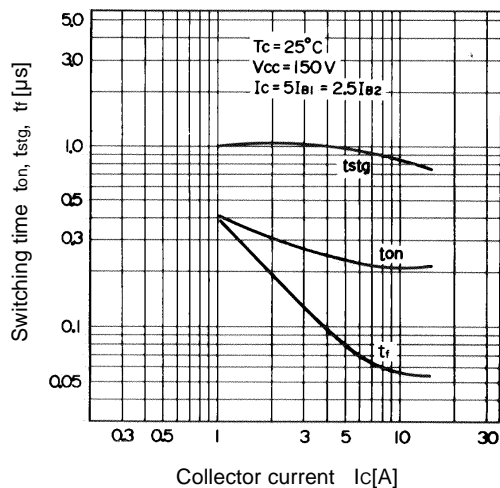
DC Current Gain



Base and Collector Saturation Voltage



Safe Operating Area



Switching Time

*1 Switching Time Test Circuit

