

TRIPLE DIFFUSED PLANER TYPE
HIGH VOLTAGE,HIGH SPEED SWITCHING

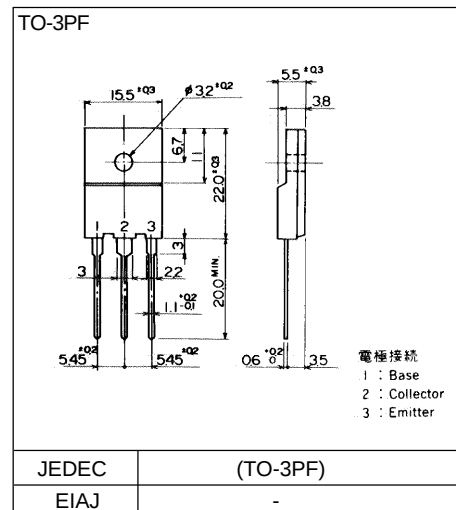
Features

- High voltage,High speed switching
- High reliability

Applications

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

Outline Drawings



Maximum ratings and characteristic

- Absolute maximum ratings ($T_c=25^\circ\text{C}$ unless otherwise specified)

Item	Symbol	Rating	Unit
Collector-Base voltage	V_{CB0}	1500	V
Collector-Emitter voltage	V_{CE0}	1500	V
Emitter-Base voltage	V_{EB0}	8	V
Collector current	I_C (DC)	5	A
Collector current	I_C (Pulse)	10	A
Base current	I_B	3	A
Collector power dissipation	P_C	80	W
Operating junction temperature	T_j	+150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

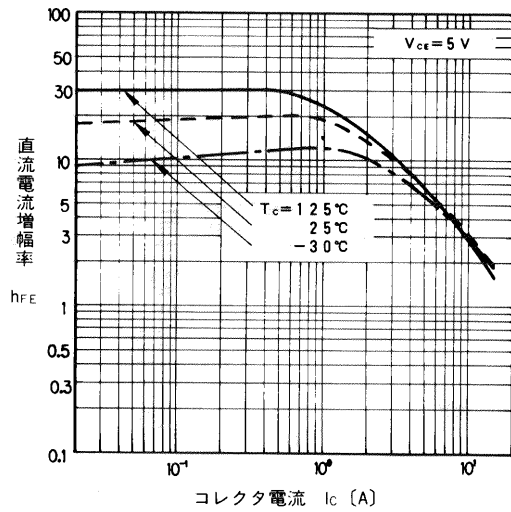
- Electrical characteristics ($T_c=25^\circ\text{C}$ unless otherwise specified)

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Collector-Base voltage	V_{CB0}	$I_{CB0} = 1\text{mA}$	1500			V
Collector-Emitter voltage	V_{CE0}	$I_{CE0} = 10\text{mA}$	-			V
Collector-Emitter voltage	$V_{CE0}(\text{SUS})$	$I_{CE0} = 0.2\text{A}$	700			V
Emitter-Base voltage	V_{EB0}	$I_{EB0} = 0.1\text{mA}$	8			V
Collector-Base leakage current	I_{CB0}	$V_{CB0} = 1500\text{V}$			1.0	mA
Emitter-Base leakage current	I_{EB0}	$V_{EB0} = 8\text{V}$			0.1	mA
D.C. current gain	h_{FE}	$I_C = 1\text{A}, V_{CE} = 5\text{V}$	18		50	
Collector-Emitter saturation voltage	$V_{CE}(\text{Sat})$	$I_C = 4.5\text{A}, I_B = 2.0\text{A}$			2.0	V
Base-Emitter saturation voltage	$V_{BE}(\text{Sat})$				1.5	V
*1	t_{on}	$I_C = 2.5\text{A}, I_{B1} = 0.25\text{A}$ $I_{B2} = -0.5\text{A},$			1.0	μs
Switching time	t_{stg}				3.0	μs
	t_r				0.5	μs

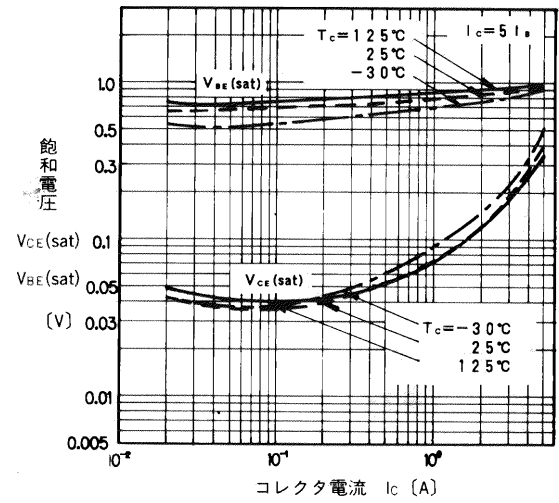
Thermalcharacteristics

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal resistance	$R_{th(j-c)}$	JunctionI to case			1.55	$^\circ\text{C/W}$

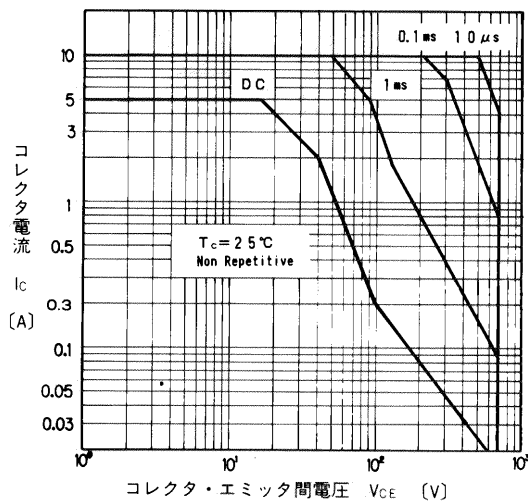
Characteristics



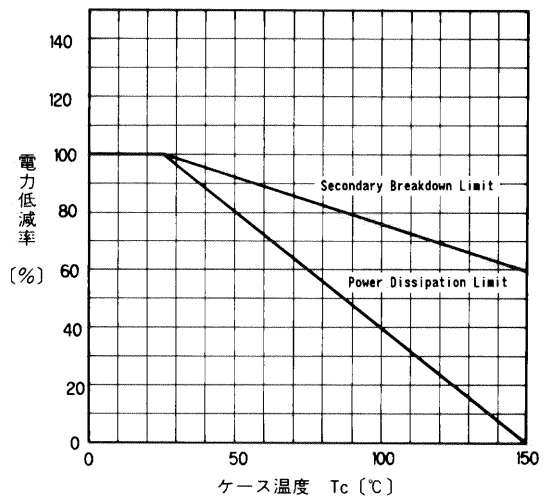
直流電流増幅率—コレクタ電流特性
DC Current Gain



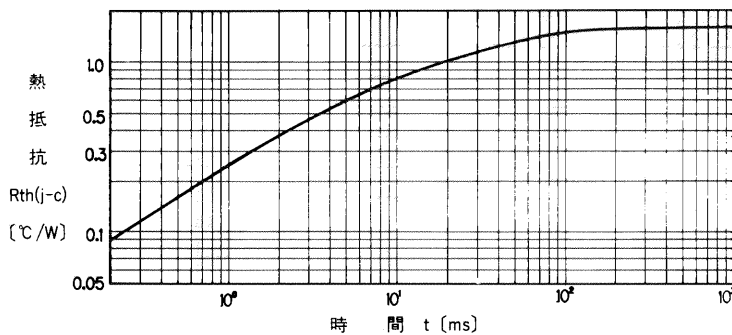
飽和電圧—コレクタ電流特性
Base and Collector Saturation Voltage



安全動作領域
Safe Operating Area



ASO低減特性
ASO Derating



過渡熱抵抗
Transient Thermal Resistance