

TRIPLE DIFFUSED PLANER TYPE
HIGH VOLTAGE, HIGH SPEED SWITCHING

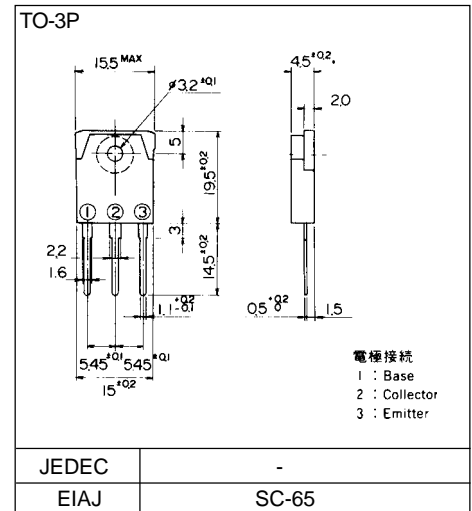
Features

- High D.C. current gain
- High reliability

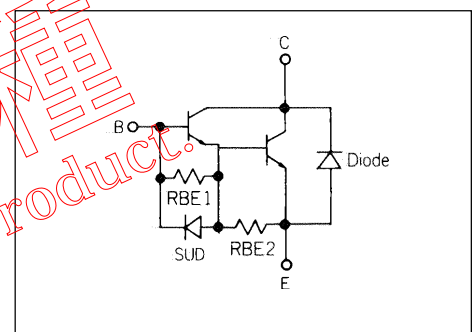
Applications

- Switching regulators
- General purpose power amplifiers

Outline Drawings



Equivalent Circuit Schematic



Maximum ratings and characteristic

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

Item	Symbol	Rating	Unit
Collector-Base voltage	V _{CB0}	650	V
Collector-Emitter voltage	V _{CE0}	450	V
Emitter-Base voltage	V _{EB0}	6	V
Collector current	I _C	15	A
Base current	I _B	2	A
Collector power dissipation	P _C	80	W
Operating junction temperature	T _j	+150	°C
Storage temperature	T _{stg}	-55 to +150	°C

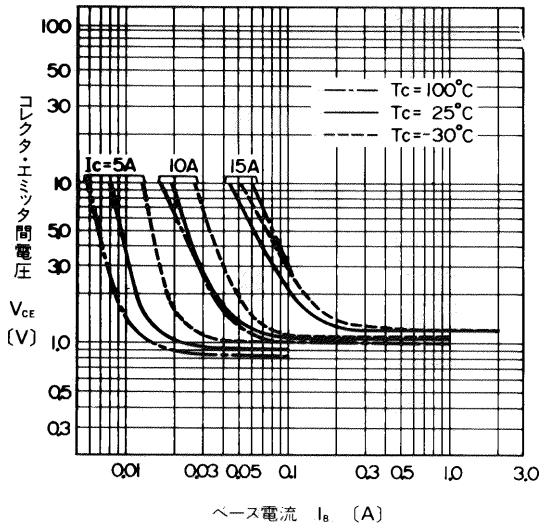
Electrical characteristics (Tc =25°C unless otherwise specified)

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Collector-Base voltage	V _{CB0}	I _{CBO} = 1.0mA	600			V
Collector-Emitter voltage	V _{CE0(SUS)}	I _C = 1.0A	450			V
Collector-Base leakage current	I _{CBO}	V _{CB0} = 600V			1.0	mA
Emitter-Base leakage current	I _{EB0}	V _{EB0} = 6V			200	mA
D.C. current gain	h _{FE}	I _C = 15A, V _{CE} = 5V	100			
Collector-Emitter saturation voltage	V _{CE(Sat)}	I _C = 15A, I _B = 0.5A			2.0	V
Base-Emitter saturation voltage	V _{BE(Sat)}				2.5	V
*1 Switching time	t _{on}	I _C = 15A, I _{B1} = 0.5A			1.0	μs
	t _{stg}	I _{B2} = -0.5A, R _L = 20Ω			12.0	μs
	t _f	P _w = 20μs, Duty=<2%			2.0	μs

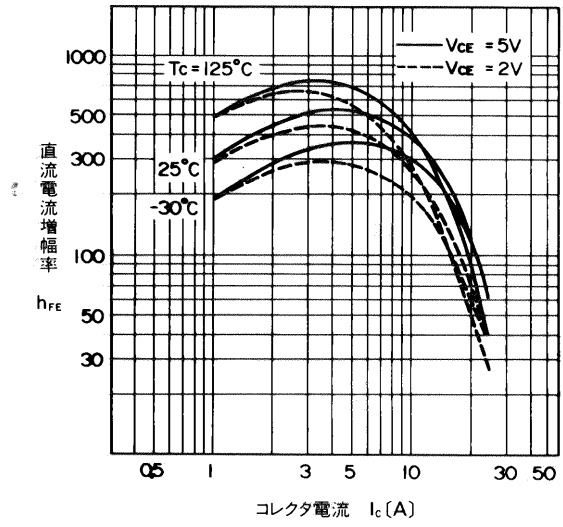
Thermal characteristics

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal resistance	R _{th(j-c)}	Junction to case			1.50	°C/W

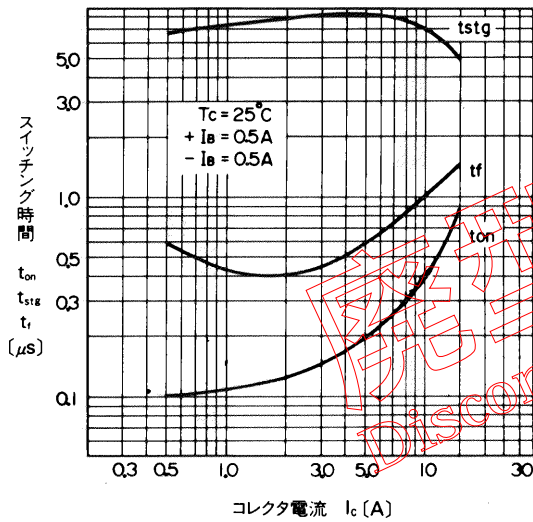
Characteristics



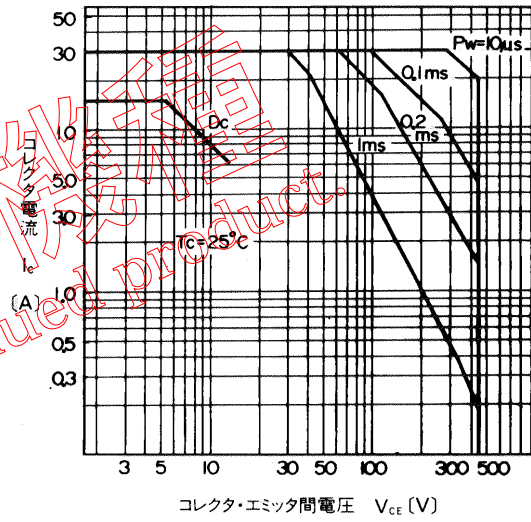
出力特性
Collector Output Characteristics



直流電流増幅率—コレクタ電流特性
DC Current Gain



スイッチング時間—コレクタ電流特性
Switching Time



安全動作領域特性
Safe Operating Area

スイッチングタイム測定回路

*) Switching Time Test Circuit

