

TRIPLE DIFFUSED PLANER TYPE HIGH SPEED SWITCHING

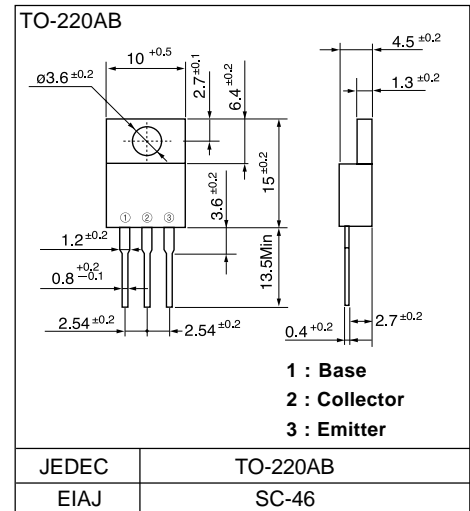
■ Features

- High speed switching
- High reliability

■ Applications

- Switching regulators
- Ultrasonic generators
- High frequency inverters
- 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}	250	V
Collector-Emitter voltage	V _{CE0}	200	V
Collector-Emitter voltage	V _{CE0(SUS)}	200	V
Emitter-Base voltage	V _{EB0}	7	V
Collector current	I _C	6	A
Base current	I _B	1.5	A
Collector power dissipation	P _C	40	W
Operating junction temperature	T _j	+150	°C
Storage temperature	T _{stg}	-55 to +150	°C

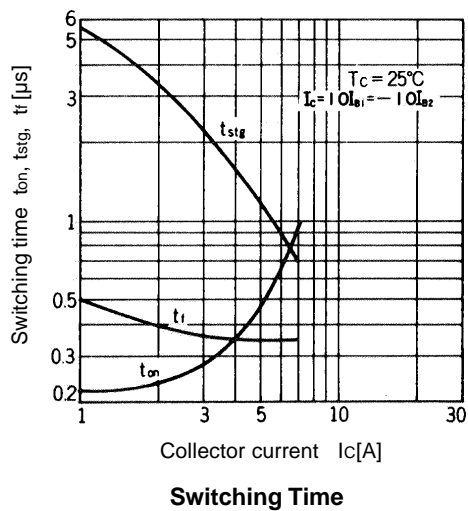
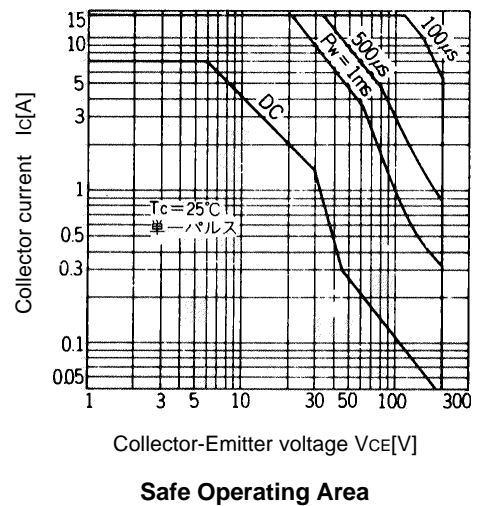
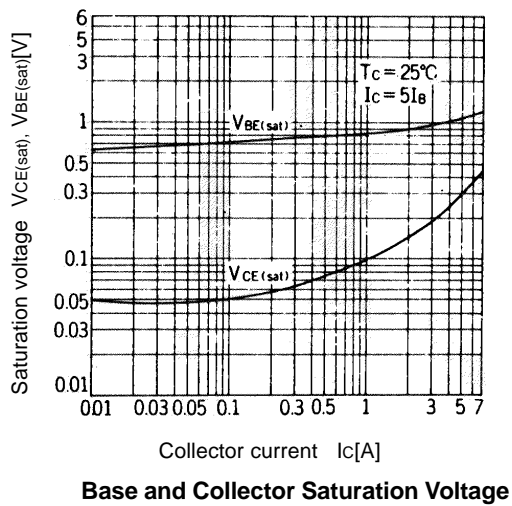
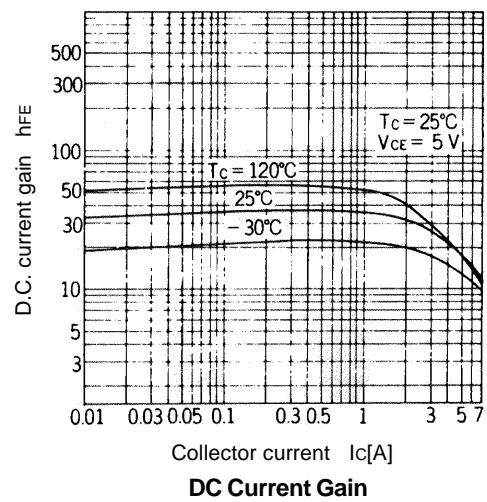
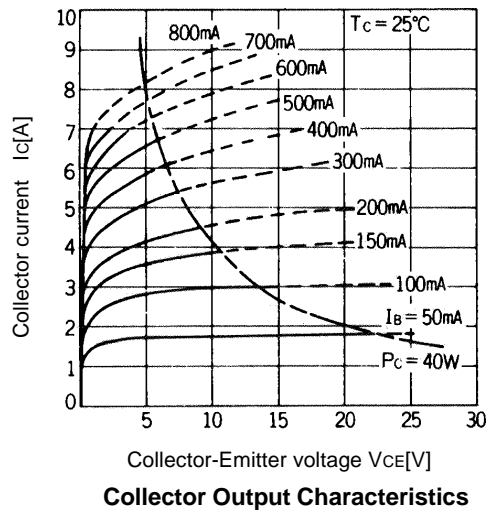
● Electrical characteristics (T_c =25°C unless otherwise specified)

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Collector-Base voltage	V _{CB0}	I _{C0} = 0.1mA	250			V
Collector-Emitter voltage	V _{CE0}	I _{CE0} = 10mA	200			V
Collector-Emitter voltage	V _{CE0(SUS)}	I _C = 1A	200	-		V
Emitter-Base voltage	V _{EB0}	I _{EB0} = 0.1mA	7	-		V
Collector-Base leakage current	I _{CBO}	V _{CB0} = 250V		-	0.1	mA
Emitter-Base leakage current	I _{EB0}	V _{EB0} = 7V		-	0.1	mA
D.C. current gain	h _{FE}	I _C = 1A, V _{CE} = 5V	20			
Collector-Emitter saturation voltage	V _{CE(Sat)}	I _C = 2A, I _B = 0.8A			0.5	V
Base-Emitter saturation voltage	V _{BE(Sat)}				1.2	V
*1	t _{on}	I _C = 4A, I _{B1} = 0.4A			1.0	μs
Switching time	t _{stg}	I _{B2} = -0.4A, R _L = 20 ohn			2.0	μs
	t _f	P _w = 20μs Duty=<2%			1.0	μs

● Thermal characteristics

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal resistance	R _{th(j-c)}	Junction to case			3.0	°C/W

Characteristics



*1 Switching Time Test Circuit

