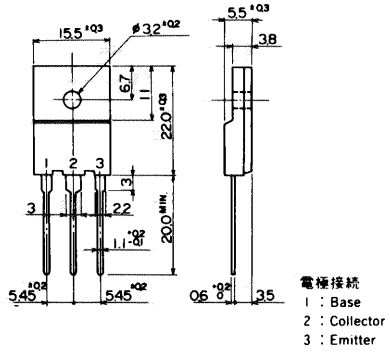
2SC4538R

FUJI POWER TRANSISTOR

TRIPLE DIFFUSED PLANER TYPE
HIGH VOLTAGE,HIGH SPEED SWITCHING

■ Outline Drawings

TO-3PF



JEDEC	(TO-3PF)
EIAJ	-

■ Features

- **High voltage,High speed switching**
- **High reliability**

■ Applications

- **Switching regulators**
- **Ultrasonic generators**
- **High frewuency inverters**
- **General purpose power amplifiers**

■ Maximum ratings and characteristics

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

Item	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	900	V
Collector-Emitter voltage	V_{CEO}	800	V
Collector-Emitter voltage	$V_{CEO(SUS)}$	-	V
Emitter-Base voltage	V_{EBO}	10	V
Collector current	I_C	5	A
Base current	I_B	3	A
Collector power disspation	P_C	80	W
Operating junction temperature	T_j	+150	℃
Storage temperature	T_{stg}	-55 to +150	℃

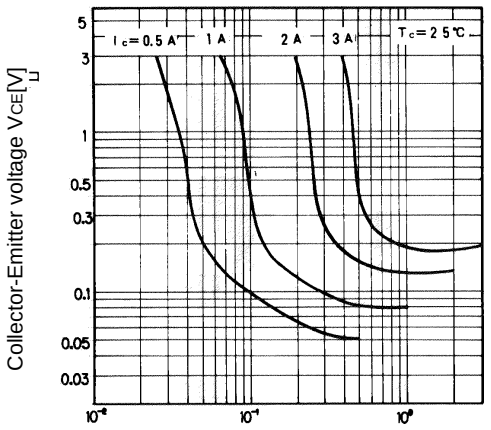
● **Electrical characteristics (T_C =25°C unless otherwise specified)**

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Collector-Base voltage	V_{CBO}	I_{CBO} = 1mA	900			V
Collector-Emitter voltage	V_{CEO}	I_{CEO} = 10mA	800			V
Collector-Emitter voltage	$V_{CEO(SUS)}$	I_C = A	-			V
Emitter-Base voltage	V_{EBO}	I_{EBO} = 1mA	10			V
Collector-Base leakage current	I_{CBO}	V_{CBO} = 900V			1.0	mA
Emitter-Base leakage current	I_{EBO}	V_{EBO} = 10V			1.0	mA
D.C. current gain	h_{FE}	I_C = 2A, V_{CE} = 5V	10			
Collector-Emitter saturation voltage	$V_{CE(Sat)}$	I_C = 2A, I_B = 0.4A			1.0	V
Base-Emitter saturation voltage	$V_{BE(Sat)}$				1.5	V
*1	t_{on}	I_C = 3A, I_{B1} = 0.6A			1.0	µs
Switching time	t_{stg}	I_{B2} = -1.2A, R_L = 100 ohm			4.0	µs
	t_f	Pw = 20µs Duty=<2%			0.8	µs

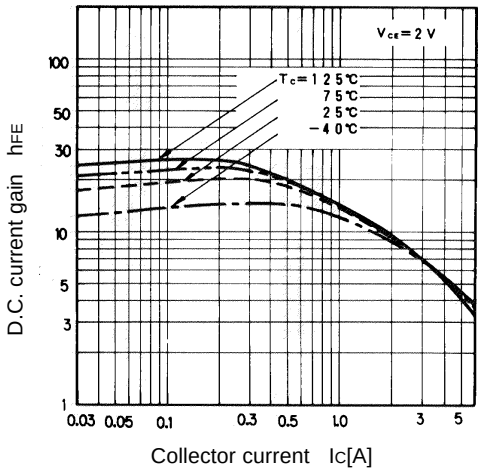
● **Thermal characteristics**

Item	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal resistance	$R_{th(j-c)}$	Junction to case			1.5	°C/W

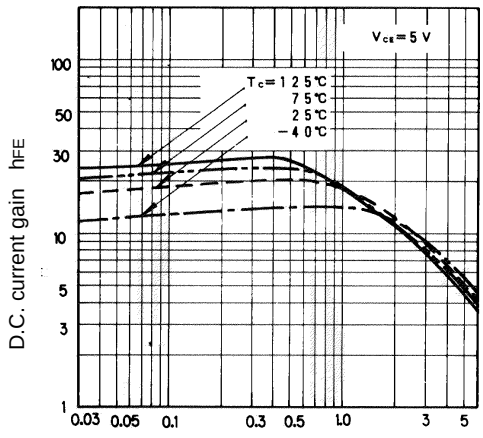
Characteristics



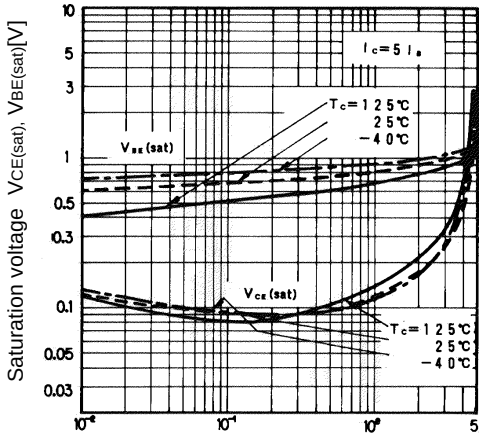
Collector Output Characteristics



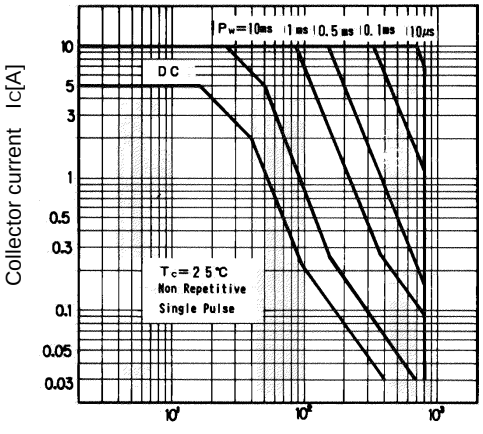
DC Current Gain



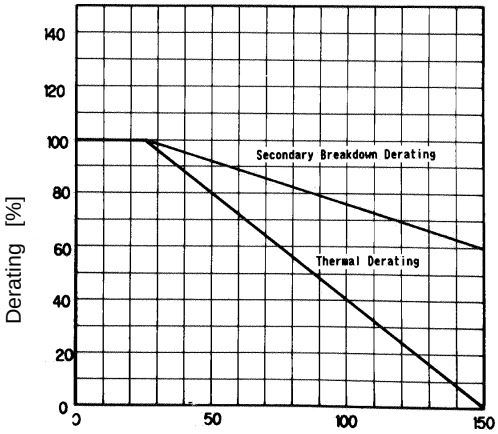
DC Current Gain



Base and Collector Saturation Voltage

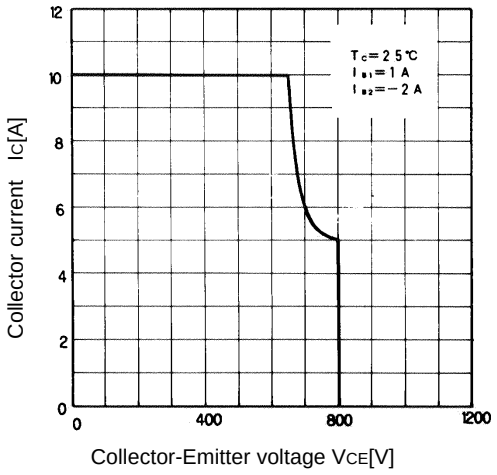


Safe Operating Area

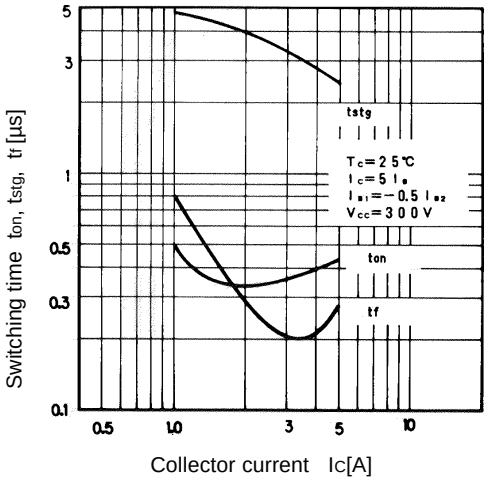


ASO Derating

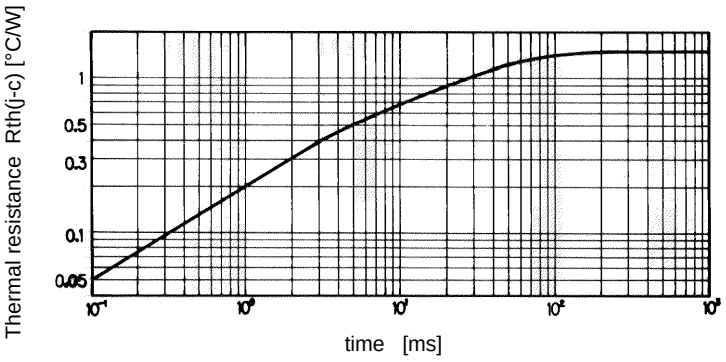
Characteristics



Reverse Biased Safe Operating Area



Switching Time



Transient Thermal Resistance