

Midium Power Transistors (120V / 700mA)

2SCR372P

● Structure

NPN Silicon epitaxial planar transistor

● Features

Low saturation voltage

$$V_{CE(sat)} = 0.3V \text{ (Max.) } (I_C / I_B = 500mA / 50mA)$$

● Applications

Driver

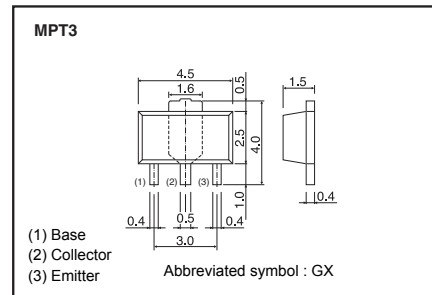
● Packaging specifications

Type	Package	Taping
	Code	T100
	Basic ordering unit (pieces)	1000
2SCR372P		○

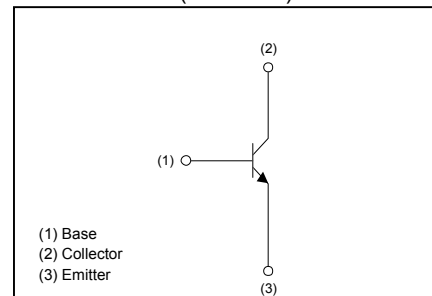
hFE values are classified follows :

Item	Q	R
hFE	120 to 270	180 to 390

● Dimensions (Unit : mm)



● Inner circuit (Unit : mm)



● Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V_{CBO}	120	V
Collector-emitter voltage		V_{CEO}	120	V
Emitter-base voltage		V_{EBO}	6	V
Collector current	DC	I_C	0.7	A
	Pulsed	I_{CP}^{*1}	1.4	A
Power dissipation		P_D^{*2}	0.5	W
		P_D^{*3}	2	W
Junction temperature		T_j	150	°C
Range of storage temperature		T_{stg}	-55 to +150	°C

*1 $P_w=10ms$, Single Pulse

*2 Each terminal mounted on a recommended land.

*3 Mounted on a ceramic board. (40x40x0.7mm)

● Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CEO}	120	-	-	V	$I_C = 1\text{mA}$
Collector-base breakdown voltage	BV_{CBO}	120	-	-	V	$I_C = 100\mu\text{A}$
Emitter-base breakdown voltage	BV_{EBO}	6	-	-	V	$I_E = 100\mu\text{A}$
Collector cut-off current	I_{CBO}	-	-	1	μA	$V_{CB} = 100\text{V}$
Emitter cut-off current	I_{EBO}	-	-	1	μA	$V_{EB} = 4\text{V}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	100	300	mV	$I_C = -500\text{mA}$, $I_B = 50\text{mA}$
DC current gain	h_{FE}	120	-	390	-	$V_{CE} = 5\text{V}$, $I_C = 100\text{mA}$
Transition frequency	f_T	-	220	-	MHz	$V_{CE} = 5\text{V}$ $I_E = -300\text{mA}$, $f = 100\text{MHz}$
Collector output capacitance	C_{ob}	-	8	-	pF	$V_{CB} = 10\text{V}$, $I_E = 0\text{A}$ $f = 1\text{MHz}$

●Electrical characteristic curves (Ta=25°C)

Fig.1 Ground Emitter Propagation Characteristics

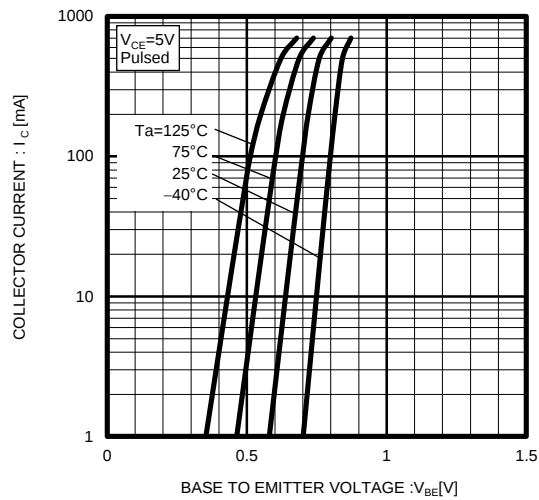


Fig.2 Typical Output Characteristics

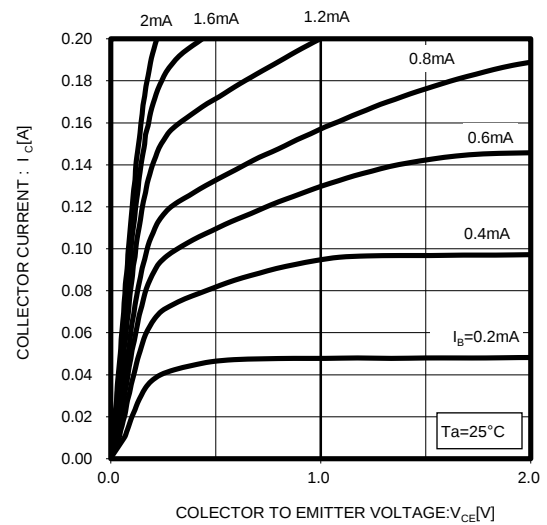


Fig.3 DC Current Gain vs. Collector Current (I)

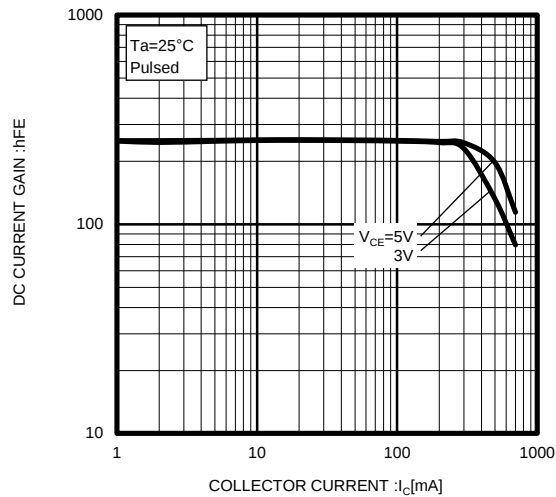


Fig.4 DC Current Gain vs. Collector Current (II)

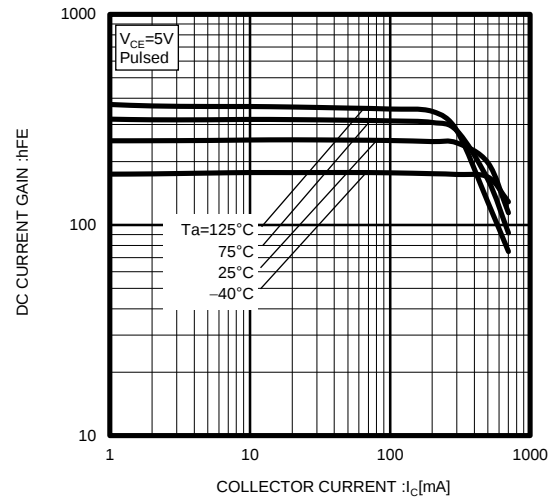


Fig.5 Collector-Emitter Saturation Voltage vs. Collector Current (I)

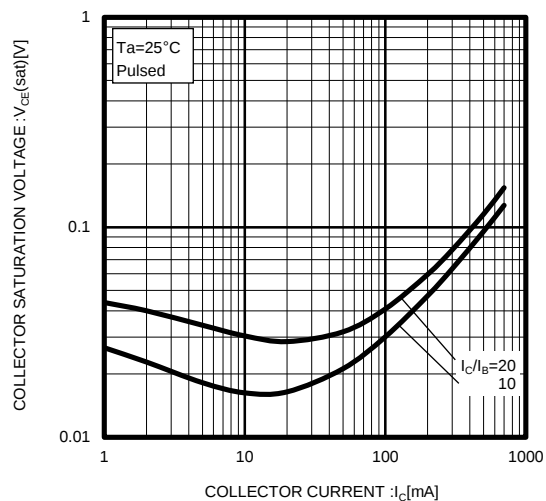


Fig.6 Collector-Emitter Saturation Voltage vs. Collector Current (II)

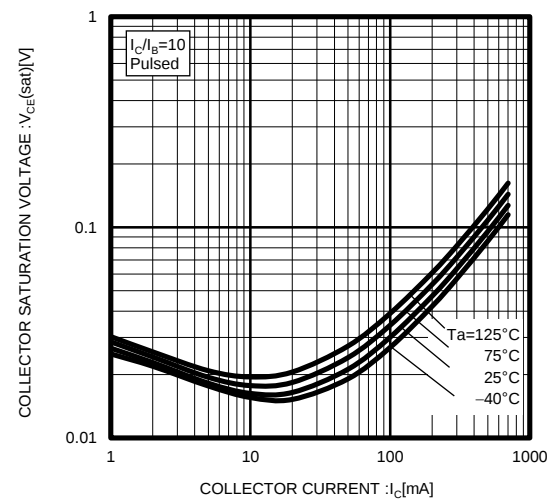


Fig.7 Emitter input capacitance vs. Emitter-Base Voltage
Collector output capacitance vs. Collector-Base Voltage

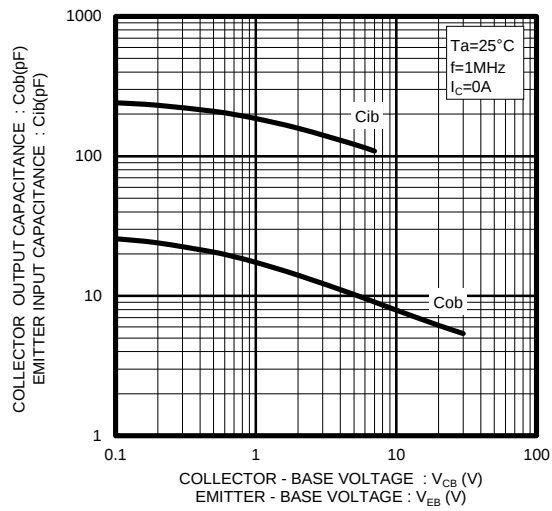


Fig.8 Gain Bandwidth Product vs. Emitter Current

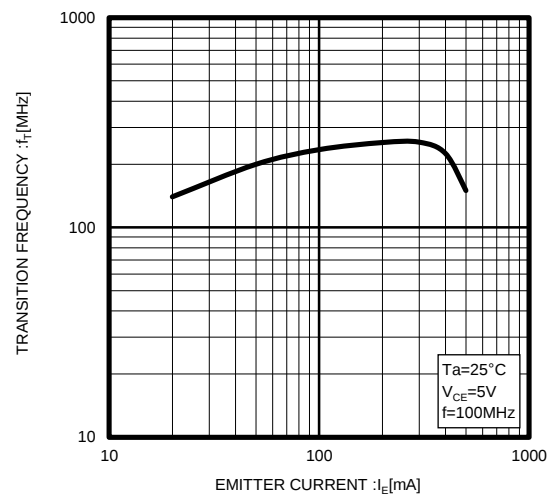
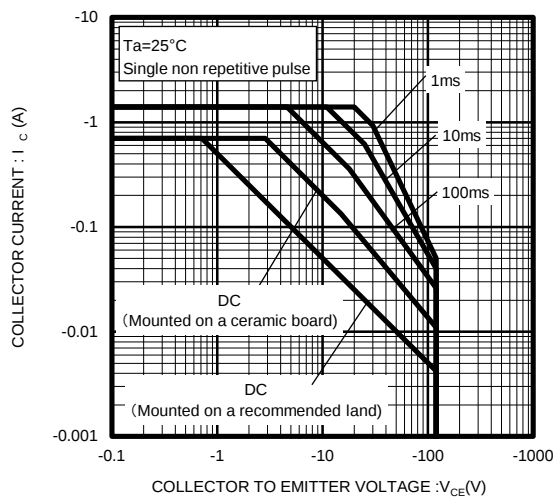


Fig.9 Safe Operating Area



Notes

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