

# 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

● **Absolute maximum ratings (Ta = 25°C)**

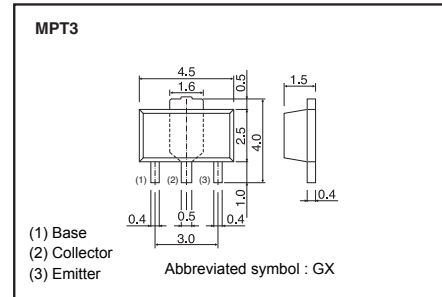
Parameter	Symbol	Limits	Unit	
Collector-base voltage	$V_{CBO}$	120	V	
Collector-emitter voltage	$V_{CEO}$	120	V	
Emitter-base voltage	$V_{EBO}$	6	V	
Collector current	DC	$I_C$	0.7	A
	Pulsed	$I_{CP}^{*1}$	1.4	A
Power dissipation	$P_D^{*2}$	0.5	W	
	$P_D^{*3}$	2	W	
Junction temperature	$T_j$	150	°C	
Range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

\*1 Pw=10ms, Single Pulse

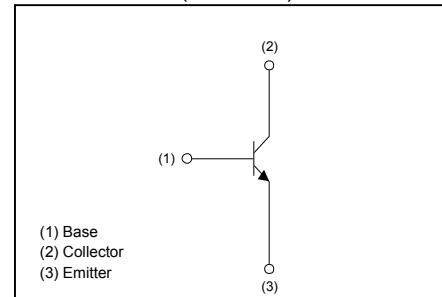
\*2 Each terminal mounted on a recommended land.

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

● **Dimensions (Unit : mm)**



● **Inner circuit (Unit : mm)**



## ● 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	$\mu\text{A}$	$V_{CB} = 100\text{V}$
Emitter cut-off current	$I_{EBO}$	-	-	1	$\mu\text{A}$	$V_{EB} = 4\text{V}$
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

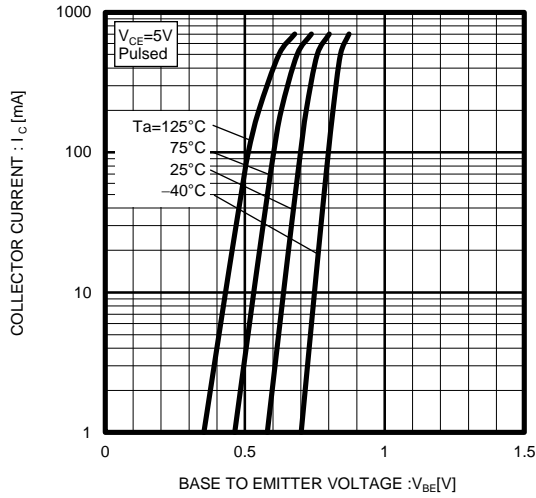


Fig.2 Typical Output Characteristics

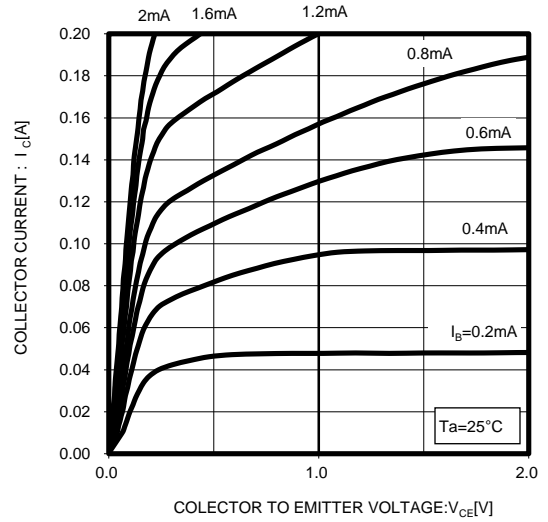


Fig.3 DC Current Gain vs. Collector Current ( I )

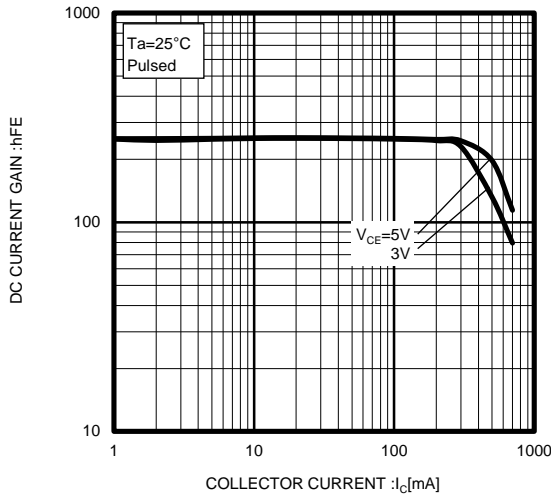


Fig.4 DC Current Gain vs. Collector Current( II )

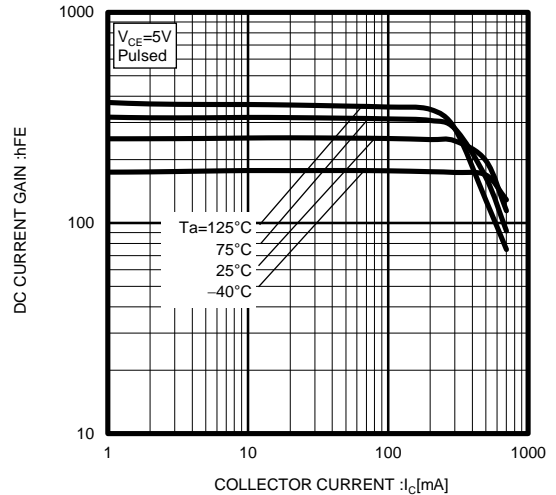


Fig.5 Collector-Emitter Saturation Voltage vs. Collector Current ( I )

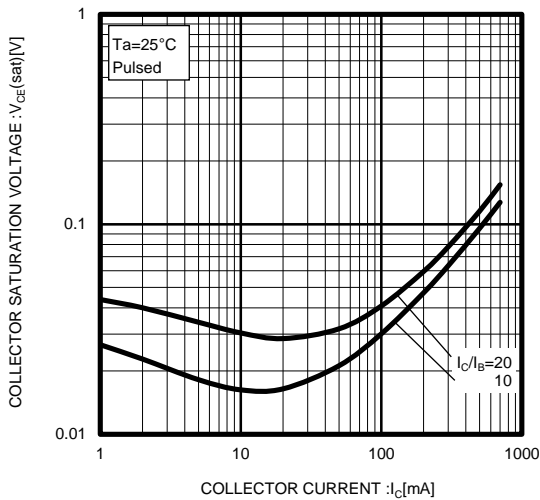


Fig.6 Collector-Emitter Saturation Voltage vs. Collector Current ( II )

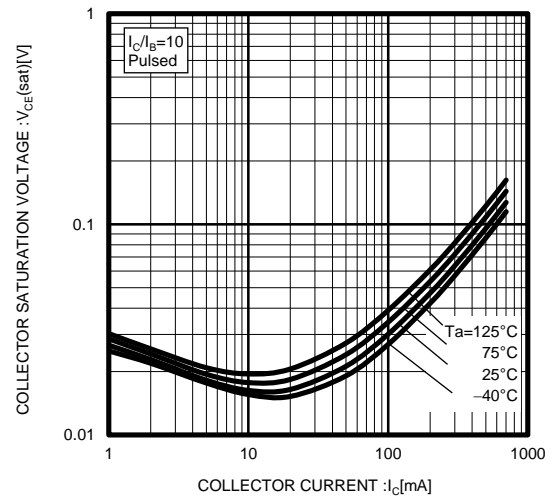


Fig.7 Emitter input capacitance vs. Emitter-Base Voltage  
Collector output capacitance vs. Collector-Base Voltage

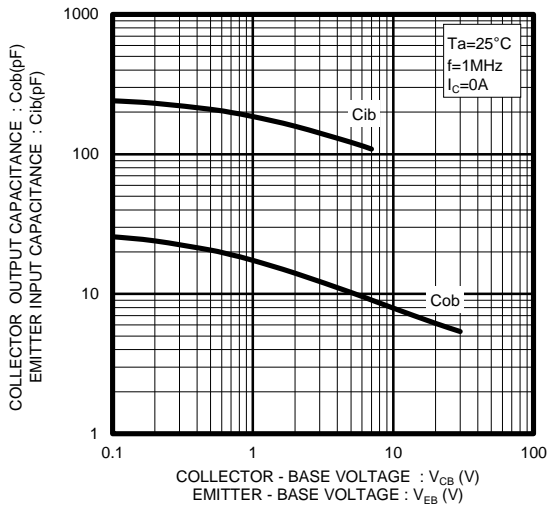


Fig.8. Gain Bandwidth Product vs. Emitter Current

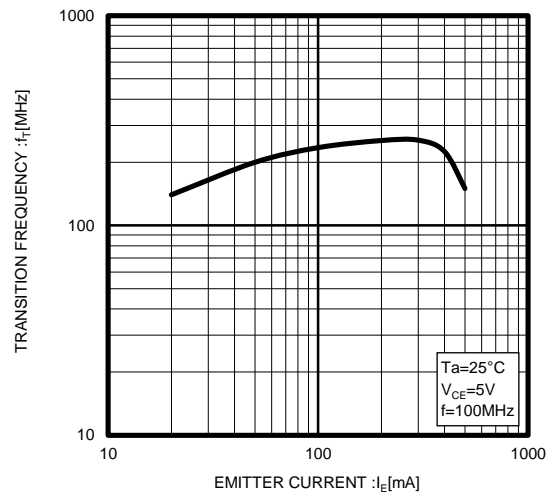
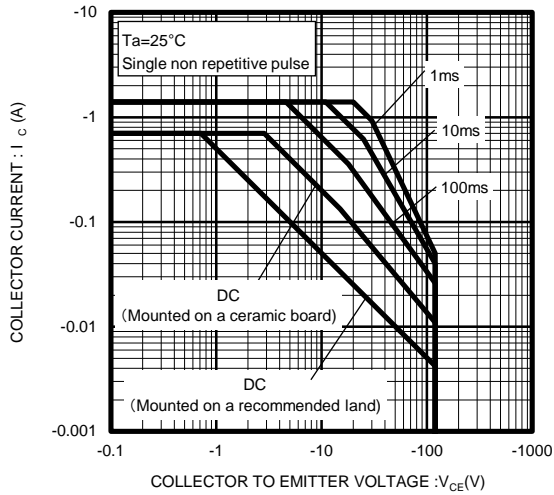


Fig.9. Safe Operating Area



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