XN04602

Silicon NPN epitaxial planar type (Tr1) Silicon PNP epitaxial planar type (Tr2)

For general amplification

Features

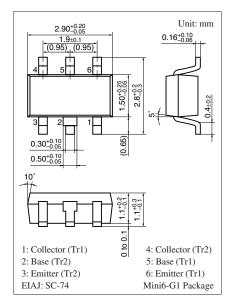
- Two elements incorporated into one package
- Reduction of the mounting area and assembly cost by one half

Basic Part Number

• 2SD0602A + 2SB0710A

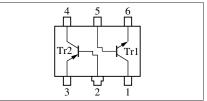
Absolute Maximum Ratings $T_a = 25^{\circ}C$

	Parameter	Symbol	Rating	Unit
Tr1	Collector-base voltage (Emitter open)	V _{CBO}	60	V
	Collector-emitter voltage (Base open)	V _{CEO}	50	V
	Emitter-base voltage (Collector open)	V _{EBO}	5	V
	Collector current	I _C	0.5	А
	Peak collector current	I _{CP}	1	А
Tr2	Collector-base voltage (Emitter open)	V _{CBO}	-60	V
	Collector-emitter voltage (Base open)	V _{CEO}	-50	V
	Emitter-base voltage (Collector open)	V _{EBO}	-5	V
	Collector current	I _C	- 0.5	А
	Peak collector current	I _{CP}	-1	А
Overall	Total power dissipation	P _T	300	mW
	Junction temperature	Tj	150	°C
	Storage temperature	T _{stg}	-55 to +150	°C



Marking Symbol: 4A

Internal Connection



\blacksquare Electrical Characteristics $T_a = 25^{\circ}C \pm 3^{\circ}C$

• Tr1

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_C = 10 \ \mu A, \ I_E = 0$	60			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_{\rm C} = 10 \text{ mA}, I_{\rm B} = 0$	50			V
Emitter-base voltage (Collector open)	V _{EBO}	$I_E = 10 \ \mu A, \ I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	I _{CBO}	$V_{CB} = 20 V, I_E = 0$			0.1	μΑ
Forward current transfer ratio *	h _{FE1}	$V_{CE} = 10 \text{ V}, I_C = 150 \text{ mA}$	85		340	
	h _{FE2}	$V_{CE} = 10 \text{ V}, \text{ I}_{C} = 500 \text{ mA}$	40			
Collector-emitter saturation voltage *	V _{CE(sat)}	$I_{\rm C} = 300 \text{ mA}, I_{\rm B} = 30 \text{ mA}$		0.35	0.60	V
Transition frequency	f _T	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		6	15	pF
(Common base, input open circuited)						

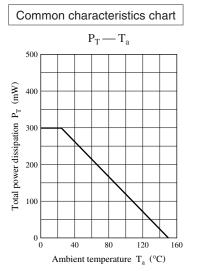
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors. 2. *: Pulse measurement

• Tr2

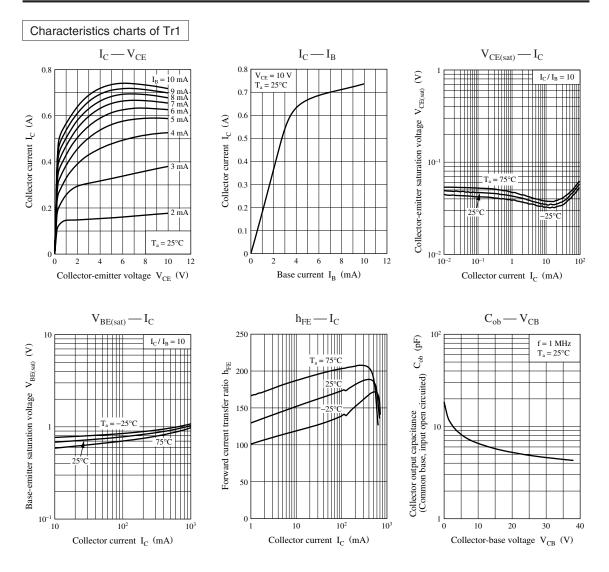
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_{C} = -10 \ \mu A, \ I_{E} = 0$	-60			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_{\rm C} = -10 \text{ mA}, I_{\rm B} = 0$	-50			V
Emitter-base voltage (Collector open)	V _{EBO}	$I_E = -10 \ \mu A, \ I_C = 0$	-5			V
Collector-base cutoff current (Emitter open)	I _{CBO}	$V_{CB} = -20 \text{ V}, I_E = 0$			- 0.1	μΑ
Forward current transfer ratio	h _{FE1}	$V_{CE} = -10 \text{ V}, I_C = -150 \text{ mA}$	85		340	
	h _{FE2}	$V_{CE} = -10 \text{ V}, I_C = -500 \text{ mA}$	40			
Collector-emitter saturation voltage *	V _{CE(sat)}	$I_{\rm C} = -300 \text{ mA}, I_{\rm B} = -30 \text{ mA}$		- 0.35	- 0.60	V
Base-emitter saturation voltage *	V _{BE(sat)}	$I_{\rm C} = -300 \text{ mA}, I_{\rm B} = -30 \text{ mA}$		-1.1	-1.5	V
Transition frequency	f _T	$V_{CB} = -10 \text{ V}, I_E = 50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance	C _{ob}	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		6	15	pF
(Common base, input open circuited)						

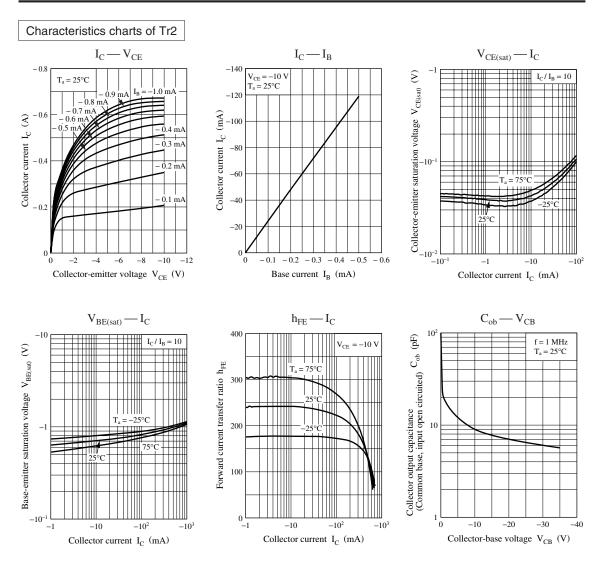
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Pulse measurement



Panasonic





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