XN04A88

Silicon NPN epitaxial planer transistor (Tr1)
Silicon PNP epitaxial planer transistor (Tr2)

For amplification of low frequency output

Features

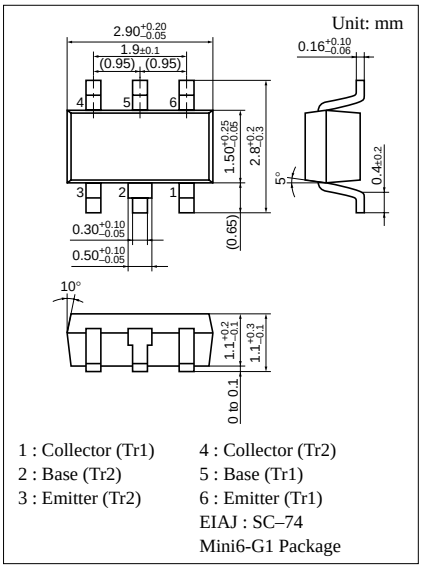
- Two elements incorporated into one package.
- Reduction of the mounting area and assembly cost by one half.

Basic Part Number of Element

- 2SD0601A(2SD601A)+UNR111S(UN111S)

Absolute Maximum Ratings (Ta=25˚C)

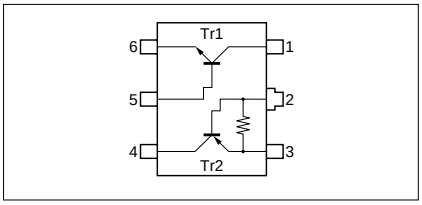
Parameter		Symbol	Ratings	Unit
Tr1	Collector to base voltage	V_{CBO}	60	V
	Collector to emitter voltage	V_{CEO}	50	V
	Emitter to base voltage	V_{EBO}	7	V
	Collector current	I_C	100	mA
	Peak collector current	I_{CP}	200	mA
Tr2	Collector to base voltage	V_{CBO}	–50	V
	Collector to emitter voltage	V_{CEO}	–50	V
	Collector current	I_C	–100	mA
Overall	Total power dissipation	P_T	300	mW
	Junction temperature	T_j	150	˚C
	Storage temperature	T_{stg}	–55 to +150	˚C



1 : Collector (Tr1)
2 : Base (Tr2)
3 : Emitter (Tr2)
4 : Collector (Tr2)
5 : Base (Tr1)
6 : Emitter (Tr1)
EIAJ : SC–74
Mini6-G1 Package

Marking Symbol: IZ

Internal Connection



Note) The Part number in the Parenthesis shows conventional part number.

Electrical Characteristics (Ta=25˚C)

- Tr1

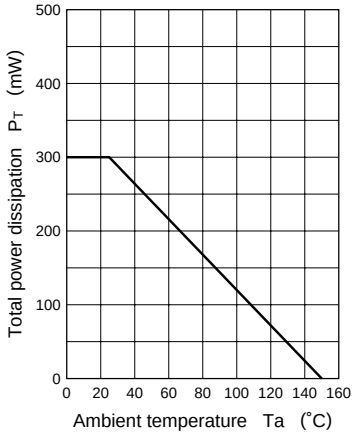
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	I_C = 10μA, I_E = 0	60			V
Collector to emitter voltage	V_{CEO}	I_C = 2mA, I_B = 0	50			V
Emitter to base voltage	V_{EBO}	I_E = 10μA, I_C = 0	7			V
Collector cutoff current	I_{CBO}	V_{CB} = 20V, I_E = 0			0.1	μA
	I_{CEO}	V_{CE} = 10V, I_B = 0			0.1	mA
Forward current transfer ratio	h_{FE}	V_{CE} = 10V, I_C = 2mA	160		460	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 100mA, I_B = 10mA		0.1	0.3	V
Collector output capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz		3.5		
Transition frequency	f_T	V_{CB} = 10V, I_E = –2mA, f = 200MHz		80		MHz

- Tr2

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	I_C = –10μA, I_E = 0	–50			V
Collector to emitter voltage	V_{CEO}	I_C = –2mA, I_B = 0	–50			V
Collector cutoff current	I_{CBO}	V_{CB} = –50V, I_E = 0			– 0.1	μA
	I_{CEO}	V_{CE} = –50V, I_B = 0			– 0.5	μA
Emitter cutoff current	I_{EBO}	V_{EB} = –6V, I_C = 0			–2.0	mA
Forward current transfer ratio	h_{FE}	V_{CE} = –10V, I_C = –5mA	20			
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = –10mA, I_B = – 0.3mA			– 0.25	V
Base to emitter resistance	R_{BE}		–30%	4.7	+30%	kΩ
Transition frequency	f_T	V_{CB} = –10V, I_E = 2mA, f = 200MHz		100		MHz

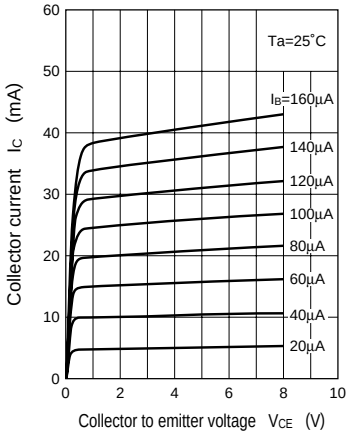
Common characteristics chart

P_T — Ta

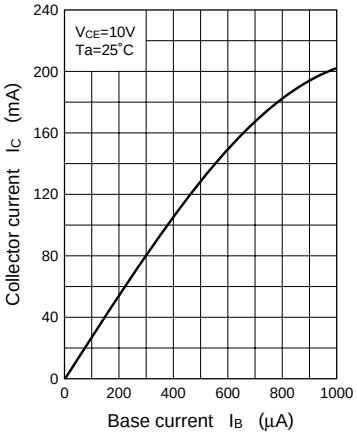


Characteristics charts of Tr1

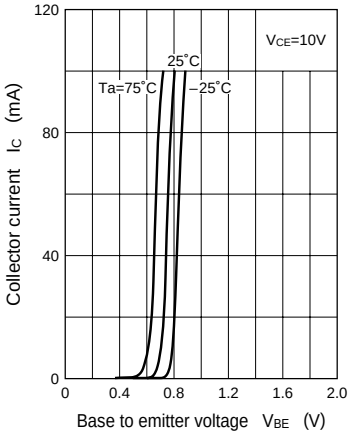
I_C — V_{CE}



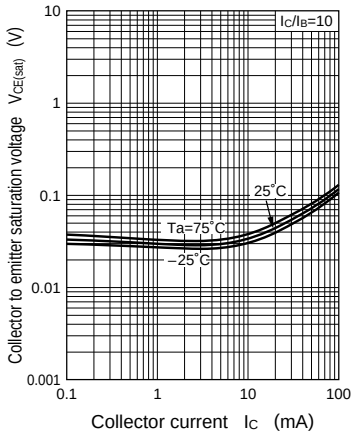
I_C — I_B



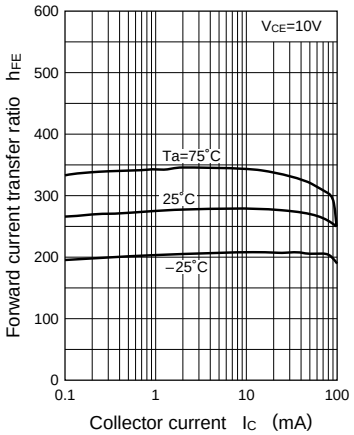
I_C — V_{BE}



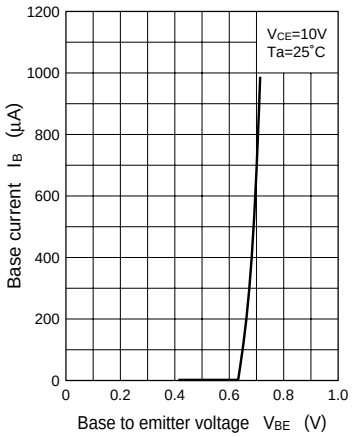
$V_{CE(sat)}$ — I_C



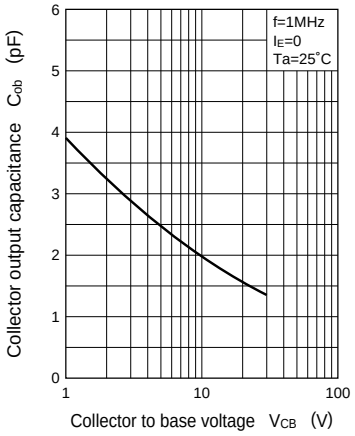
h_{FE} — I_C



I_B — V_{BE}

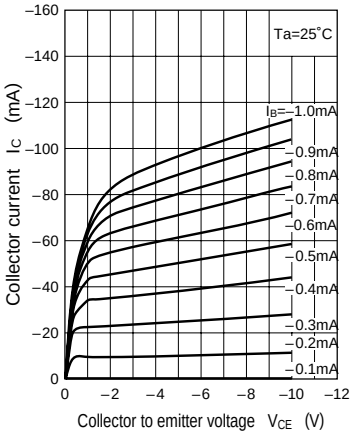


C_{ob} — V_{CB}

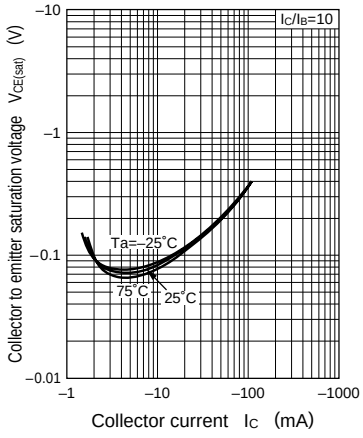


Characteristics charts of Tr2

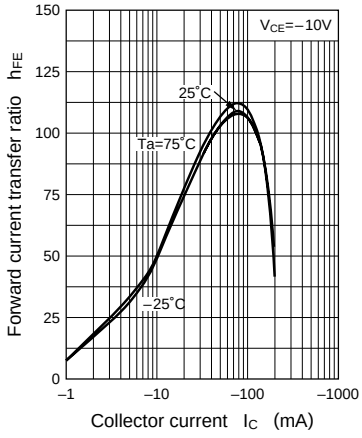
I_C — V_{CE}



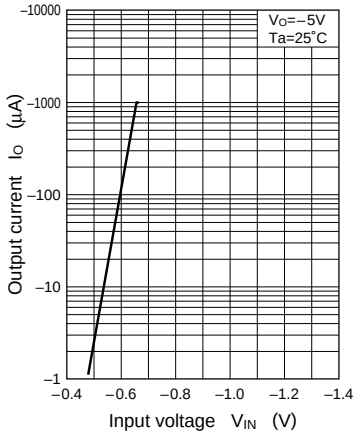
$V_{CE(sat)}$ — I_C



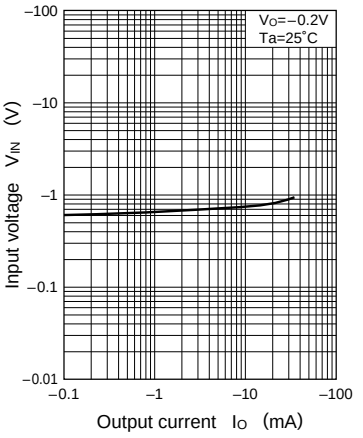
h_{FE} — I_C



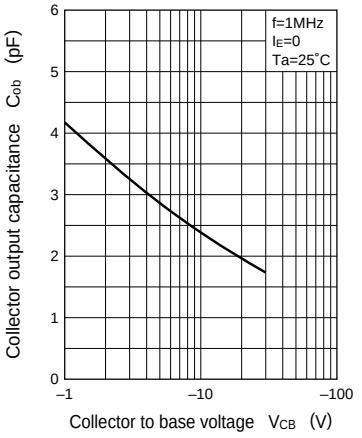
I_O — V_{IN}



V_{IN} — I_O



C_{ob} — V_{CB}



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