

2SC3130

Silicon NPN epitaxial planar type

For high-frequency amplification/oscillation/mixing

■ Features

- High transition frequency f_T
- Small collector output capacitance (Common base, input open circuited) C_{ob} and reverse transfer capacitance (Common emitter) C_{rb}
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	15	V
Collector-emitter voltage (Base open)	V_{CEO}	10	V
Emitter-base voltage (Collector open)	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

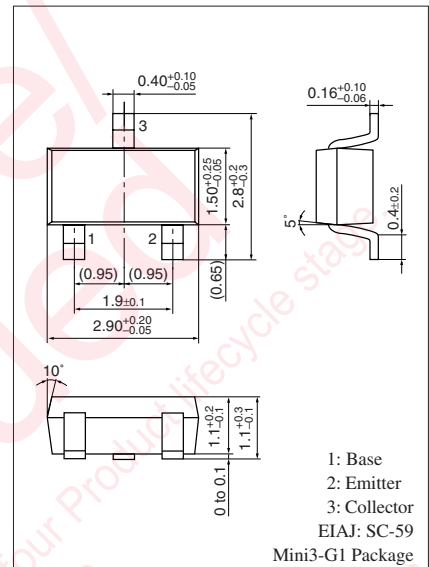
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 2 \text{ mA}, I_B = 0$	10			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \mu\text{A}, I_C = 0$	3			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 10 \text{ V}, I_E = 0$			1	μA
Forward current transfer ratio *1	h_{FE}	$V_{CE} = 4 \text{ V}, I_C = 5 \text{ mA}$	75		220	—
h_{FE} ratio *2	Δh_{FE}	$h_{FE2}: V_{CE} = 4 \text{ V}, I_C = 100 \mu\text{A}$	0.75		1.60	—
		$h_{FE1}: V_{CE} = 4 \text{ V}, I_C = 5 \text{ mA}$				
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 20 \text{ mA}, I_B = 4 \text{ mA}$			0.5	V
Transition frequency	f_T	$V_{CB} = 4 \text{ V}, I_E = -5 \text{ mA}, f = 200 \text{ MHz}$	1.4	1.9	2.5	GHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 4 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		1.4		pF
Reverse transfer capacitance (Common emitter)	C_{rb}	$V_{CB} = 4 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		0.45		pF
Collector-base parameter	$r_{bb}' \cdot C_C$	$V_{CB} = 4 \text{ V}, I_E = -5 \text{ mA}, f = 31.9 \text{ MHz}$		11		ps

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

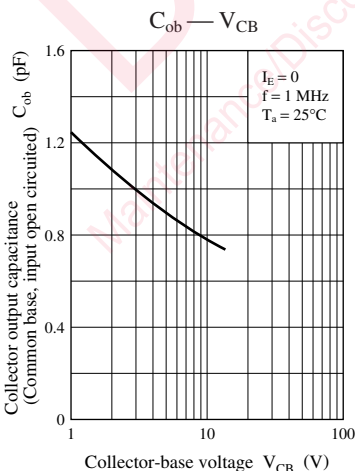
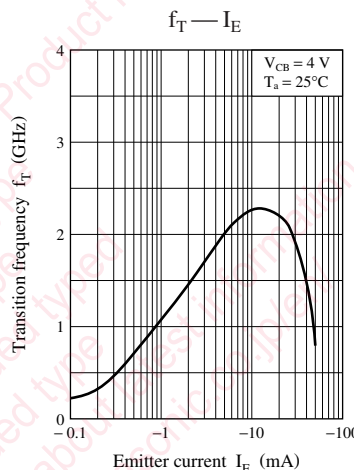
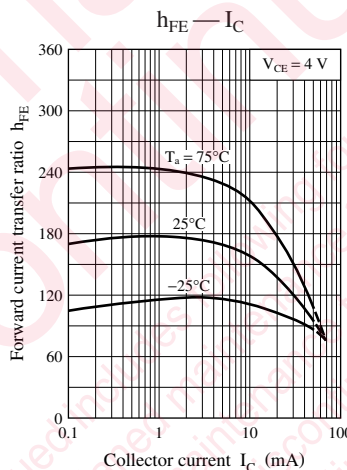
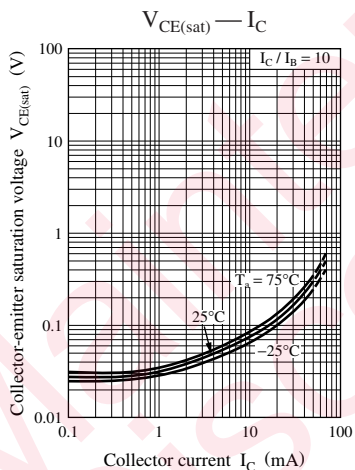
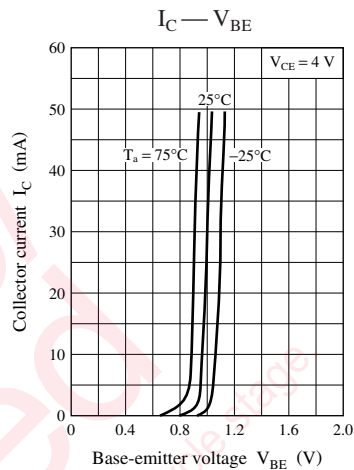
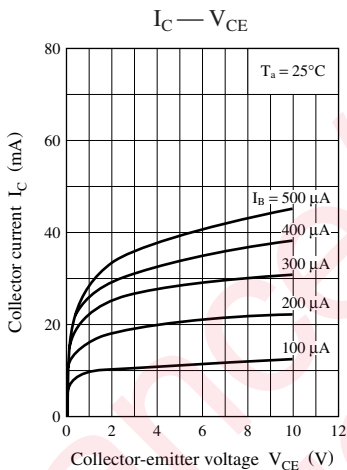
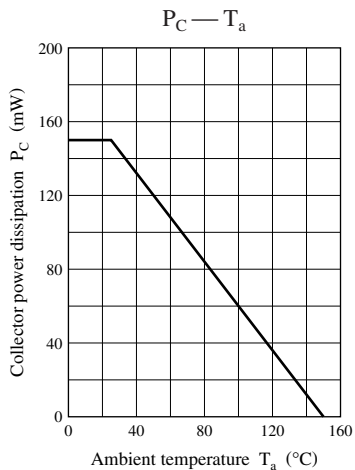
2. *1: Rank classification

Rank	P	Q
h_{FE}	75 to 130	110 to 220

*2: $\Delta h_{FE} = h_{FE2} / h_{FE1}$



Marking Symbol: 1S



utions in using the technical information and scribed in this book

s book is to be exported or provided to non-residents, the laws and
rd to security export control, must be observed.

ly to show the main characteristics and application circuit examples
l property right or other right owned by our company or any other
any as to the infringement upon any such right owned by any other
rmation described in this book.

standard applications or general electronic equipment (such as office
and household appliances).

ng applications:

biles, traffic control equipment, combustion equipment, life support
reliability are required, or if the failure or malfunction of the prod-

k are subject to change without notice for modification and/or im-
use of the products, therefore, ask for the most up-to-date Product
atisfy your requirements.

bsolute maximum rating and the guaranteed operating conditions
(.). Especially, please be careful not to exceed the range of absolute
r-off and mode-switching. Otherwise, we will not be liable for any

take into the consideration of incidence of break down and failure
n the systems such as redundant design, arresting the spread of fire
al injury, fire, social damages, for example, by using the products.

own and characteristics change due to external factors (ESD, EOS,
mounting or at customer's process. When using products for which
shelf life and the elapsed time since first opening the packages.

ly or partially, without the prior written permission of Matsushita

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

 [View 2SC31300QL on WIN SOURCE](#)

 [Panasonic Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management