2SD1979G

Silicon NPN epitaxial planar type

For low frequency amplification
For muting
For DC-DC converter

■ Features

- Low ON resistance R_{on}
- High forward current transfer ratio h_{FE}
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

■ Package

- Code
  SMini3-F2
- Marking Symbol: 3W
- Pin Name
  1: Base
  2: Emitter
  3: Collector

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	50	V
Collector-emitter voltage (Base open)	V_{CEO}	20	V
Emitter-base voltage (Collector open)	V_{EBO}	25	V
Collector current	I_C	300	mA
Peak collector current	I_{CP}	500	mA
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

■ Electrical Characteristics $T_a = 25°C \pm 3°C$

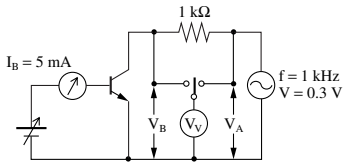
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-emitter voltage (Base open)	V_{CEO}	I_C = 1 mA, I_B = 0	20			V
Base-emitter voltage	V_{BE}	V_{CE} = 2 V, I_C = 4 mA		0.6		V
Collector-base cutoff current (Emitter open)	I_{CBO}	V_{CB} = 50 V, I_E = 0			1	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	V_{EB} = 25 V, I_C = 0			1	μA
Forward current transfer ratio *1	h_{FE}	V_{CE} = 2 V, I_C = 4 mA	500		2 500	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 30 mA, I_B = 3 mA			0.1	V
Transition frequency	f_T	V_{CB} = 6 V, I_E = −4 mA, f = 200 MHz		80		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz		4.5		pF
ON resistance *2	R_{on}			1		Ω

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

2. *1: Rank classification

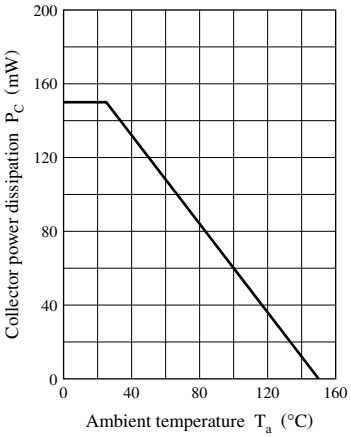
Rank	S	T
h_{FE}	500 to 1 500	800 to 2 500

*2: R_{on} Measuremet circuit

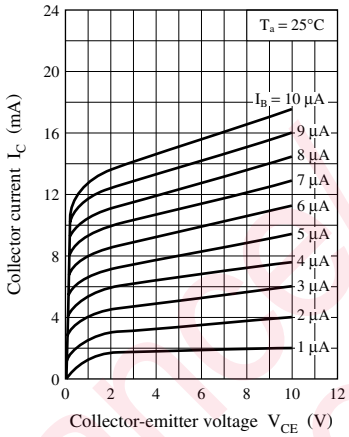


$$R_{on} = \frac{V_B}{V_A - V_B} \times 1\,000\ (\Omega)$$

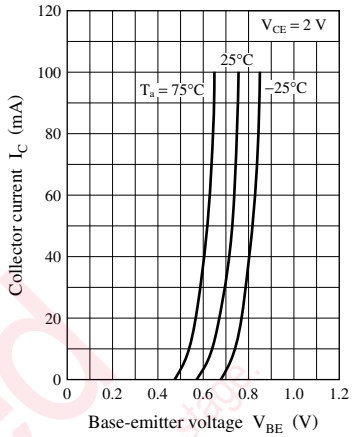
P_C — T_a



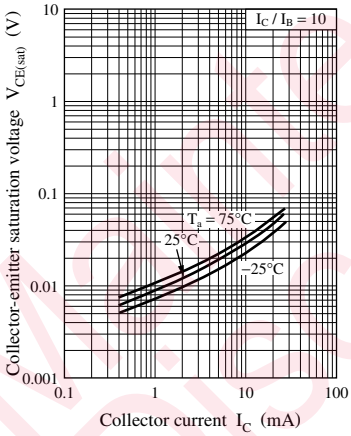
I_C — V_{CE}



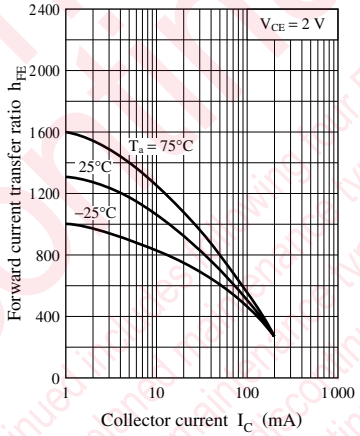
I_C — V_{BE}



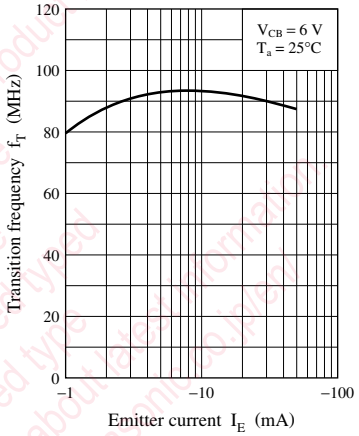
$V_{CE(sat)}$ — I_C



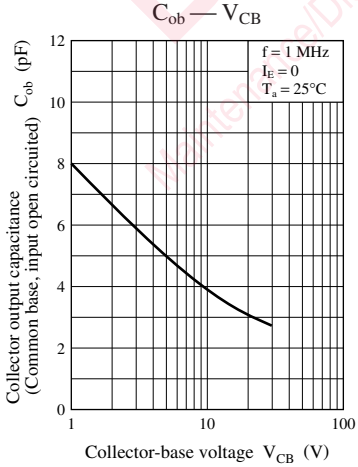
h_{FE} — I_C



f_T — I_E

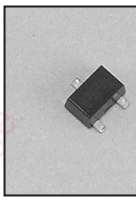


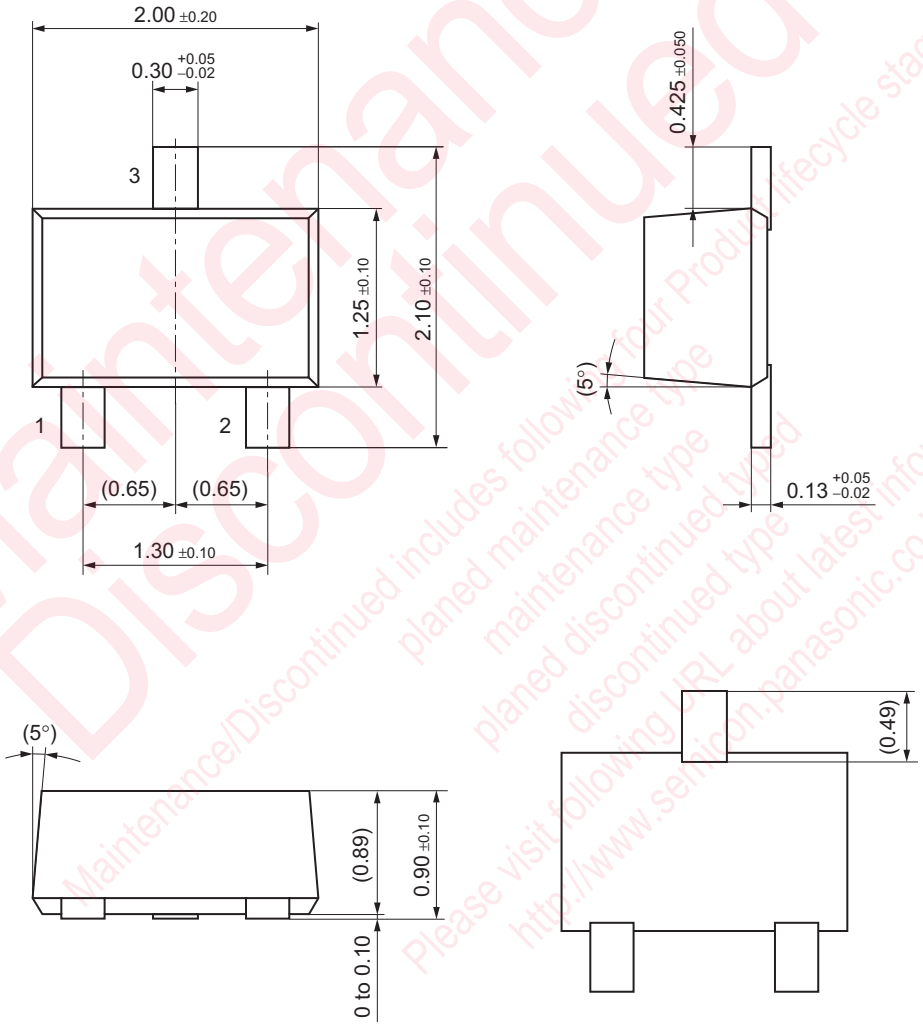
C_{ob} — V_{CB}



SMini3-F2

Unit: mm





(2) The technical information described in this book is intended only to show the main characteristics and application circuit examples of the products, and no license is granted under any intellectual property right or other right owned by our company or any other company. Therefore, no responsibility is assumed by our company as to the infringement upon any such right owned by any other company which may arise as a result of the use of technical information described in this book.

(3) The products described in this book are intended to be used for standard applications or general electronic equipment (such as office equipment, communications equipment, measuring instruments and household appliances).
Consult our sales staff in advance for information on the following applications:
- Special applications (such as for airplanes, aerospace, automobiles, traffic control equipment, combustion equipment, life support systems and safety devices) in which exceptional quality and reliability are required, or if the failure or malfunction of the products may directly jeopardize life or harm the human body.
- Any applications other than the standard applications intended.

(4) The products and product specifications described in this book are subject to change without notice for modification and/or improvement. At the final stage of your design, purchasing, or use of the products, therefore, ask for the most up-to-date Product Standards in advance to make sure that the latest specifications satisfy your requirements.

(5) When designing your equipment, comply with the range of absolute maximum rating and the guaranteed operating conditions (operating power supply voltage and operating environment etc.). Especially, please be careful not to exceed the range of absolute maximum rating on the transient state, such as power-on, power-off and mode-switching. Otherwise, we will not be liable for any defect which may arise later in your equipment.
 Even when the products are used within the guaranteed values, take into the consideration of incidence of break down and failure mode, possible to occur to semiconductor products. Measures on the systems such as redundant design, arresting the spread of fire or preventing glitch are recommended in order to prevent physical injury, fire, social damages, for example, by using the products.

(6) Comply with the instructions for use in order to prevent breakdown and characteristics change due to external factors (ESD, EOS, thermal stress and mechanical stress) at the time of handling, mounting or at customer's process. When using products for which damp-proof packing is required, satisfy the conditions, such as shelf life and the elapsed time since first opening the packages.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for panasonic ***manufacturer:***

Other Similar products are found below :

ECE-A1HKAR47 ELC-09D151F HC2-H-DC48V-F HL2-HP-AC120V-F HL2-H-DC12V-F HL2-HP-DC12V-F HL2-HP-DC6V-F HL2-HP-DC24V-F HL2-H-DC110V-F HC4-H-DC24V HL2-HTM-DC24V-F HL2-HTM-AC24V-F HC4-H-AC24V HC4-H-AC120V HC4-H-DC12V AZH2031 RP-SDMF64DA1 EVM-F6SA00B55 RP-SMLE08DA1 ERZ-V20R391 ELL-ATV681M ERZ-V05V680CB LT4H-DC24V LT4HL8-AC24V LT4HW-AC24V LT4HWT8-AC240V LT4HWT-AC240VS CY-122A-P ETQ-P5M470YFM EVAL_PAN1555 EVQ-PAE04M EX-14B EX-22B-PN EX-31A-C5 EXB-24N121JX MC-NA40-4 EX-F72-PN EX-L211 EYG-A121803V MFMCA0030AEB FCR-M50-AC208V FC-SFBH-20 FC-SFBH-24 FD-F8Y MHMA102A1C MHMD022S1S MHMD041S1S MHMD042G1T MHMD082G1T FD-S9