# 2SD0965 (2SD965)

### Silicon NPN epitaxial planar type

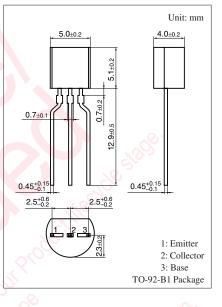
For low-frequency power amplification For stroboscope

#### Features

- $\bullet$  Low collector-emitter saturation voltage  $V_{CE(sat)}$
- Satisfactory operation performances at high efficiency with the low-voltage power supply.

Absolute Maximum Hatings $T_a = 25$ C					
Parameter	Symbol	Rating	Unit		
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	40	v		
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	20	V		
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	7	V		
Collector current	I <sub>C</sub>	5	А		
Peak collector current	I <sub>CP</sub>	8	А		
Collector power dissipation	P <sub>C</sub>	750	mW		
Junction temperature	Tj	150	°C		
Storage temperature	T <sub>stg</sub>	-55 to +150	°CO		





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

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_{\rm C} = 1 \text{ mA}, I_{\rm B} = 0$	20	SOL		V
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	$I_{\rm E} = 10 \ \mu A, I_{\rm C} = 0$	7	0-		V
Collector-base cutoff current (Emitter open)	I <sub>CBO</sub>	$V_{CB} = 10 \text{ V}, I_E = 0$	20		0.1	μΑ
Collector-emitter cutoff current (Base open)	I <sub>CEO</sub>	$V_{CE} = 10 \text{ V}, I_B = 0$			1	μΑ
Emitter-base cutoff current (Collector open)	I <sub>EBO</sub>	$V_{EB} = 7 V, I_C = 0$			0.1	μΑ
Forward current transfer ratio	h <sub>FE1</sub> *	$V_{CE} = 2 V, I_C = 0.5 A$	230		600	
	h <sub>FE2</sub>	$V_{CE} = 2 V, I_C = 1 A$	150			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_{\rm C} = 3 \text{ A}, I_{\rm B} = 0.1 \text{ A}$		0.28	1.00	V
Transition frequency	f <sub>T</sub>	$V_{CB} = 6 V, I_E = -50 mA, f = 200 MHz$		150		MHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB} = 20 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		26	50	pF
(Common base, input open circuited)						

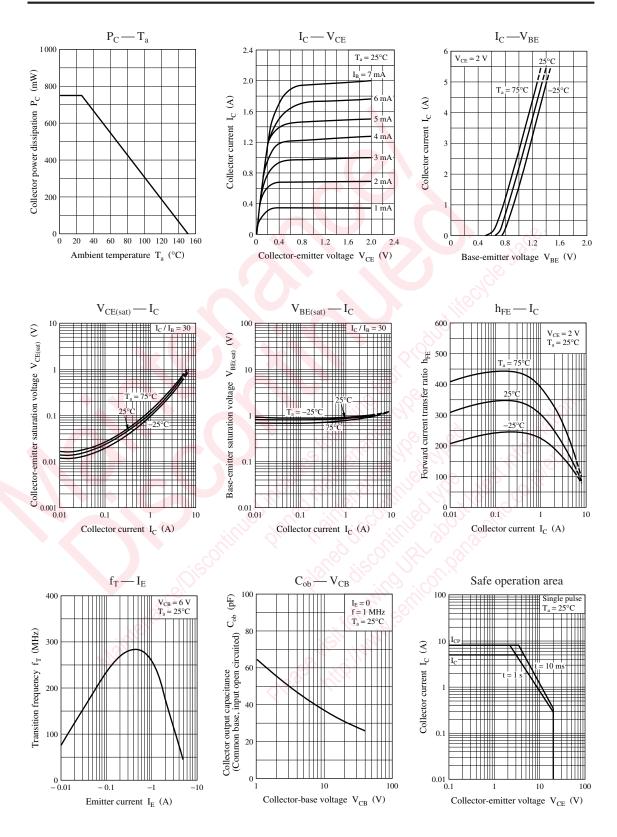
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

Rank	Q	R
h <sub>FE1</sub>	230 to 380	340 to 600

Note) The part number in the parenthesis shows conventional part number.

## Panasonic



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