2SD0965 (2SD965)

Silicon NPN epitaxial planar type

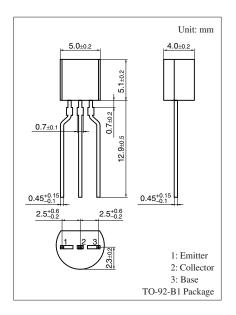
For low-frequency power amplification For stroboscope

■ Features

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

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V _{CBO}	40	V	
Collector-emitter voltage (Base open)	V _{CEO}	20	V	
Emitter-base voltage (Collector open)	V_{EBO}	7	V	
Collector current	I_C	5	A	
Peak collector current	I_{CP}	8	A	
Collector power dissipation	P _C	750	mW	
Junction temperature	T_j	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	



■ Electrical Characteristics $T_a = 25$ °C ± 3 °C

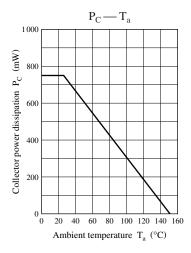
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V _{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	20			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \ \mu A, I_C = 0$	7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 10 \text{ V}, I_{E} = 0$			0.1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

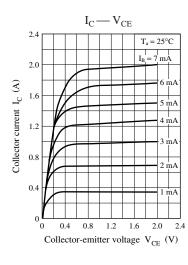
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

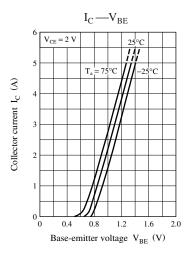
2. *: Rank classification

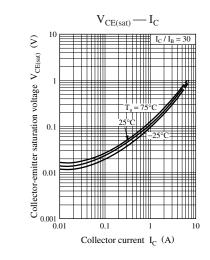
Rank	Q	R
$h_{\rm FE1}$	230 to 380	340 to 600

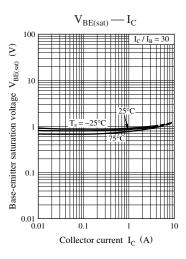
Note) The part number in the parenthesis shows conventional part number.

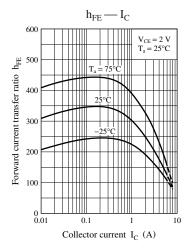


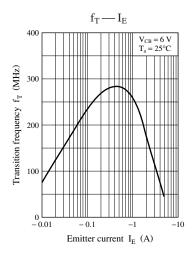


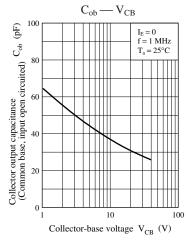


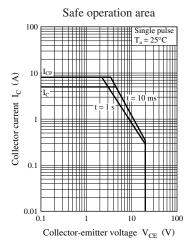












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