2SA0683 (2SA683), 2SA0684 (2SA684)

Silicon PNP epitaxial planar type

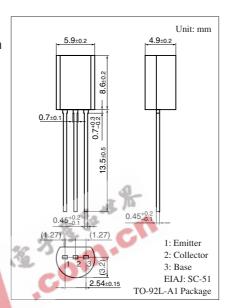
For low-frequency power amplification and driver amplification Complementary to 2SC1383, 2SC1384

■ Features

• Allowing supply with the radial taping

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit				
Collector-base voltage	2SA0683	V_{CBO}	-30	V			
(Emitter open)	2SA0684		-60				
Collector-emitter voltage	2SA0683	V _{CEO}	-25	V			
(Base open)	2SA0684		-50				
Emitter-base voltage (Coll	V_{EBO}	-5	V				
Collector current	I_C	-1	A				
Peak collector current	I_{CP}	-1.5	A				
Collector power dissipation	$P_{\rm C}$	1	W				
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-base voltage	2SA0683	V_{CBO}	$I_C = -10 \ \mu A, \ I_E = 0$	-30			V
(Emitter open)	2SA0684			-60			
Collector-emitter voltage	2SA0683	V _{CEO}	$I_{\rm C} = -2 \text{ mA}, I_{\rm B} = 0$	-25			V
(Base open)	2SA0684			-50			
Emitter-base voltage (Collector open)		V_{EBO}	$I_E = -10 \ \mu A, I_C = 0$	-5			V
Collector-base cutoff current (Emitter open)		I_{CBO}	$V_{CB} = -20 \text{ V}, I_E = 0$			- 0.1	μΑ
Forward current transfer ratio *1		h _{FE1} *2	$V_{CE} = -10 \text{ V}, I_{C} = -500 \text{ mA}$	85		340	_
		h _{FE2}	$V_{CE} = -5 \text{ V}, I_{C} = -1 \text{ A}$	50			
Collector-emitter saturation voltage		V _{CE(sat)}	$I_C = -500 \text{ mA}, I_B = -50 \text{ mA}$		- 0.2	- 0.4	V
Base-emitter saturation volt	age	V _{BE(sat)}	$I_C = -500 \text{ mA}, I_B = -50 \text{ mA}$		- 0.85	-1.20	V
Transition frequency		f_T	$V_{CB} = -10 \text{ V}, I_E = 50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance (Common base, input open circuited)		C _{ob}	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		20	30	pF

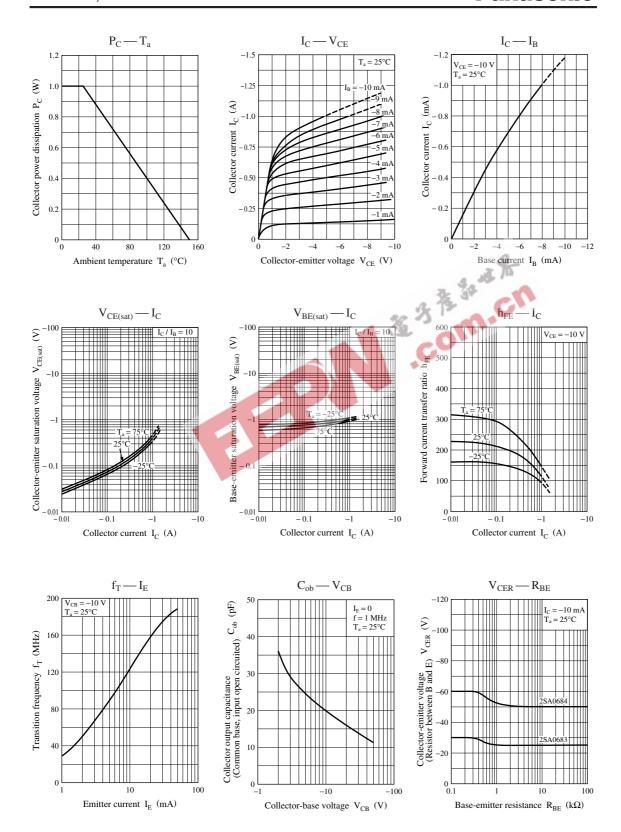
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

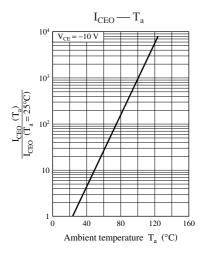
2. *1: Pulse measurement

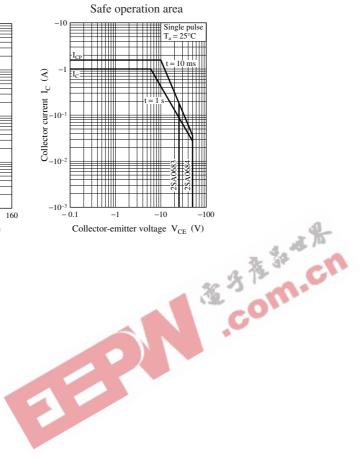
*2: Rank classification

Rank	Q	R	S	
h_{FE}	85 to 170	120 to 240	170 to 340	

Note) The part numbers in the parenthesis show conventional part number.







SJC00001CED 3

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