2SB0643, 2SB0644 (2SB643, 2SB644)

Silicon PNP epitaxial planar type

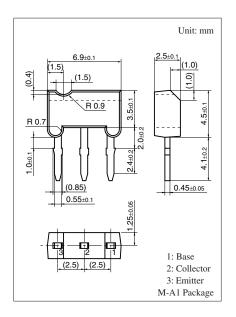
For low-frequency general amplification

■ Features

• M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage	2SB0643	V _{CBO}	-30	V
(Emitter open)	2SB0644		-60	
Collector-emitter voltage	2SB0643	V _{CEO}	-25	V
(Base open)	2SB0644		-50	
Emitter-base voltage (Col	V_{EBO}	-7	V	
Collector current	I_C	- 0.5	A	
Peak collector current	I_{CP}	-1	A	
Collector power dissipation	P _C	600	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-base voltage	2SB0643	V_{CBO}	$I_C = -10 \ \mu A, I_E = 0$	-30			V
(Emitter open)	2SB0644			-60			
Collector-emitter voltage	2SB0643	V _{CEO}	$I_C = -2 \text{ mA}, I_B = 0$	-25			V
(Base open)	2SB0644			-50			
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}	$V_{CB} = -20 \text{ V}, I_{E} = 0$			- 0.1	μΑ
Collector-Emitter cutoff current (Base open)		I_{CEO}	$V_{CE} = -20 \text{ V}, I_B = 0$			-1	μΑ
Forward current transfer ratio *1		h _{FE1} *2	$V_{CE} = -10 \text{ V}, I_{C} = -10 \text{ mA}$	85		340	_
		h _{FE2}	$V_{CE} = -10 \text{ V}, I_{C} = -500 \text{ mA}$	40	90		_
Collector-emitter saturation voltage *1		V _{CE(sat)}	$I_C = -300 \text{ mA}, I_B = -30 \text{ mA}$		- 0.35	- 0.6	V
Transition frequency		f_T	$V_{CB} = -10 \text{ V}, I_E = 10 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance (Common base, input open circuited)		C _{ob}	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		6	15	pF

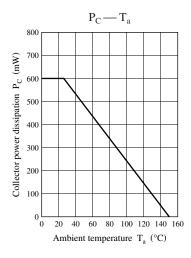
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

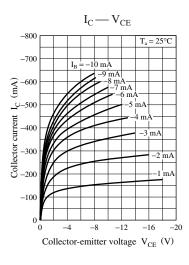
2. *1: Pulse measurement

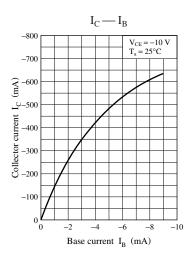
*2: Rank classification

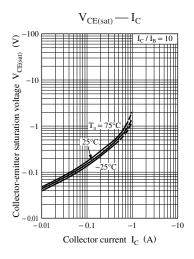
Rank	Q	R	S	
h _{FE1}	85 to 170	120 to 240	170 to 340	

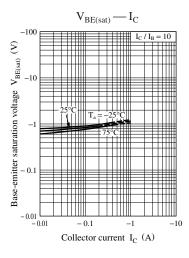
Note) The part numbers in the parenthesis show conventional part number.

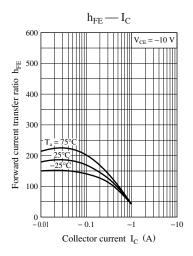


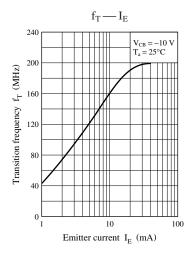


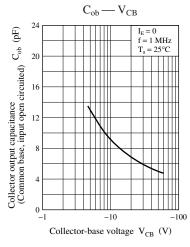


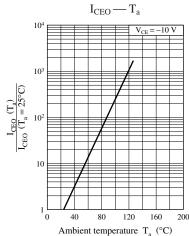












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