

2SB0790 (2SB790)

Silicon PNP epitaxial planar type

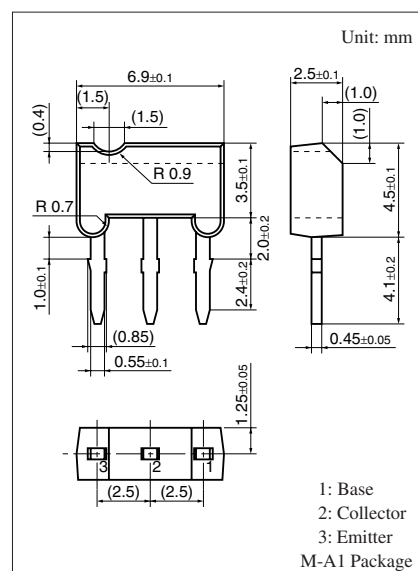
For low-frequency output amplification

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-25	V
Collector-emitter voltage (Base open)	V_{CEO}	-20	V
Emitter-base voltage (Collector open)	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	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = -10\ \mu\text{A}$, $I_E = 0$	-25			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -1\ \text{mA}$, $I_B = 0$	-20			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = -10\ \mu\text{A}$, $I_C = 0$	-7			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -25\ \text{V}$, $I_E = 0$			-0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -20\ \text{V}$, $I_B = 0$			-1	μA
Forward current transfer ratio *1	h_{FE1} *2	$V_{CE} = -2\ \text{V}$, $I_C = -0.5\ \text{A}$	90		220	—
	h_{FE2}	$V_{CE} = -2\ \text{V}$, $I_C = -1\ \text{A}$	25			—
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	$I_C = -500\ \text{mA}$, $I_B = -50\ \text{mA}$			-0.4	V
Base-emitter saturation voltage *1	$V_{BE(sat)}$	$I_C = -500\ \text{mA}$, $I_B = -50\ \text{mA}$			-1.2	V
Transition frequency	f_T	$V_{CB} = -10\ \text{V}$, $I_E = 50\ \text{mA}$, $f = 200\ \text{MHz}$		150		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = -10\ \text{V}$, $I_E = 0$, $f = 1\ \text{MHz}$		15	25	pF

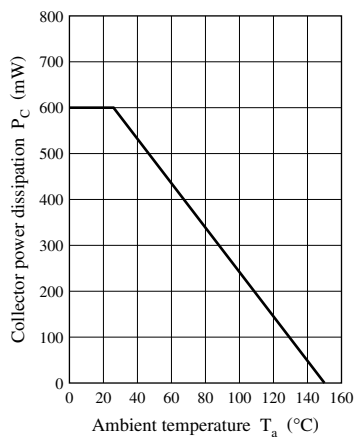
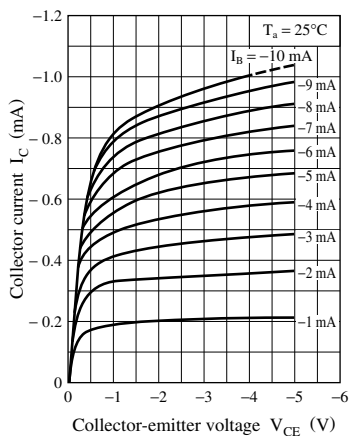
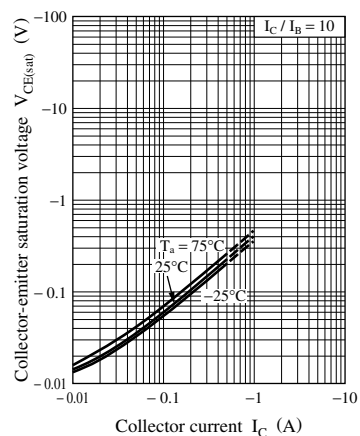
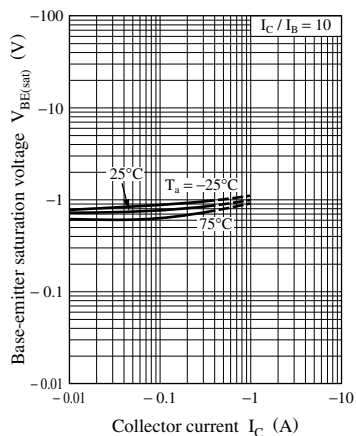
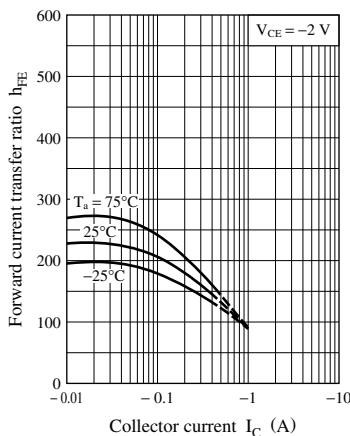
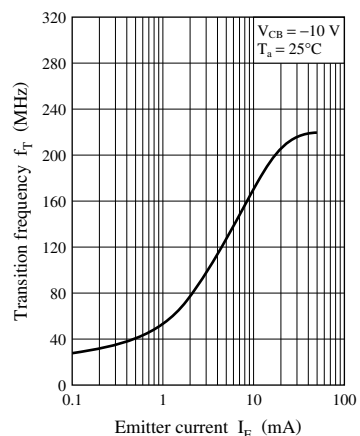
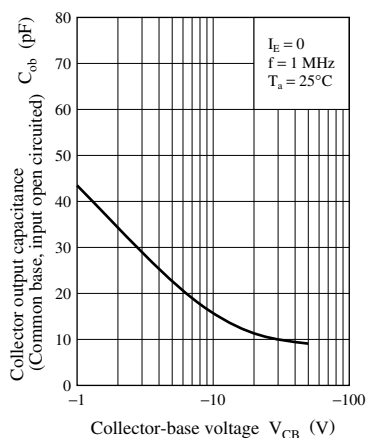
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *1: Pulse measurement

*2: Rank classification

Rank	Q	R
h_{FE1}	90 to 155	130 to 220

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

$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 

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