New Jersey Semi-Conductor Products, Inc.

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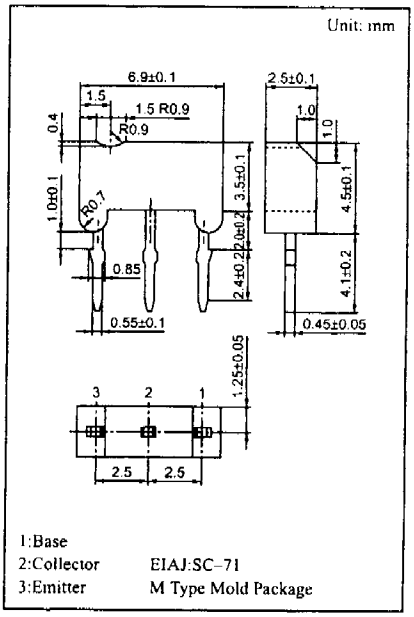
2SB643, 2SB644

Silicon PNP epitaxial planer type

For low-power general amplification
Complementary to 2SD638 and 2SD639



Features

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

Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Ratings	Unit
Collector to base voltage	2SB643	V_{CBO}	−30	V
	2SB644		−60	
Collector to emitter voltage	2SB643	V_{CEO}	−25	V
	2SB644		−50	
Emitter to base voltage		V_{EBO}	−7	V
Peak collector current		I_{CP}	−1	A
Collector current		I_C	− 0.5	A
Collector power dissipation		P_C	600	mW
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	−55 ~ +150	°C

Electrical Characteristics (Ta=25°C)

Parameter		Symbol	Conditions	min	typ	max	Unit
Collector cutoff current		I_{CBO}	V_{CB} = −20V, I_E = 0			−100	nA
		I_{CEO}	V_{CE} = −20V, I_B = 0			−1	μA
Collector to base voltage	2SB643	V_{CBO}	I_C = −10μA, I_E = 0	−30			V
	2SB644			−60			
Collector to emitter voltage	2SB643	V_{CEO}	I_C = −2mA, I_B = 0	−25			V
	2SB644			−50			
Emitter to base voltage		V_{EBO}	I_E = −10μA, I_C = 0	−7			V
Forward current transfer ratio		h_{FE1}*1	V_{CE} = −10V, I_C = −150mA*2	85		340	
		h_{FE2}	V_{CE} = −10V, I_C = −500mA*2	40	90		
Collector to emitter saturation voltage		$V_{CE(sat)}$	I_C = −300mA, I_B = −30mA*2		− 0.35	− 0.6	V
Transition frequency		f_T	V_{CB} = −10V, I_E = 10mA, f = 200MHz		200		MHz
Collector output capacitance		C_{ob}	V_{CB} = −10V, I_E = 0, f = 1MHz		6	15	pF

*2 Pulse measurement

*1 h_{FE1} Rank classification

Rank	Q	R	S
h_{FE1}	85 ~ 170	120 ~ 240	170 ~ 340