

2SB643, 2SB644

Silicon PNP epitaxial planer type

For low-power general amplification

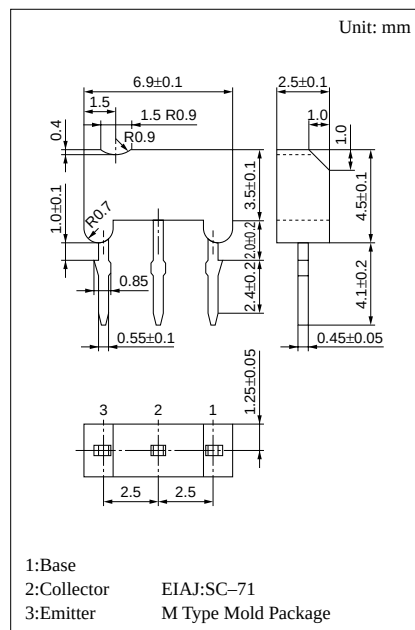
Complementary to 2SD638 and 2SD639

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



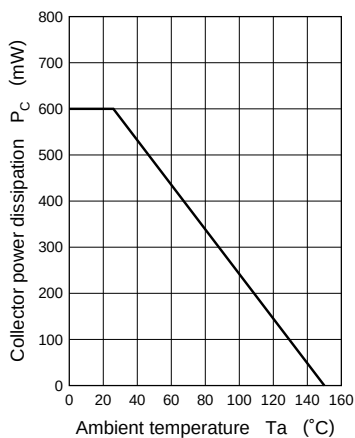
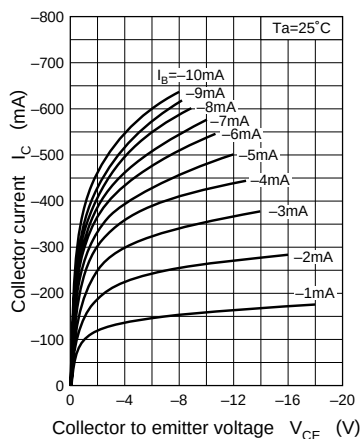
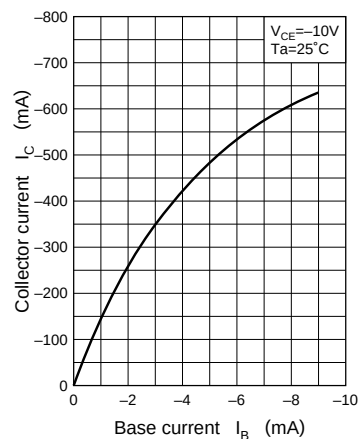
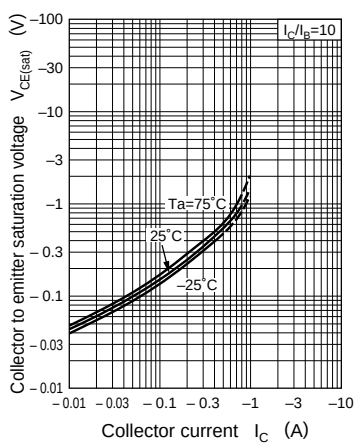
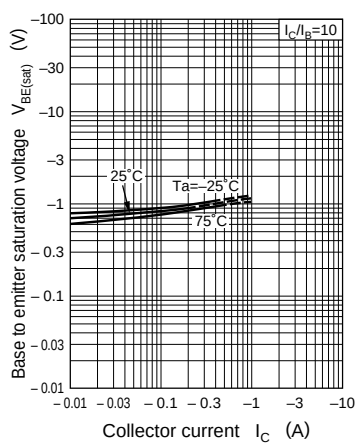
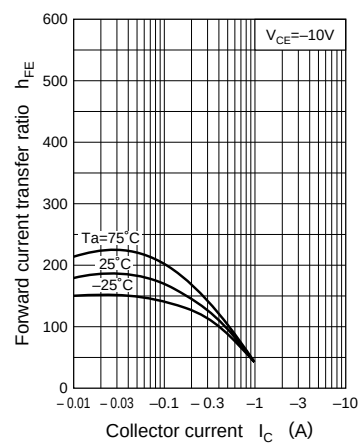
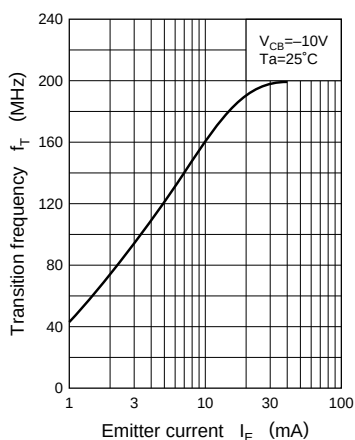
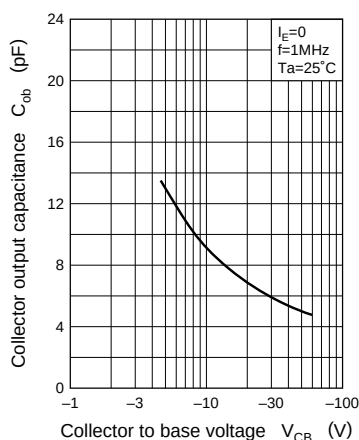
Electrical Characteristics (Ta=25°C)

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}	$I_C = -10\mu A, I_E = 0$	-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}	$I_E = -10\mu A, I_C = 0$	-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

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