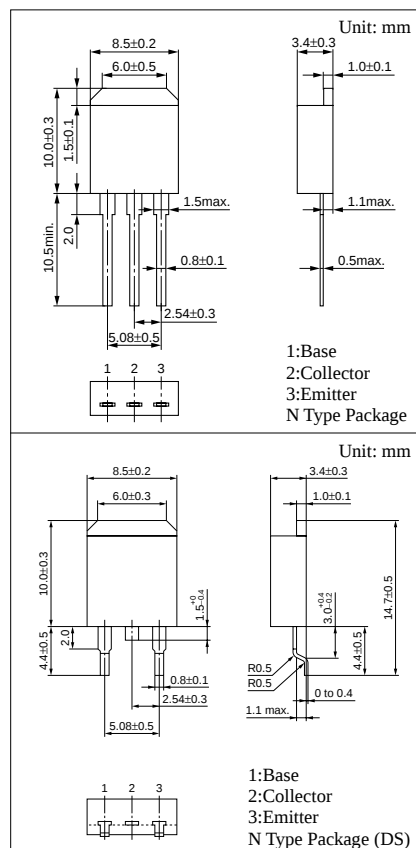


Silicon NPN epitaxial planar type

Complementary to 2SB0931 (2SB931)

- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Satisfactory linearity of forward current transfer ratio h_{FE}
- Large collector current I_C
- N type package enabling direct soldering of the radiating fin to the printed circuit board, etc. of small electronic equipment.

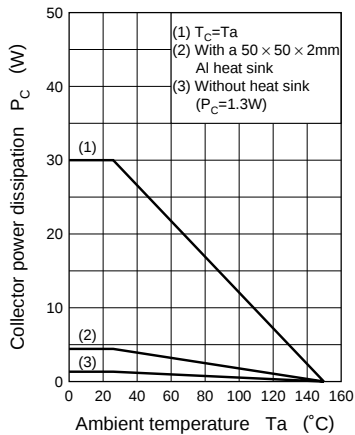
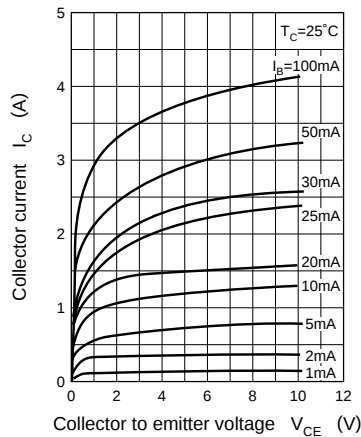
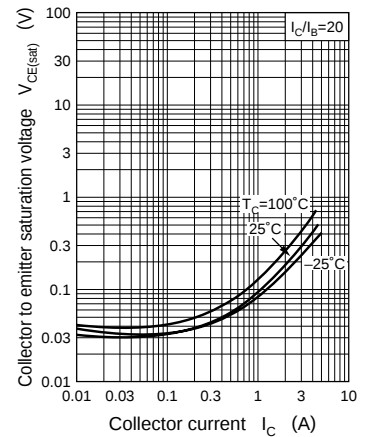
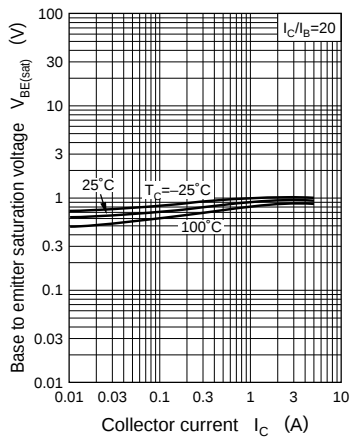
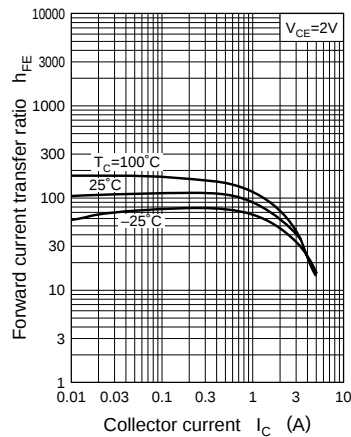
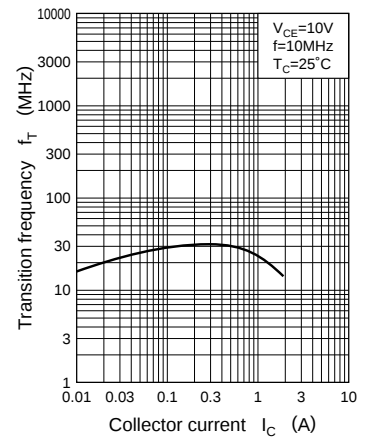
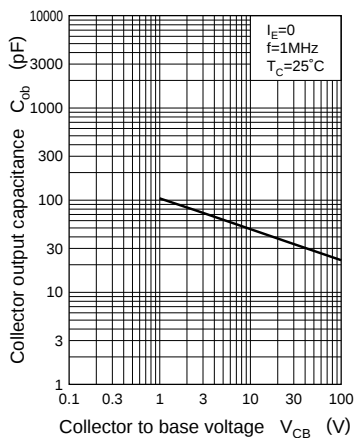
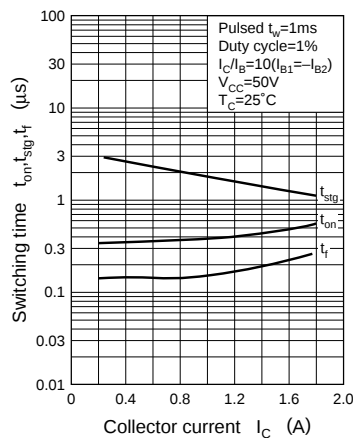
Parameter		Symbol	Ratings	Unit
Collector to base voltage		V_{CBO}	130	V
Collector to emitter voltage		V_{CEO}	80	V
Emitter to base voltage		V_{EBO}	7	V
Peak collector current		I_{CP}	6	A
Collector current		I_C	3	A
Collector power dissipation	$T_C=25^{\circ}\text{C}$	P_C	30	W
	$T_a=25^{\circ}\text{C}$		1.3	
Junction temperature		T_j	150	$^{\circ}\text{C}$
Storage temperature		T_{stg}	-55 to +150	$^{\circ}\text{C}$



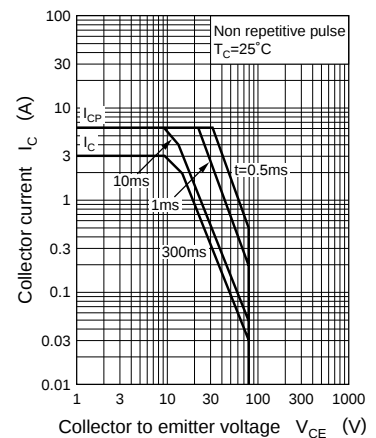
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 100V, I_E = 0$			10	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			50	μA
Collector to emitter voltage	V_{CEO}	$I_C = 10mA, I_B = 0$	80			V
Forward current transfer ratio	h_{FE1}	$V_{CE} = 2V, I_C = 0.1A$	45			
	h_{FE2}^*	$V_{CE} = 2V, I_C = 0.5A$	60		260	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2A, I_B = 0.1A$			0.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 2A, I_B = 0.1A$			1.5	V
Transition frequency	f_T	$V_{CE} = 10V, I_C = 0.5A, f = 10MHz$		30		MHz
Turn-on time	t_{on}	$I_C = 0.5A, I_{B1} = 50mA, I_{B2} = -50mA,$ $V_{CC} = 50V$		0.5		μs
Storage time	t_{stg}			2.5		μs
Fall time	t_f			0.15		μs

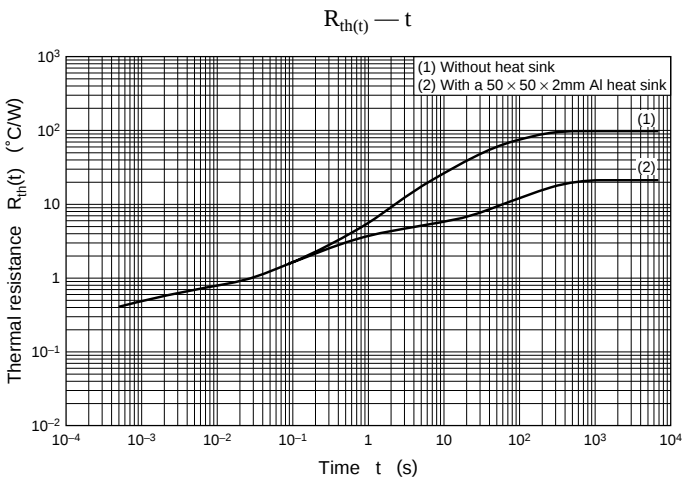
Rank	R	Q	P
h_{FE2}	60 to 120	90 to 180	130 to 260

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

$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$  $C_{ob} - V_{CB}$  $t_{on}, t_{stg}, t_f - I_C$ 

Area of safe operation (ASO)





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