

Power Transistors



2SB952, 2SB952A

Silicon PNP epitaxial planar type

For low-voltage switching

Features

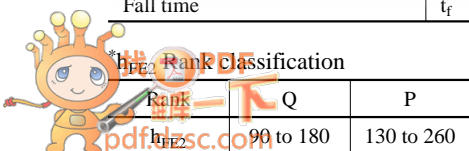
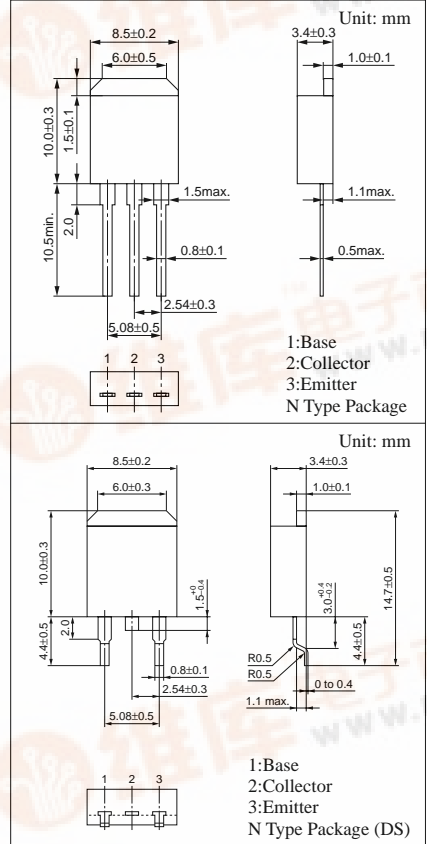
- Low collector to emitter saturation voltage $V_{CE(sat)}$
- High-speed switching
- N type package enabling direct soldering of the radiating fin to the printed circuit board, etc. of small electronic equipment.

Absolute Maximum Ratings ($T_C=25^\circ C$)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	-40	V
Collector to emitter voltage	V_{CEO}	-20	V
Emitter to base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-12	A
Collector current	I_C	-7	A
Collector power dissipation	P_C	30	W
		1.3	W
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

Electrical Characteristics ($T_C=25^\circ C$)

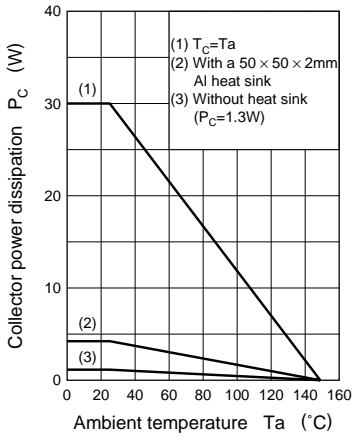
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -40V, I_E = 0$			-50	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-50	μA
Collector to emitter voltage	V_{CEO}	$I_C = -10mA, I_B = 0$	-20		-40	V
Forward current transfer ratio	h_{FE1}	$V_{CE} = -2V, I_C = -0.1A$	45			
	h_{FE2}^*	$V_{CE} = -2V, I_C = -2A$	90		260	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -5A, I_B = -0.16A$			-0.6	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -5A, I_B = -0.16A$			-1.5	V
Transition frequency	f_T	$V_{CE} = -10V, I_C = -0.5A, f = 10MHz$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$		140		pF
Turn-on time	t_{on}	$I_C = -2A, I_{B1} = -66mA, I_{B2} = 66mA$		0.1		μs
Storage time	t_{stg}			0.5		μs
Fall time	t_f			0.1		μs



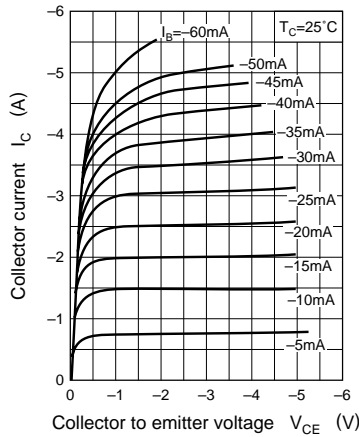
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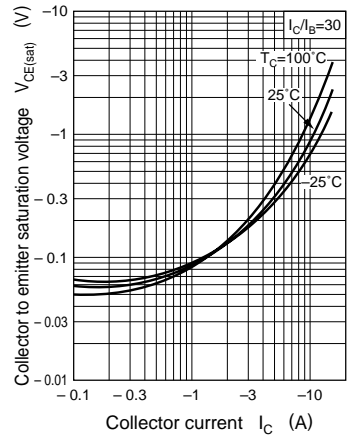
$P_C - T_a$



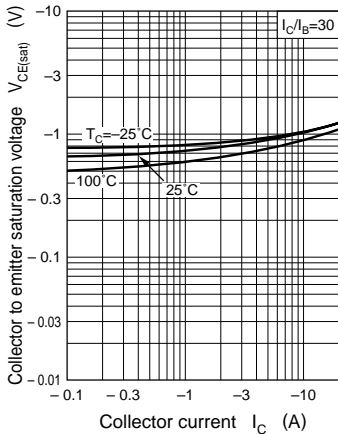
$I_C - V_{CE}$



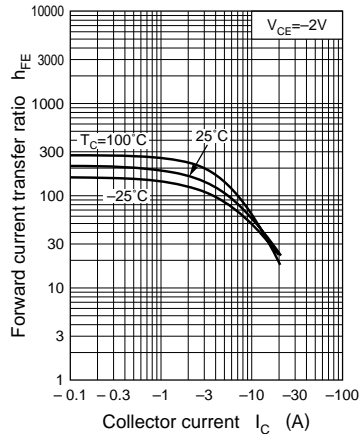
$V_{CE(sat)} - I_C$



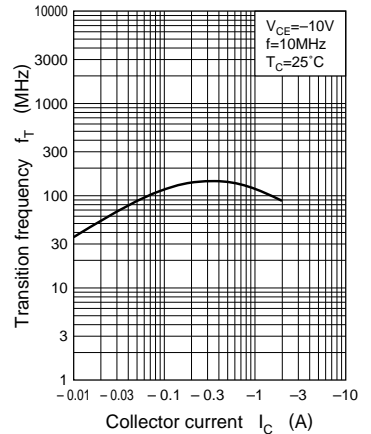
$V_{CE(sat)} - I_C$



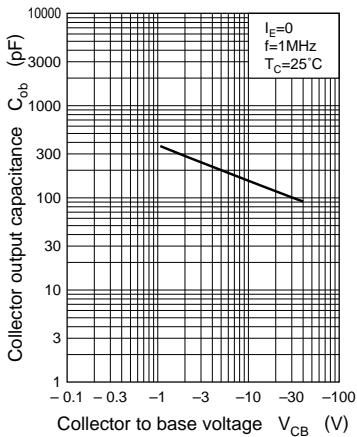
$h_{FE} - I_C$



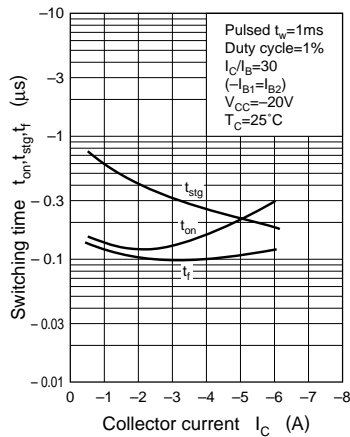
$f_T - I_C$



$C_{ob} - V_{CB}$



$t_{on}, t_{stg}, t_f - I_C$



Area of safe operation (ASO)

