

2SD0973, 2SD0973A (2SD973, 2SD973A)

Silicon NPN epitaxial planer type

For low-frequency power amplification

■ Features

- Low collector to 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 (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	30	V
2SD0973A	2SD0973A	60	
Collector to emitter voltage	V_{CEO}	25	V
2SD0973A	2SD0973A	50	
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	1.5	A
Collector current	I_C	1	A
Collector power dissipation	P_C^*	1	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

* Printed circuit board: Copper foil area of 1cm² or more, and the board thickness of 1.7mm for the collector portion

■ Electrical Characteristics (Ta=25°C)

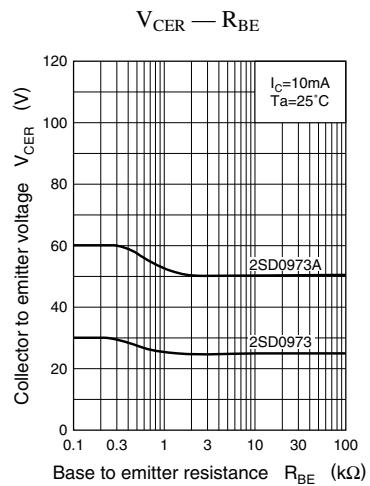
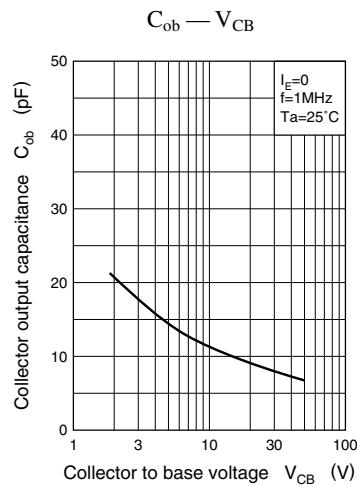
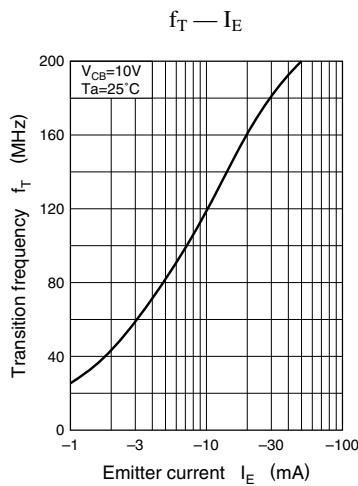
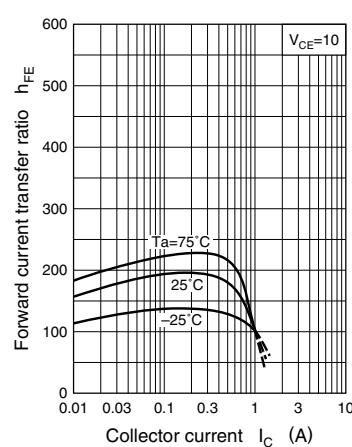
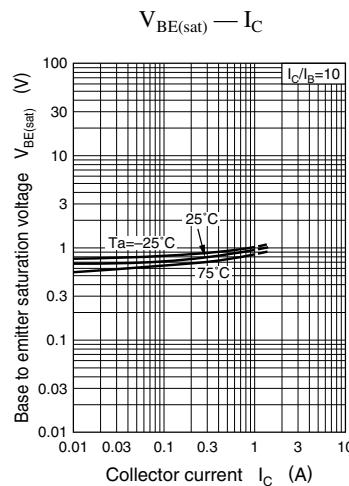
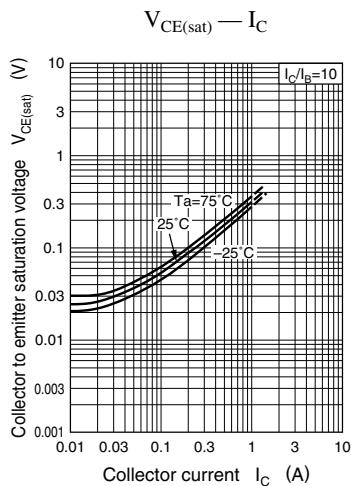
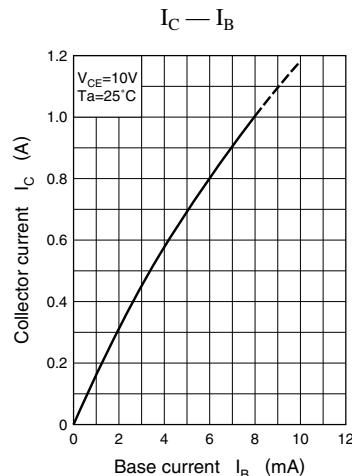
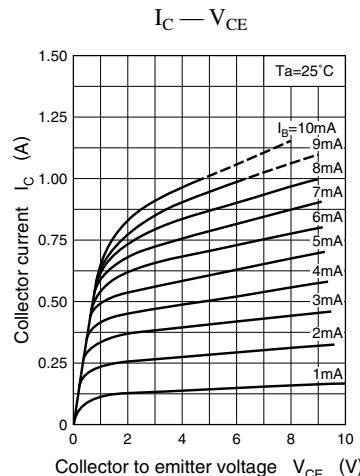
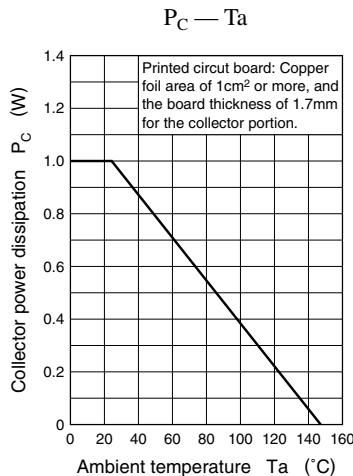
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 20V, I_E = 0$			0.1	μA
Collector to base voltage	V_{CBO}	$I_C = 10\mu A, I_E = 0$	30			V
2SD0973A	2SD0973A	$I_C = 10\mu A, I_E = 0$	60			
Collector to emitter voltage	V_{CEO}	$I_C = 2mA, I_B = 0$	25			V
2SD0973A	2SD0973A	$I_C = 2mA, I_B = 0$	50			
Emitter to base voltage	V_{EBO}	$I_E = 10\mu A, I_C = 0$	5			V
Forward current transfer ratio	h_{FE1}^*	$V_{CE} = 10V, I_C = 500mA^*$	85	160	340	
	h_{FE2}	$V_{CE} = 5V, I_C = 1A^*$	50	100		
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA^*$		0.2	0.4	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500mA, I_B = 50mA^*$		0.85	1.2	V
Transition frequency	f_T	$V_{CB} = 10V, I_E = -50mA, f = 200MHz$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		11	20	pF

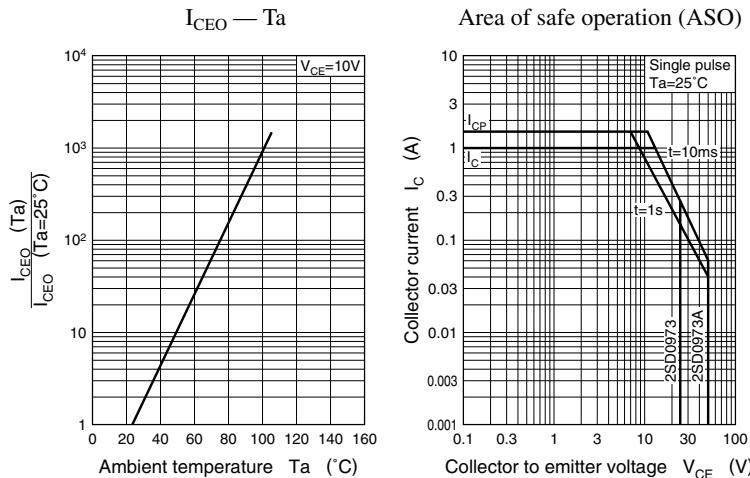
*2 Pulse measurement

*1 h_{FE1} Rank classification

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

Note.) The Part numbers in the Parenthesis show conventional part number.





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