

2SD968, 2SD968A

Silicon NPN epitaxial planer type

For low-frequency driver amplification

Complementary to 2SB789 and 2SB789A

Features

- High collector to emitter voltage V_{CEO} .
- Large collector power dissipation P_C .
- Mini Power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	100	V
2SD968			
2SD968A		120	
Collector to emitter voltage	V_{CEO}	100	V
2SD968			
2SD968A		120	
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	1	A
Collector current	I_C	0.5	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

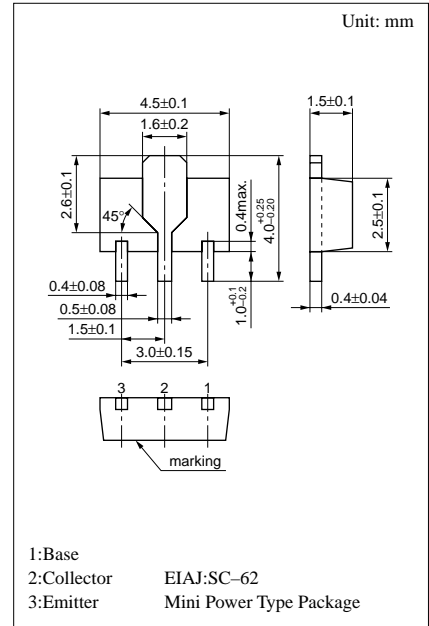
Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to emitter voltage	V_{CEO}	$I_C = 100\mu A, I_B = 0$	100			V
2SD968						
2SD968A			120			
Emitter to base voltage	V_{EBO}	$I_E = 10\mu A, I_C = 0$	5			V
Forward current transfer ratio	h_{FE1}^{*1}	$V_{CE} = 10V, I_C = 150mA^{*2}$	90		220	
	h_{FE2}	$V_{CE} = 5V, I_C = 500mA^{*2}$	50	100		
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA^{*2}$		0.2	0.6	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500mA, I_B = 50mA^{*2}$		0.85	1.2	V
Transition frequency	f_T	$V_{CB} = 10V, I_E = -50mA, f = 200MHz$		120		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		11	20	pF

*1 h_{FE1} Rank classification

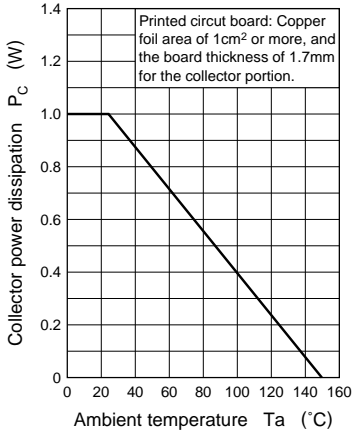
Rank	Q	R
h_{FE1}	90 ~ 155	130 ~ 220
Marking	2SD968	WQ
Symbol	2SD968A	VR

*2 Pulse measurement

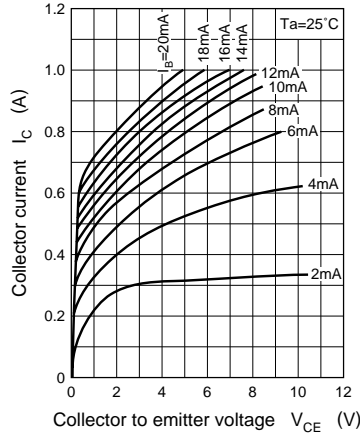


Marking symbol : W(2SD968)
V(2SD968A)

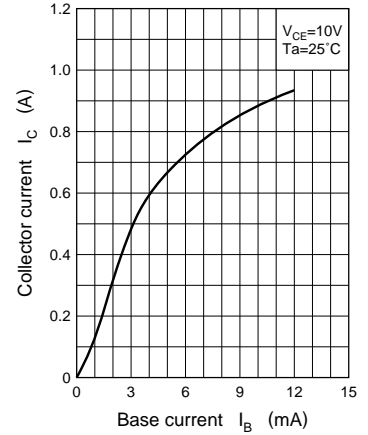
$P_C - T_a$



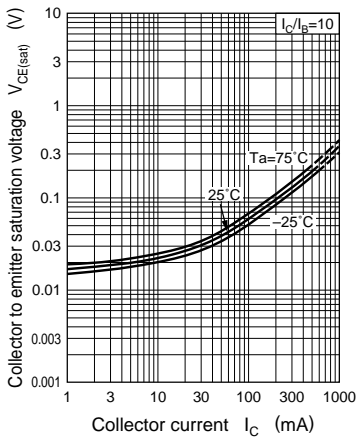
$I_C - V_{CE}$



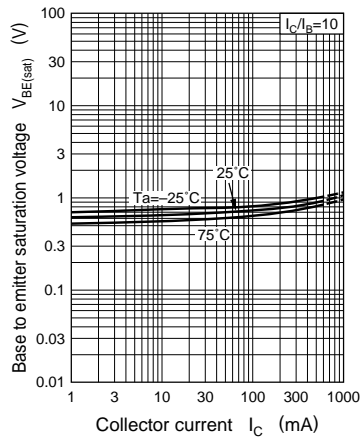
$I_C - I_B$



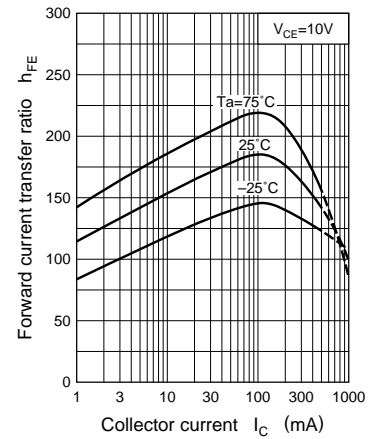
$V_{CE(sat)} - I_C$



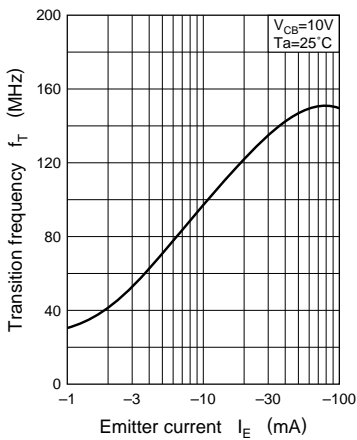
$V_{BE(sat)} - I_C$



$h_{FE} - I_C$



$f_T - I_E$



$C_{ob} - V_{CB}$

