2SD2184

Silicon NPN epitaxial planar type

For low-frequency output amplification Complementary to 2SB1438

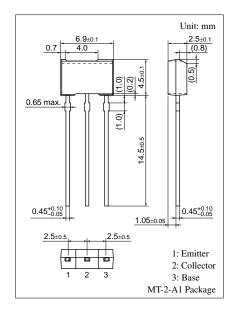
■ Features

- \bullet High collector to emitter voltage V_{CEO}
- \bullet Low collector to emitter saturation voltage $V_{\text{CE}(\text{sat})}$
- Allowing supply with the radial taping

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	150	V
Collector to emitter voltage	V _{CEO}	150	V
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	Т	-55 to +150	°C

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



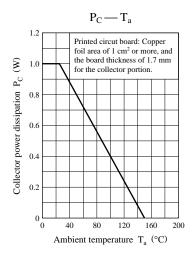
■ Electrical Characteristics $T_a = 25$ °C

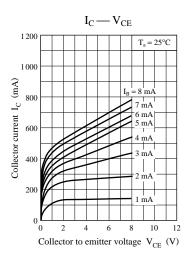
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 75 \text{ V}, I_E = 0$			0.1	μΑ
Collector to base voltage	V_{CBO}	$I_C = 10 \ \mu A, I_E = 0$	150			V
Collector to emitter voltage	V _{CEO}	$I_{\rm C} = 1 \text{ mA}, I_{\rm B} = 0$	150			V
Emitter to base voltage	V_{EBO}	$I_E = 10 \ \mu A, \ I_C = 0$	5			V
Forward current transfer ratio	h _{FE1} *2	$V_{CE} = 2 \text{ V}, I_{C} = 100 \text{ mA}$	120		340	
	h _{FE2}	$V_{CE} = 2 \text{ V}, I_{C} = 500 \text{ mA}$	40			
Collector to emitter saturation voltage *1	V _{CE(sat)}	$I_C = 500 \text{ mA}, I_B = 25 \text{ mA}$		0.11	0.3	V
Base to emitter saturation voltage *1	V _{BE(sat)}	$I_C = 500 \text{ mA}, I_B = 25 \text{ mA}$		0.8	1.2	V
Transition frequency	f_T	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		90		MHz
Collector output capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		12	20	pF

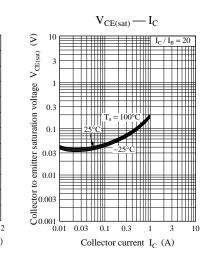
Note) *1: Pulse measurement

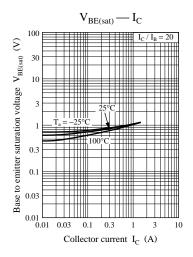
*2: h_{FE} Rank classification

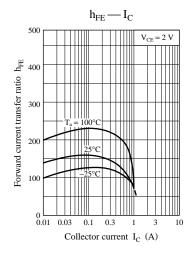
Rank	R	S
h_{FE1}	120 to 240	170 to 340

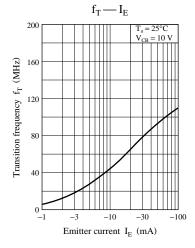


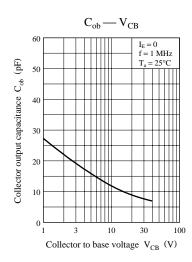












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