2SD2133

Silicon NPN epitaxial planar type

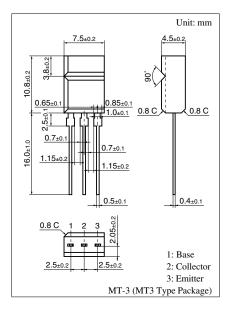
For low-frequency power amplification driver Complementary to 2SB1413

■ Features

- ullet Low collector to emitter saturation voltage $V_{CE(sat)}$
- Output of 15 W can be obtained by a complementary pair with 2SB1413

■ Absolute Maximum Ratings $T_C = 25$ °C

Parameter	Symbol	Rating	Unit
Collector to base voltage	V _{CBO}	60	V
Collector to emitter voltage	V _{CEO}	50	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	1.5	W
Junction temperature	T _j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C



■ Electrical Characteristics $T_C = 25$ °C

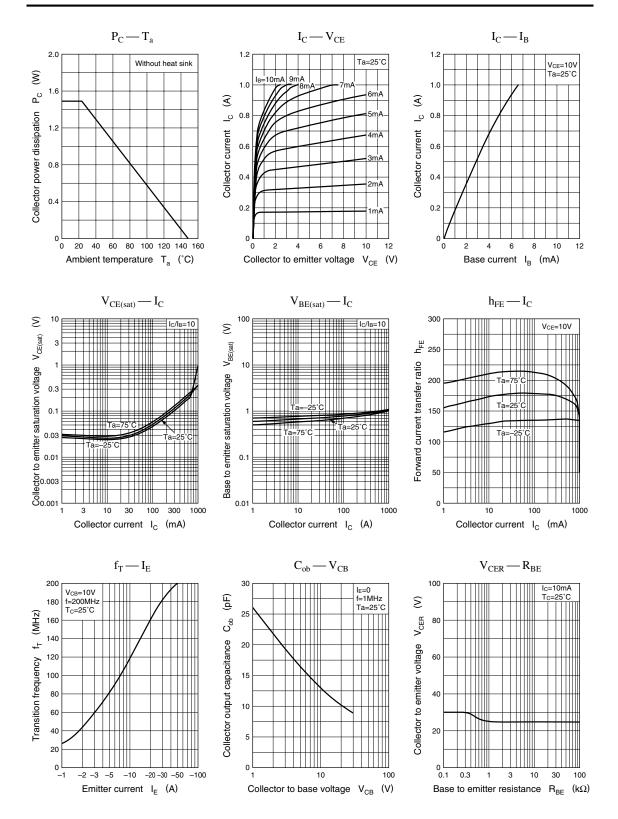
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 20 \text{ V}, I_{E} = 0$			0.1	μΑ
Collector to base voltage	V_{CBO}	$I_C = 10 \mu A, I_E = 0$	60			V
Collector to emitter voltage	V _{CEO}	$I_{\rm C} = 2 \text{ mA}, I_{\rm B} = 0$	50			V
Emitter to base voltage	V_{EBO}	$I_E = 10 \ \mu A, I_C = 0$	5			V
Forward current transfer ratio	h _{FE1} *	$V_{CE} = 10 \text{ V}, I_{C} = 500 \text{ mA}$	85		340	
	h _{FE2}	$V_{CE} = 5 \text{ V}, I_{C} = 1 \text{ A}$	50	100		
	h _{FE3}	$V_{CE} = 10 \text{ V}, I_{C} = 1 \text{ mA}$	35			
Collector to emitter saturation voltage	V _{CE(sat)}	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$		0.2	0.4	V
Base to emitter saturation voltage	V _{BE(sat)}	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$		0.85	1.2	V
Transition frequency	f_T	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		11		pF

Note) *: Rank classification

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

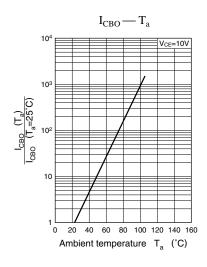
Panasonic

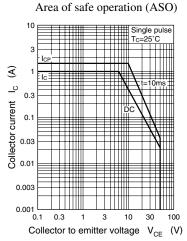
2SD2133 Power Transistors

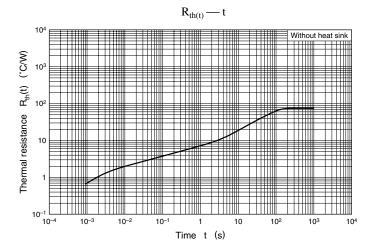


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Power Transistors 2SD2133







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