Power Transistors Panasonic

2SD2139

Silicon NPN triple diffusion planar type

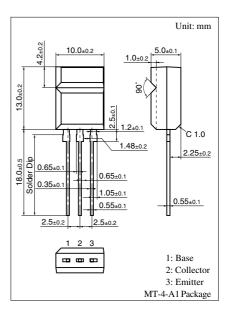
For high-current amplification ratio, power amplification

■ Features

- \bullet High forward current transfer ratio h_{FE}
- \bullet Satisfactory linearity of forward current transfer ratio h_{FE}
- Allowing supply with the radial taping

■ Absolute Maximum Ratings $T_C = 25$ °C

Parameter		Symbol	Rating	Unit
Collector to base voltage		V_{CBO}	80	V
Collector to emitter voltage		V_{CEO}	60	V
Emitter to base voltage		V_{EBO}	6	V
Peak collector current		I_{CP}	6	A
Collector current		I_{C}	3	A
Base current		I_{B}	1	A
Collector power	$T_C = 25^{\circ}C$	P _C	15	W
dissipation	$T_a = 25^{\circ}C$		2	
Junction temperature		T _j	150	°C
Storage temperature		T _{stg}	-55 to +150	°C



■ Electrical Characteristics $T_C = 25$ °C

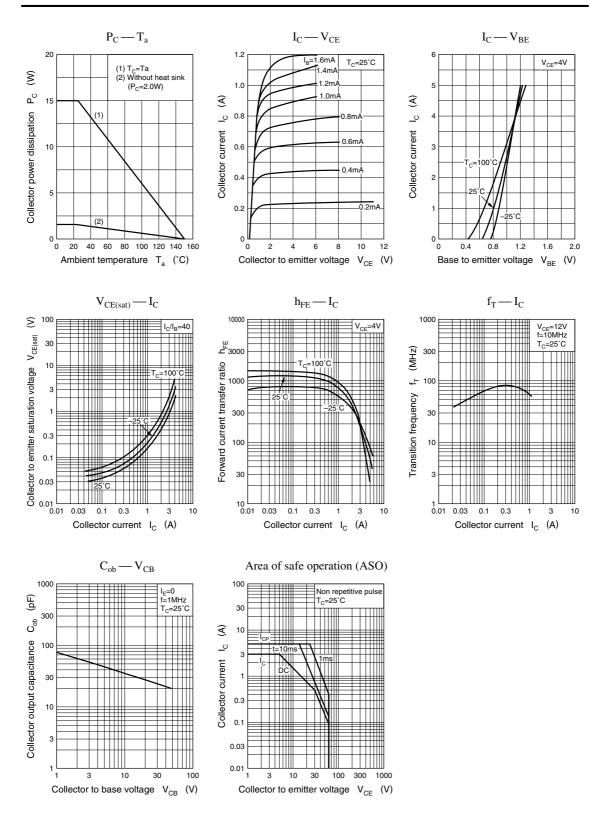
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 80 \text{ V}, I_{E} = 0$			100	μΑ
	I _{CEO}	$V_{CE} = 40 \text{ V}, I_{B} = 0$			100	μΑ
Emitter cutoff current	I_{EBO}	$V_{EB} = 6 \text{ V}, I_{C} = 0$			100	μA
Collector to emitter voltage	V_{CEO}	$I_{\rm C} = 25 \text{ mA}, I_{\rm B} = 0$	60			V
Forward current transfer ratio *	h _{FE}	$V_{CE} = 4 \text{ V}, I_{C} = 0.5 \text{ A}$	500		2 500	
Collector to emitter saturation voltage	V _{CE(sat)}	$I_C = 2 \text{ A}, I_B = 0.05 \text{ A}$			1	V
Transition frequency	f_T	$V_{CE} = 12 \text{ V}, I_{C} = 0.2 \text{ A}, f = 10 \text{ MHz}$		50		MHz

Note) *: Rank classification

Rank	Q	Р	0		
h_{FE}	500 to 1 000	800 to 1 500	1 200 to 2 500		

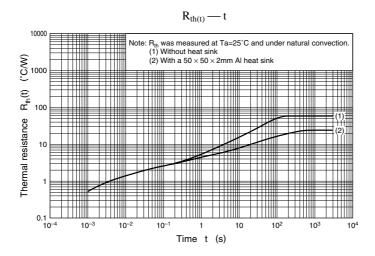
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2SD2139 Power Transistors



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Power Transistors 2SD2139



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