2SD1499

Silicon NPN triple diffusion planar type

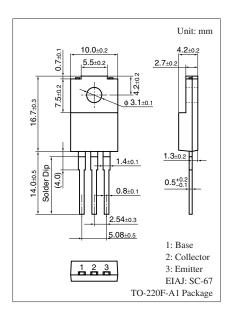
For high power amplification Complementary to 2SB1063

■ Features

- \bullet Extremely satisfactory linearity of the forward current transfer ratio h_{FE}
- Wide safe operation area
- High transition frequency f_T
- Full-pack package which can be installed to the heat sink with one screw.

■ Absolute Maximum Ratings $T_C = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (En	V _{CBO}	100	V	
Collector-emitter voltage	V _{CEO}	100	V	
Emitter-base voltage (Col	V _{EBO}	5	V	
Collector current	I_C	5	A	
Peak collector current	I_{CP}	8	A	
Collector power		P _C	40	W
dissipation	$T_a = 25$ °C		2.0	
Junction temperature	T _j	150	°C	
Storage temperature	T_{stg}	-55 to +150	°C	



■ Electrical Characteristics $T_C = 25$ ° $C \pm 3$ °C

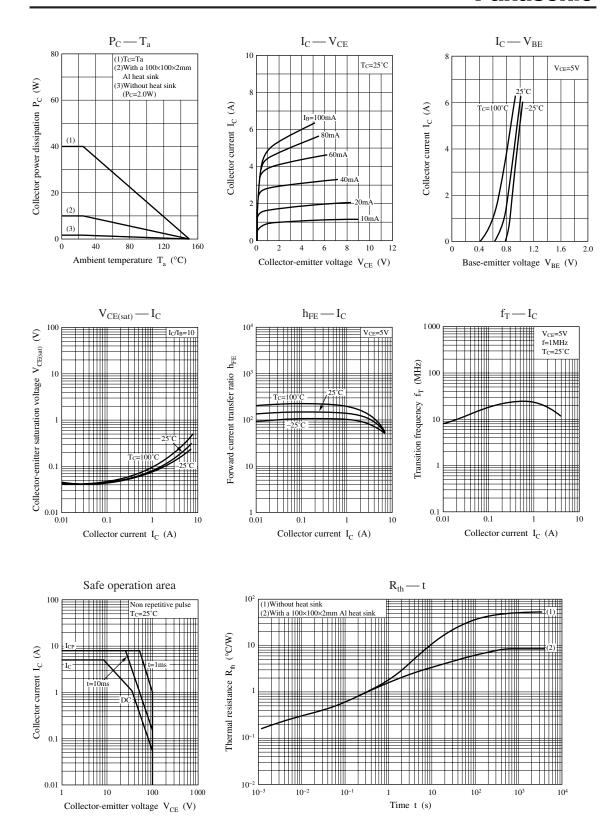
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Base-emitter voltage	V _{BE}	$V_{CE} = 5 \text{ V}, I_{C} = 3 \text{ A}$			1.8	V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 100 \text{ V}, I_{E} = 0$			50	μΑ
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 3 \text{ V}, I_{C} = 0$			50	μΑ
Forward current transfer ratio	h _{FE1}	$V_{CE} = 5 \text{ V}, I_{C} = 20 \text{ mA}$	20			_
	h _{FE2} *	$V_{CE} = 5 \text{ V}, I_{C} = 1 \text{ A}$	40		200	
	h _{FE3}	$V_{CE} = 5 \text{ V}, I_{C} = 3 \text{ A}$	20			
Collector-emitter saturation voltage	V _{CE(sat)}	$I_C = 3 \text{ A}, I_B = 0.3 \text{ A}$			2.0	V
Transition frequency	f_T	$V_{CE} = 5 \text{ V}, I_{C} = 0.5 \text{ A}, f = 1 \text{ MHz}$		20		MHz
Collector output capacitance	Cob	$V_{CB} = 10 \text{ V}, I_{E} = 0, f = 1 \text{ MHz}$		90		pF
(Common base, input open circuited)						

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Rank classification

Rank	R	Q	Р
h _{FE2}	40 to 80	60 to120	100 to 200

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