

2SD2479

Silicon NPN epitaxial planar type Darlington

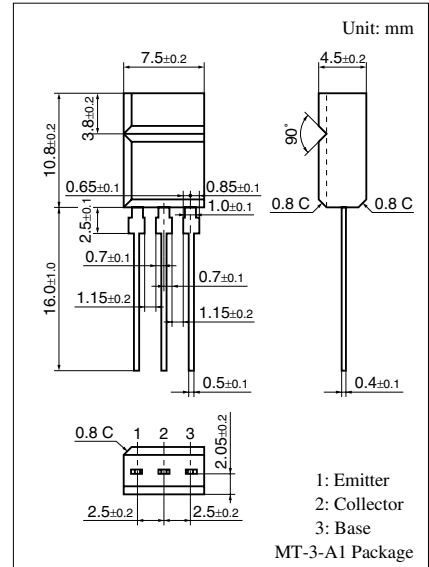
For low-frequency amplification

■ Features

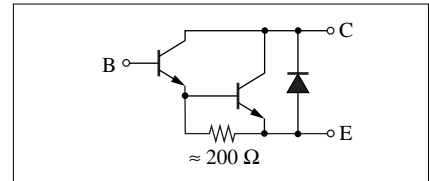
- High forward current transfer ratio h_{FE}
- Allowing automatic insertion with radial taping

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	120	V
Collector to emitter voltage	V_{CEO}	100	V
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	3	A
Collector current	I_C	2	A
Collector power dissipation	P_C	1.5	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Internal Connection



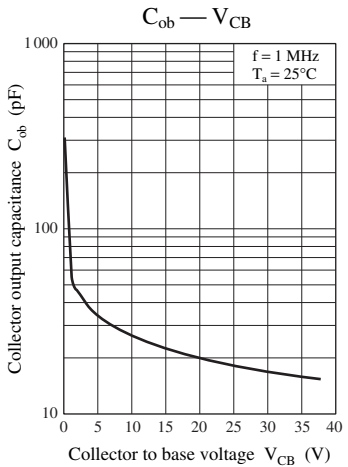
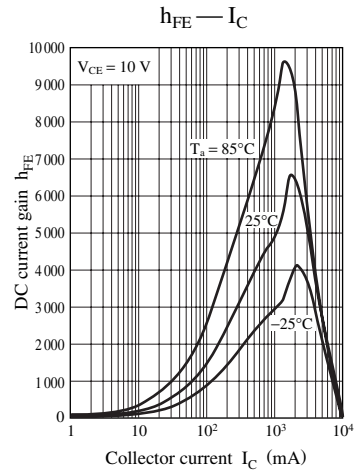
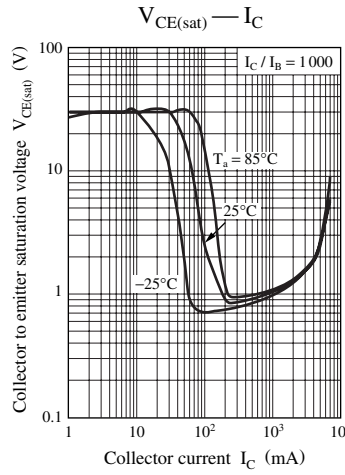
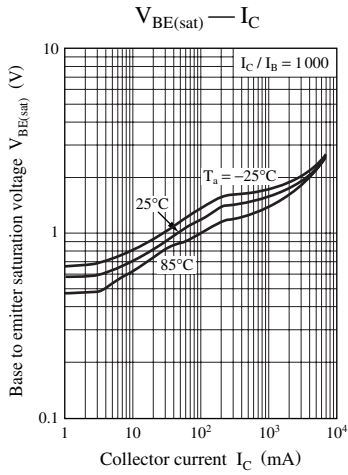
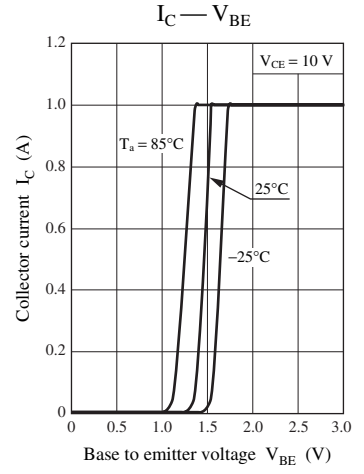
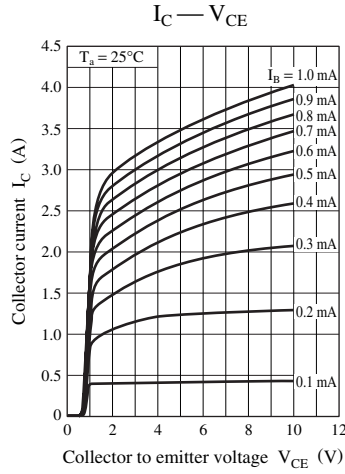
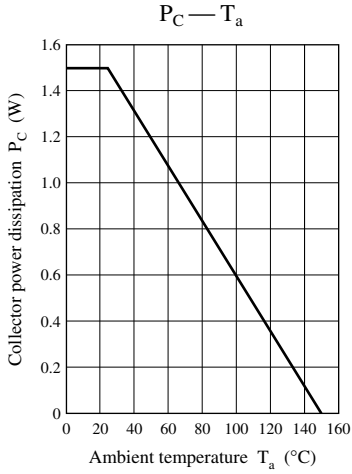
■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 2^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 25 \text{ V}, I_E = 0$			0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4 \text{ V}, I_C = 0$			1	μA
Collector to base voltage	V_{CBO}	$I_C = 100 \mu\text{A}, I_E = 0$	120			V
Collector to emitter voltage	V_{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	100			V
Emitter to base voltage	V_{EBO}	$I_E = 100 \mu\text{A}, I_C = 0$	5			V
DC current gain ^{*1, 2}	h_{FE}	$V_{CE} = 10 \text{ V}, I_C = 1 \text{ A}$	4000		40000	
Collector to emitter saturation voltage ^{*1}	$V_{CE(sat)}$	$I_C = 1 \text{ A}, I_B = 1 \text{ mA}$			1.5	V
Base to emitter saturation voltage ^{*1}	$V_{BE(sat)}$	$I_C = 1 \text{ A}, I_B = 1 \text{ mA}$			2	V
Gain bandwidth product	f_T	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		150		MHz

Note) *1: Pulse measurement

*2: Rank classification

Rank	Q	R	S
h_{FE}	4000 to 10000	8000 to 20000	16000 to 40000



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