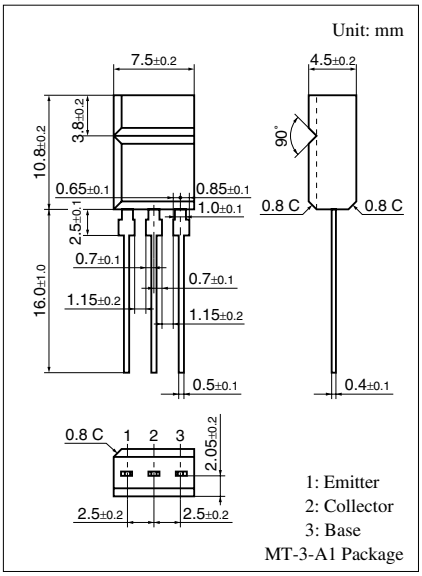
2SD2479

Silicon NPN epitaxial planar type Darlington

For low-frequency amplification



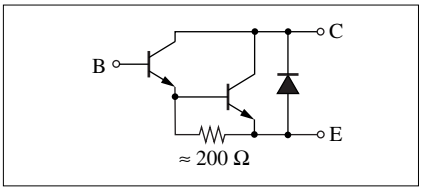
■ Features

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

■ Absolute Maximum Ratings $T_a = 25°C$

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	°C
Storage temperature	T_{stg}	−55 to +150	°C

Internal Connection



■ Electrical Characteristics $T_a = 25°C \pm 2°C$

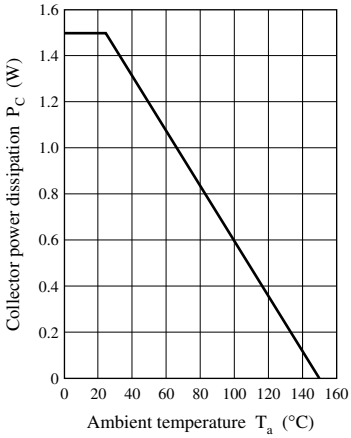
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 25 V, I_E = 0			0.1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = 4 V, I_C = 0			1	μA
Collector to base voltage	V_{CBO}	I_C = 100 μA, I_E = 0	120			V
Collector to emitter voltage	V_{CEO}	I_C = 1 mA, I_B = 0	100			V
Emitter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

Note) ∗1: Pulse measurement

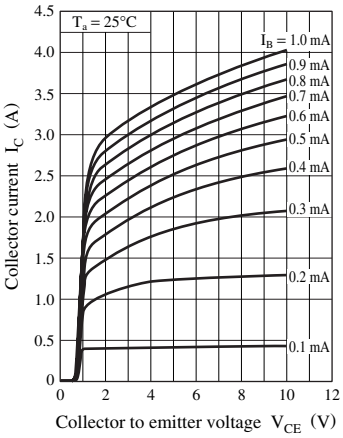
∗2: Rank classification

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

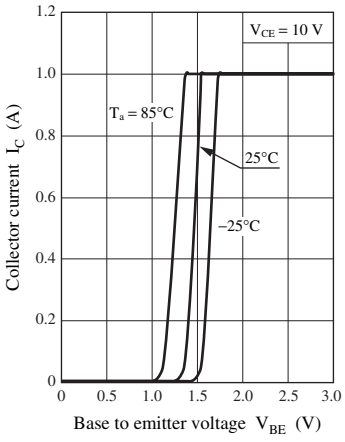
P_C — T_a



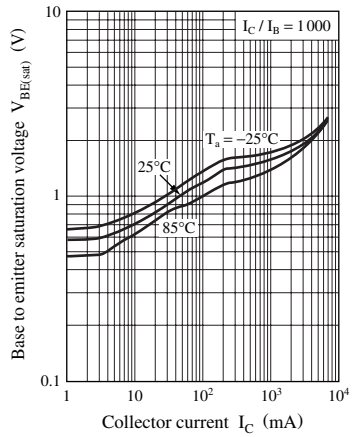
I_C — V_{CE}



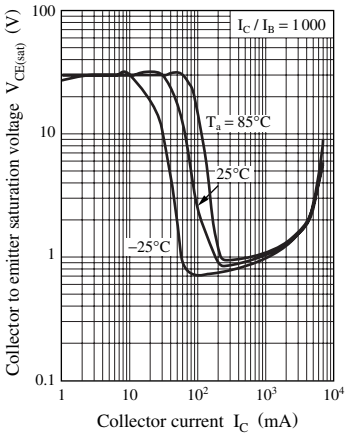
I_C — V_{BE}



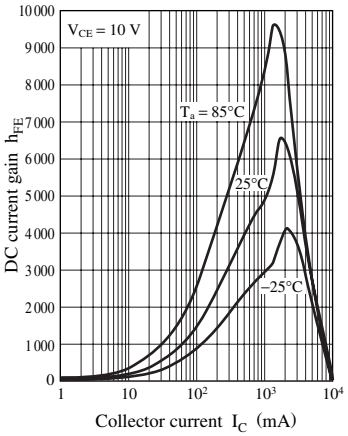
$V_{BE(sat)}$ — I_C



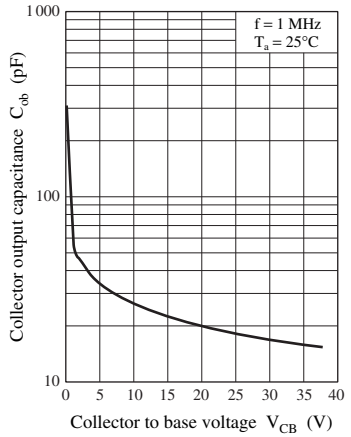
$V_{CE(sat)}$ — I_C



h_{FE} — I_C



C_{ob} — V_{CB}



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