2SD2598

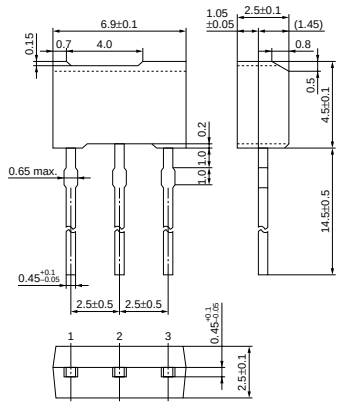
Silicon NPN epitaxial planer type darlington

For low-frequency amplification

Features

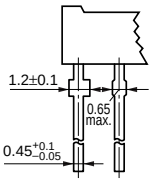
- Forward current transfer ratio h_{FE} is designed high, which is appropriate to the driver circuit of motors and printer bammer: h_{FE} = 4000 to 20000.
- A shunt resistor is omitted from the driver.
- M type package allowing easy automatic and manual insertion as well as stand-alone fixing to the printed circuit board.

Unit: mm



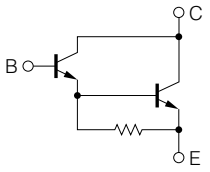
Note: In addition to the lead type shown in the upper figure, the type as shown in the lower figure is also available.

1:Emitter
2:Collector
3:Base
MT2 Type Package



(HW type)

Internal Connection



Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	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}	750	mA
Collector current	I_C	500	mA
Collector power dissipation	P_C *1	1	W
Junction temperature	T_j	150	˚C
Storage temperature	T_{stg}	–55 ~ +150	˚C

* Printed circuit board: Copper foil area of 1cm^2 or more, and the board thickness of 1.7mm for the collector portion

Electrical Characteristics (Ta=25˚C)

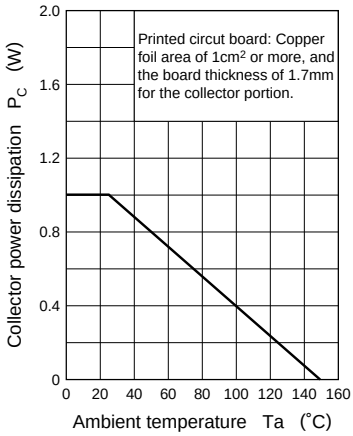
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 25V, I_E = 0			100	nA
Emitter cutoff current	I_{EBO}	V_{EB} = 4V, I_C = 0			100	nA
Collector to base voltage	V_{CBO}	I_C = 100µA, I_E = 0	60			V
Collector to emitter voltage	V_{CEO}	I_C = 1mA, I_B = 0	50			V
Emitter to base voltage	V_{EBO}	I_E = 100µA, I_C = 0	5			V
Forward current transfer ratio	h_{FE} *1	V_{CE} = 10V, I_C = 500mA*2	4000		20000	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 500mA, I_B = 0.5mA*2			2.5	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = 500mA, I_B = 0.5mA*2			3.0	V
Transition frequency	f_T	V_{CB} = 10V, I_E = –50mA, f = 200MHz		200		MHz

*2 Pulse measurement

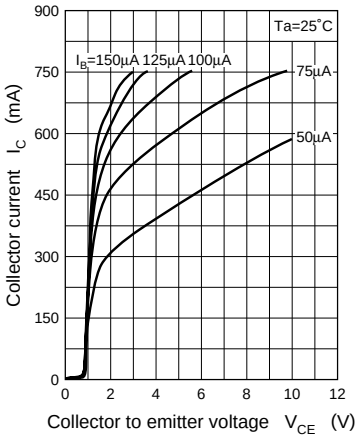
*1 h_{FE} Rank classification

Rank	Q	R
h_{FE}	4000 ~ 10000	8000 ~ 20000

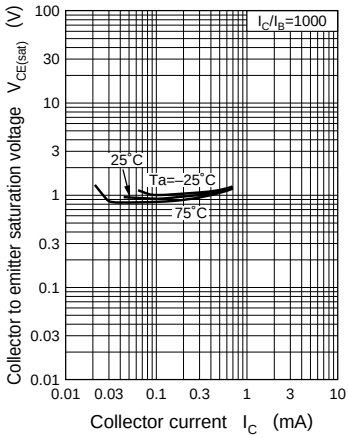
P_C — Ta



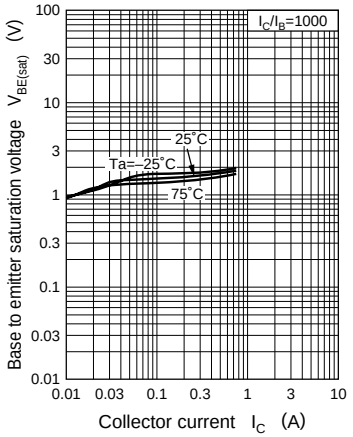
I_C — V_{CE}



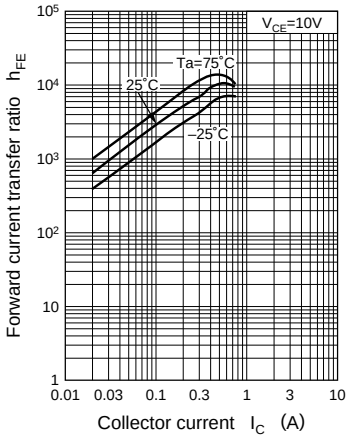
$V_{CE(sat)}$ — I_C



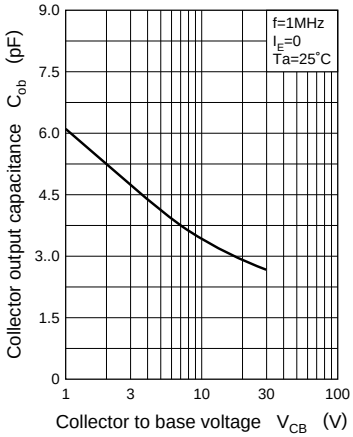
$V_{BE(sat)}$ — I_C



h_{FE} — I_C



C_{ob} — V_{CB}



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