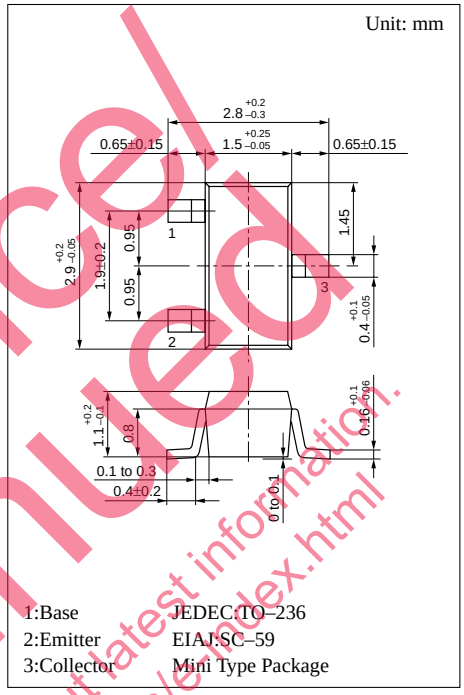
2SD1679

Silicon NPN epitaxial planer type

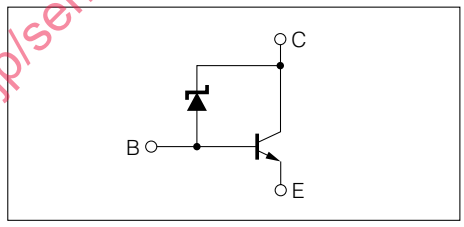
For low-frequency output amplification



1:Base JEDEC:TO–236
2:Emitter EIAJ:SC–59
3:Collector Mini Type Package

Marking symbol : N

Internal Connection



Features

- 18V zener diode is built in between collector and base.
- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- High foward current transfer ratio h_{FE}.
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	18±5	V
Collector to emitter voltage	V_{CEO}	18±5	V
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	1	A
Collector current	I_C	0.5	A
Collector power dissipation	P_C	200	mW
Junction temperature	T_j	150	˚C
Storage temperature	T_{stg}	–55 ~ +150	˚C

Electrical Characteristics (Ta=25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 5V, I_E = 0			100	nA
Collector to base voltage	V_{CBO}	I_C = 10μA, I_E = 0	13		23	V
Collector to emitter voltage	V_{CEO}	I_C = 1mA, I_B = 0	13		23	V
Emitter to base voltage	V_{EBO}	I_E = 10μA, I_C = 0	5			V
Forward current transfer ratio	h_{FE}*1	V_{CE} = 2V, I_C = 0.5A*2	200		800	
Collector to emitter saturation voltage	$V_{CE(sat)}$	I_C = 0.5A, I_B = 20mA*2		0.13	0.4	V
Base to emitter saturation voltage	$V_{BE(sat)}$	I_C = 0.5A, I_B = 50mA*2		0.92	1.2	V
Transition frequency	f_T	V_{CB} = 10V, I_E = –30mA, f = 200MHz		170		MHz

*2 Pulse measurement

*1h_{FE} Rank classification

Rank	R	S	T
h_{FE}	200 ~ 350	300 ~ 500	400 ~ 800
Marking Symbol	NR	NS	NT

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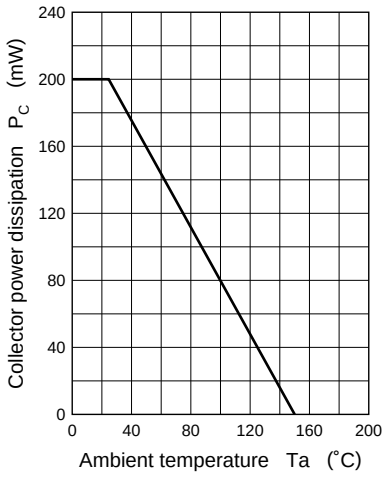
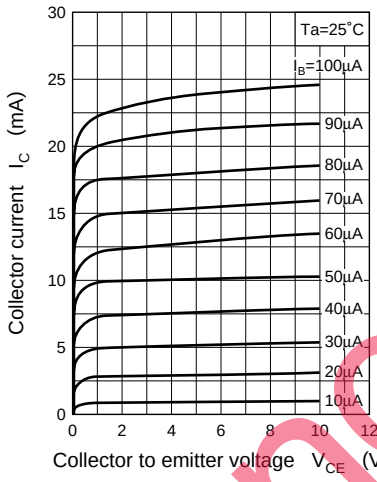
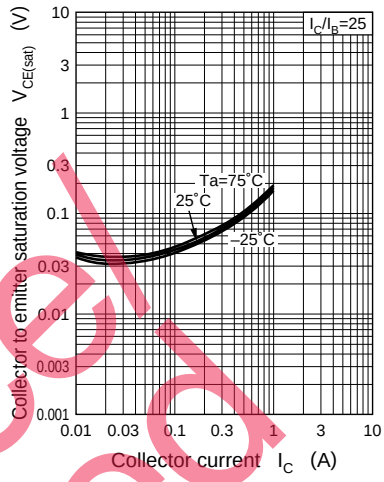
P_C — Ta



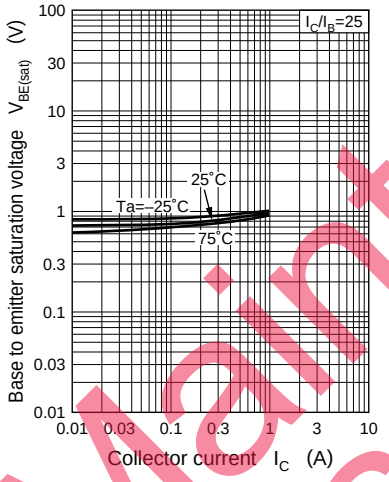
I_C — V_{CE}



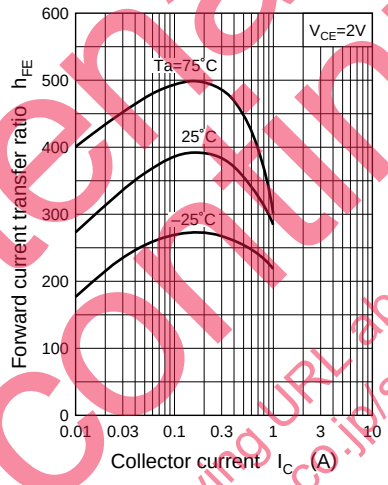
$V_{CE(sat)}$ — I_C



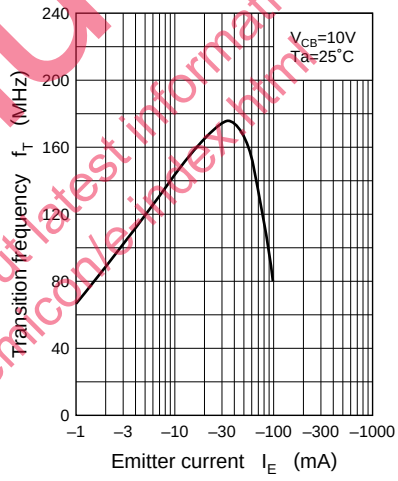
$V_{BE(sat)}$ — I_C



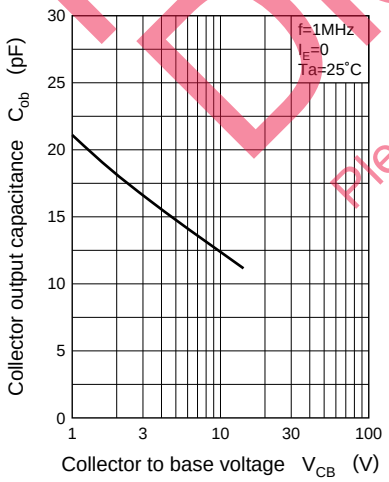
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



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