

2SD1679

Silicon NPN epitaxial planer type

For low-frequency output amplification

Features

- 18V zener diode is built in between collector and base.
- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- High forward 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

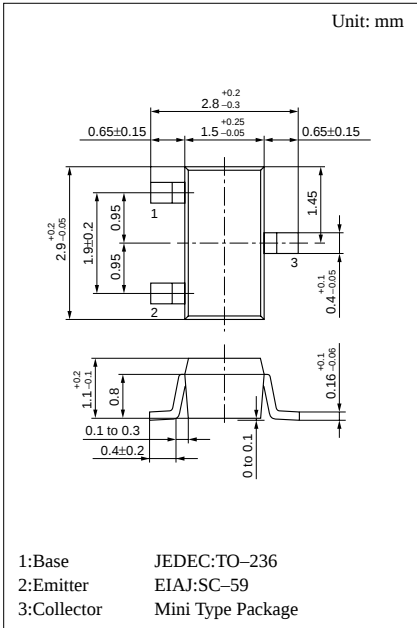
Electrical Characteristics (Ta=25°C)

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}	$I_C = 10\mu A, I_E = 0$	13		23	V
Collector to emitter voltage	V_{CEO}	$I_C = 1mA, I_B = 0$	13		23	V
Emitter to base voltage	V_{EBO}	$I_E = 10\mu A, I_C = 0$	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

^{*1} h_{FE} Rank classification

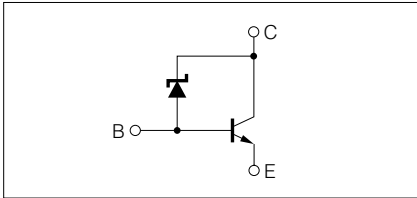
Rank	R	S	T
h_{FE}	200 ~ 350	300 ~ 500	400 ~ 800
Marking Symbol	NR	NS	NT

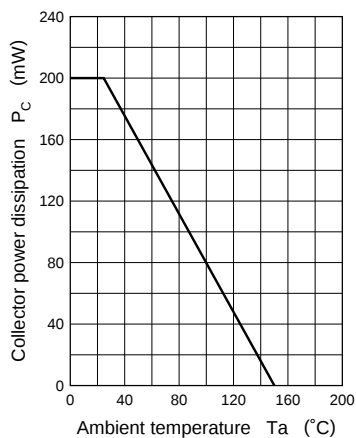
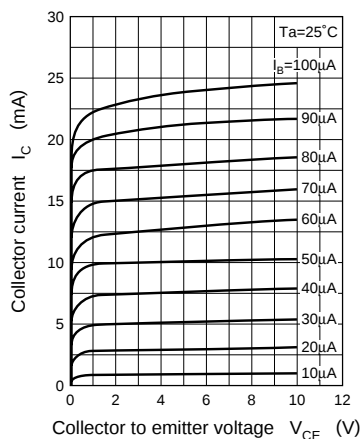
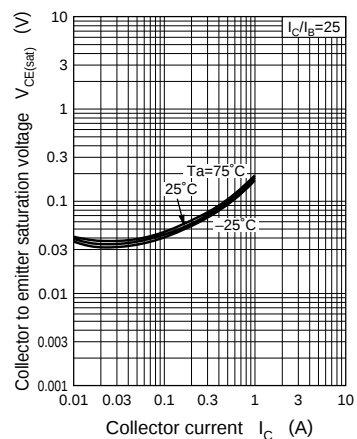
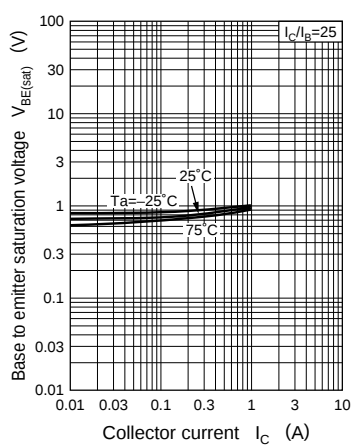
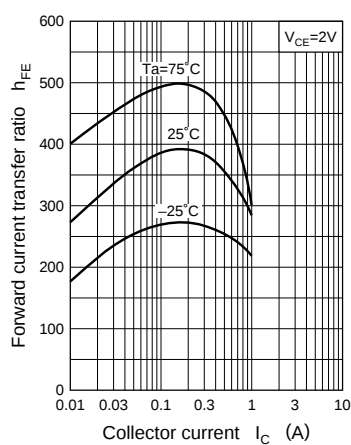
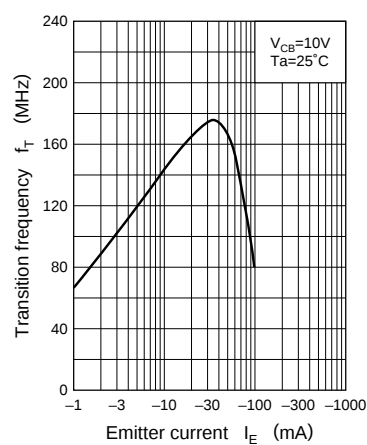
^{*2} Pulse measurement



Marking symbol : N

Internal Connection



$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 