

2SD2018

Silicon NPN Epitaxial Planar Darlington Type

AF Amplifier

■ Features

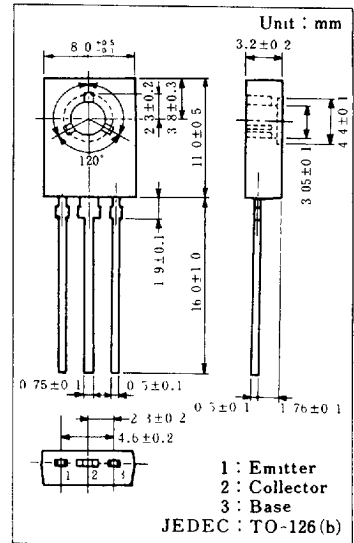
- High f_{FE}
- 60V Zener diode built-in between C and B
- Darlington connection

■ Absolute Maximum Ratings (Ta=25°C)

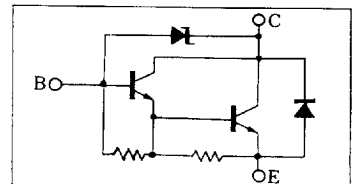
Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	60^{+25}_{-10}	V
Collector-emitter voltage	V_{CEO}	60^{+25}_{-10}	V
Emitter-base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	1.5	A
Collector current	I_C	1	A
Collector power dissipation	P_C	1.2	W
		5.0*	
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 ~ +150	°C

* With the $100 \times 100 \times 2\text{mm}$ Al cooling, at $T_a = 25^\circ\text{C}$

■ Package Dimensions



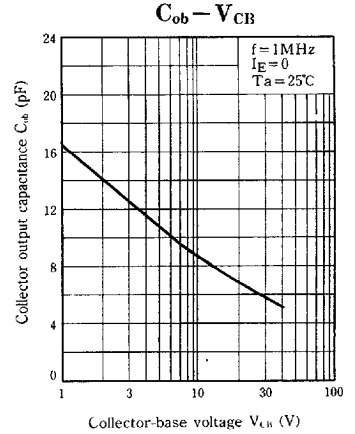
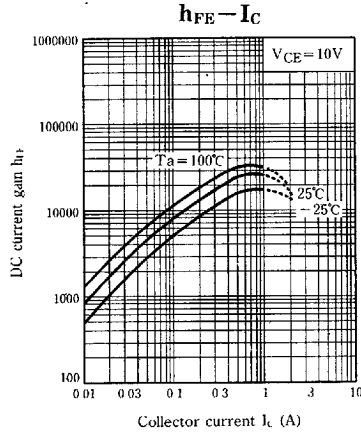
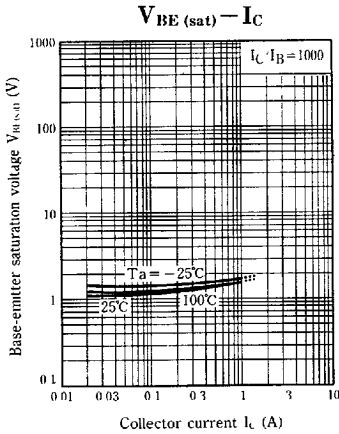
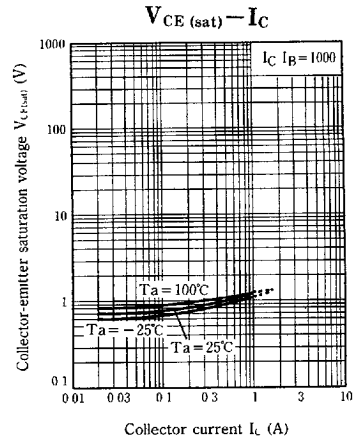
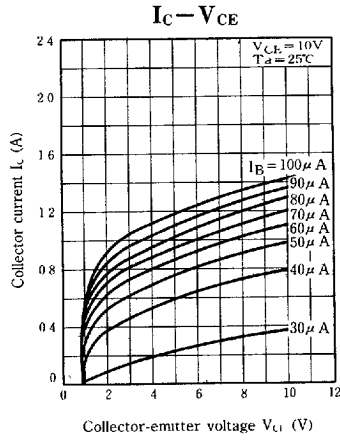
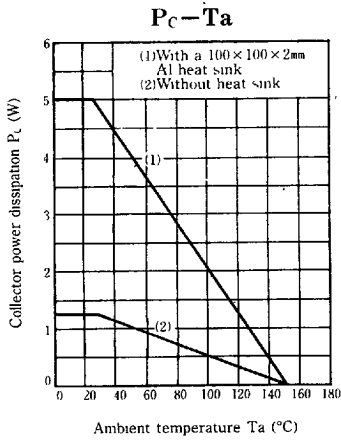
■ Inner Circuit



■ Electrical Characteristics (Tc=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 25\text{V}, I_E = 0$			1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$			2	mA
Collector-base voltage	V_{CBO}	$I_C = 100\mu\text{A}, I_E = 0$	50		85	V
Collector-emitter voltage	V_{CEO}	$I_C = 1\text{mA}, I_B = 0$	50		85	V
DC current gain	h_{FE}	$V_{CE} = 10\text{V}, I_C = 1.0\text{A}$	6500		40000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1.0\text{A}, I_B = 1.0\text{mA}$			1.8	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1.0\text{A}, I_B = 1.0\text{mA}$			2.2	V
Transition frequency	f_T	$V_{CB} = 10\text{V}, I_E = -50\text{mA}, f = 200\text{MHz}$		150		MHz

6932852 0016928 595



6932852 0016929 421