

2SD1640

Silicon NPN Epitaxial Planar Darlington Type

AF Output Amplifier

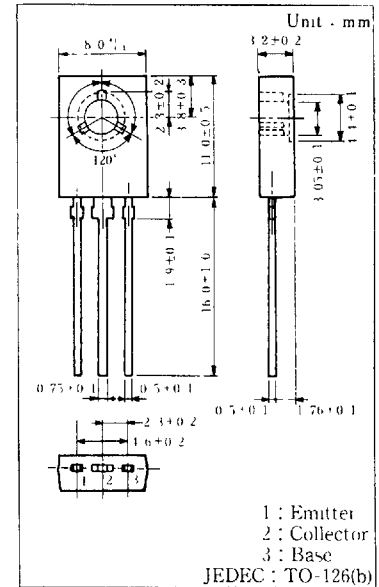
■ Features

- Darlington connection
- High DC current gain (h_{FE})
- High collector current (I_C)
- High collector-emitter voltage (V_{CE0})

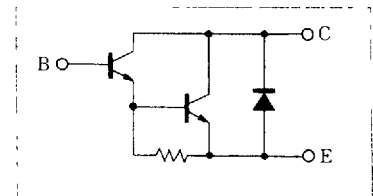
■ Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	120	V
Collector-emitter voltage	V_{CE0}	100	V
Emitter-base voltage	V_{EB0}	5	V
Peak collector current	I_{CP}	3	A
Collector current	I_C	2	A
Collector power dissipation	P_C	1.2	W
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +150$	$^\circ\text{C}$

■ Package Dimensions



■ Inner Circuit



■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min	typ	max	Unit
Collector cutoff current	I_{CB0}	$V_{CB} = 25\text{ V}, I_E = 0$			0.1	μA
Emitter cutoff current	I_{EB0}	$V_{EB} = 4\text{ V}, I_C = 0$			1	μA
Collector-base voltage	V_{CB0}	$I_C = 100\text{ }\mu\text{A}, I_E = 0$	120			V
Collector-emitter voltage	V_{CE0}	$I_C = 1\text{ mA}, I_E = 0$	100			V
Emitter-base voltage	V_{EB0}	$I_E = 100\text{ }\mu\text{A}, I_C = 0$	5			V
DC current gain	h_{FE}^{*1}	$V_{CE} = 10\text{ V}, I_C \approx 1\text{ A}^{*2}$	4000		40000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1\text{ A}, I_E = 1\text{ mA}^{*2}$			1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1\text{ A}, I_E = 1\text{ mA}^{*2}$			2	V
Transition frequency	f_T	$V_{CB} = 10\text{ V}, I_E = -50\text{ mA}, f = 200\text{ MHz}$		150		MHz

*1: h_{FE} 測定

*1 h_{FE} Classifications

Class	Q	R	S
h_{FE}	4000 ~ 10000	8000 ~ 20000	16000 ~ 40000

6932852 0016782 78T

