

**2SD1981****Driver Applications****Applications**

- Motor drivers, printer hammer drivers, relay drivers, voltage regulator control.

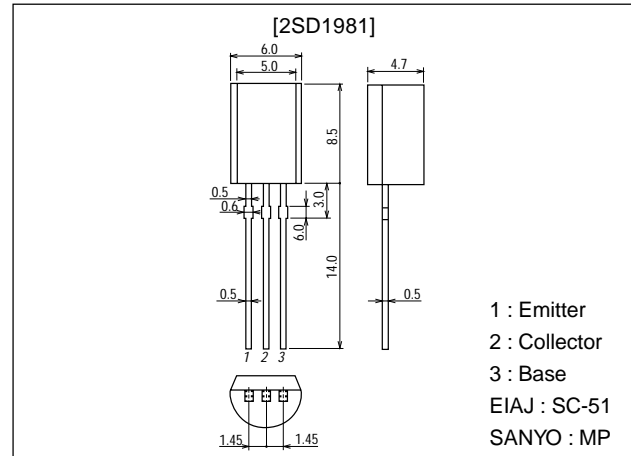
**Features**

- Darlington connection (on-chip bias resistance, damper diode).
- High DC current gain.
- Low dependence of DC current gain on temperature.

**Package Dimensions**

unit:mm

2006B

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		100	V
Collector-to-Emitter Voltage	$V_{CE0}$		80	V
Emitter-to-Base Voltage	$V_{EBO}$		6	V
Collector Current	$I_C$		2	A
Collector Current (Pulse)	$I_{CP}$		4	A
Collector Dissipation	$P_C$		1	W
Junction Temperature	$T_J$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

**Electrical Characteristics at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			10	$\mu A$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			2.5	mA
DC Current Gain	$h_{FE1}$	$V_{CE}=3V, I_C=500mA$	1000			
	$h_{FE2}$	$V_{CE}=3V, I_C=1A$	2000	7000	30000	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=1A, I_B=2mA$		1.0	1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=1A, I_B=2mA$		1.6	2.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	100			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=25mA, R_{BE}=\infty$	80			V

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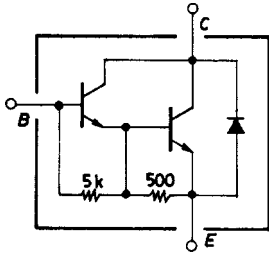
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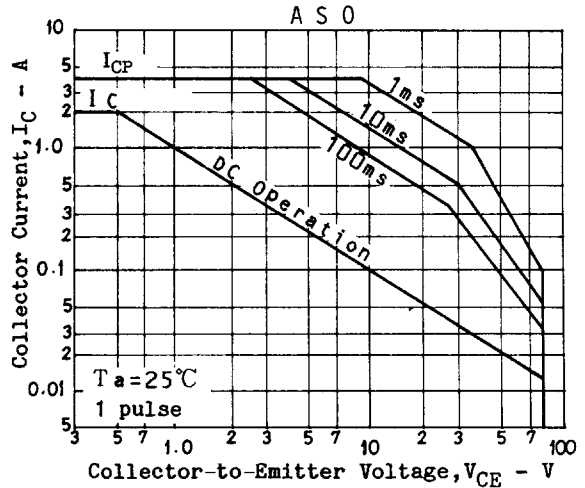
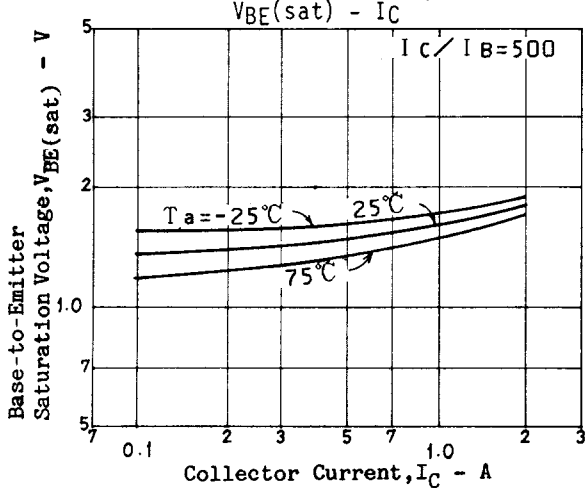
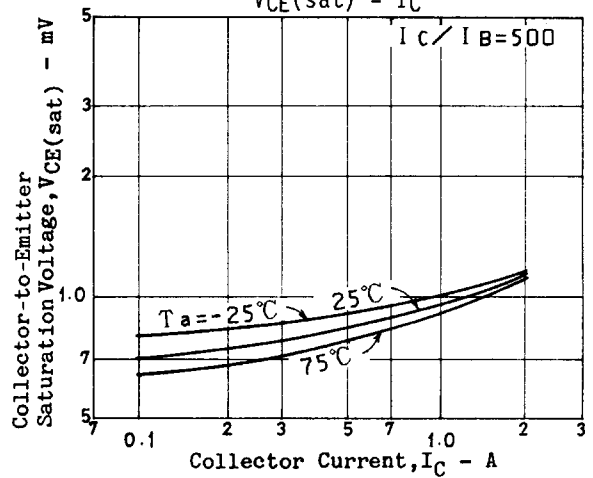
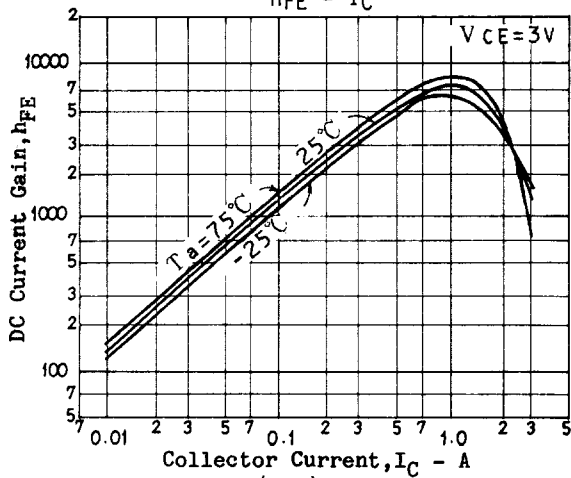
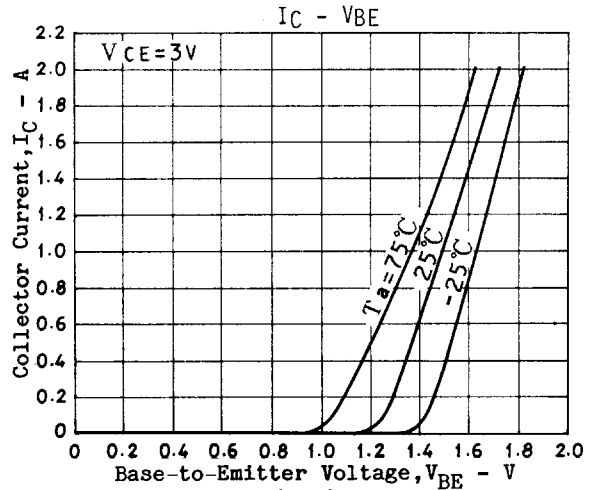
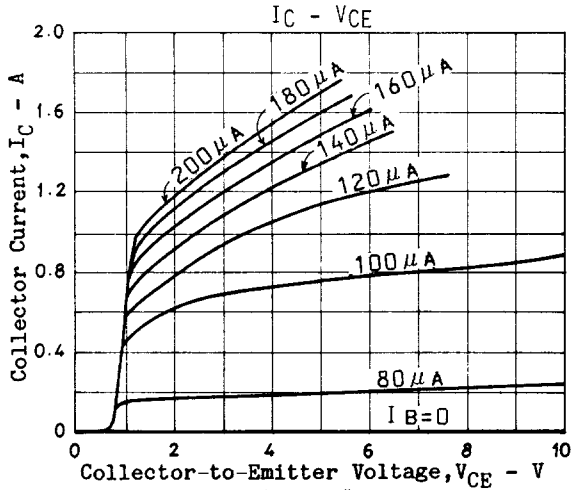
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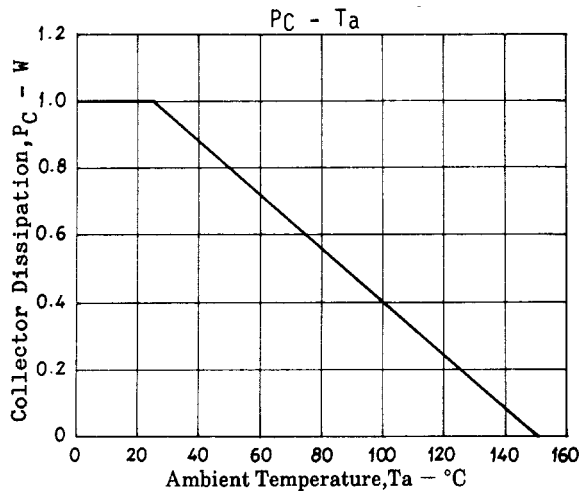
## Electrical Connection



Unit (resistance :  $\Omega$ )



## 2SD1981



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