

<b>SANYO</b>	No.2507	2SD1953
	NPN Epitaxial Planar Type Silicon Transistor	
DRIVER APPLICATIONS		

**Applications**

- . Motor drivers, printer hammer drivers, relay drivers

**Features**

- . Darlington connection
- . High DC current gain
- . Low dependence of DC current gain on temperature

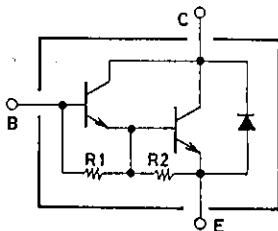
**Absolute Maximum Ratings at Ta=25°C**

			unit
Collector-to-Base Voltage	V <sub>CB0</sub>	120	V
Collector-to-Emitter Voltage	V <sub>CE0</sub>	120	V
Emitter-to-Base Voltage	V <sub>EB0</sub>	6	V
Collector Current	I <sub>C</sub>	1.5	A
Peak Collector Current	i <sub>cp</sub>	3	A
Collector Dissipation	P <sub>C</sub>	1	W
		10	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

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

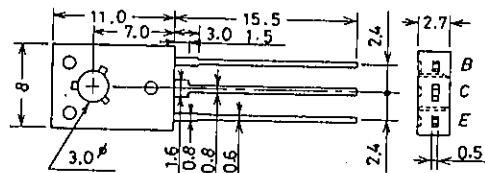
			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> =100V, I <sub>E</sub> =0			10	μA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0			2.5	mA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> =3V, I <sub>C</sub> =0.5A	1000			
	h <sub>FE</sub> (2)	V <sub>CE</sub> =3V, I <sub>C</sub> =1A	2000	30000		
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =2mA			1.5	V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =1A, I <sub>B</sub> =2mA			2.0	V
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	120			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =10mA, R <sub>BE</sub> =∞	120			V

**Electrical Connection**



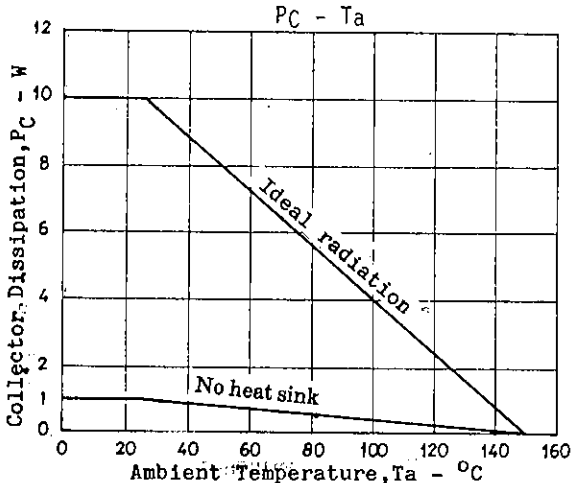
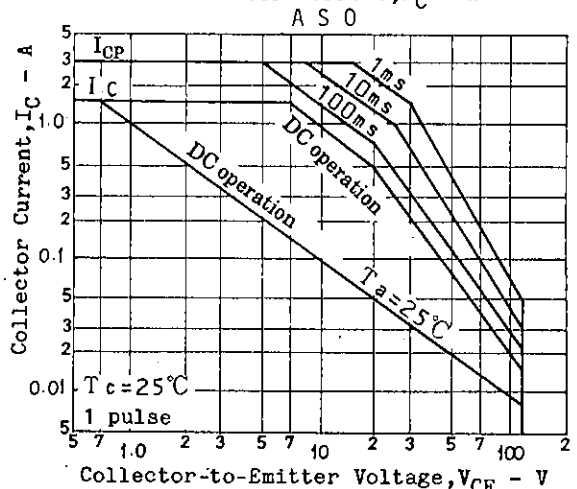
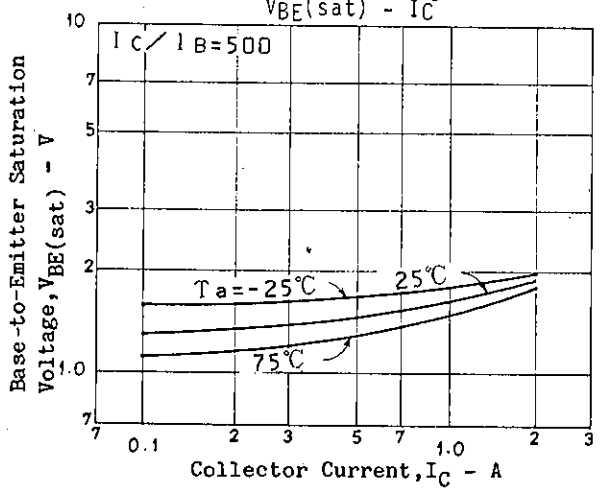
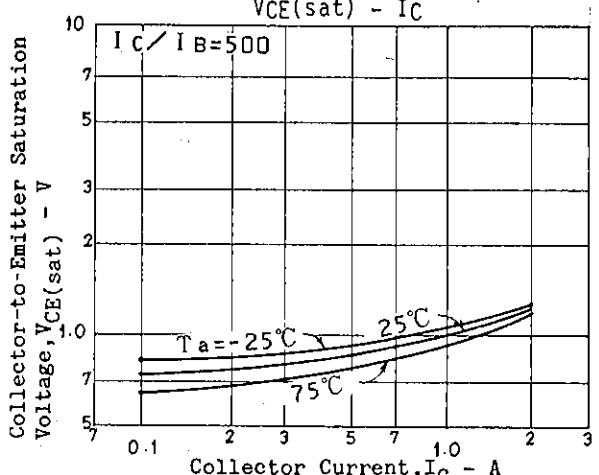
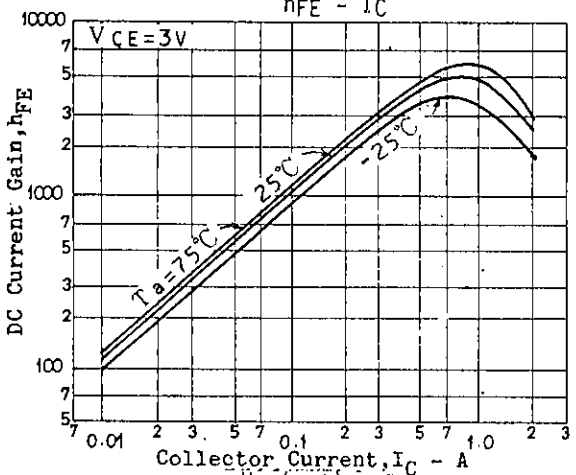
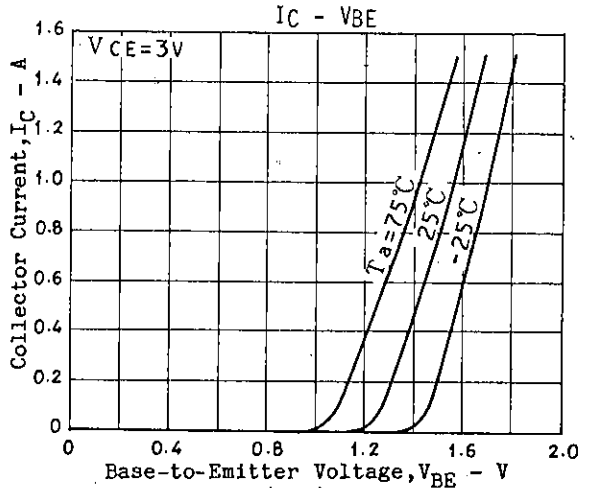
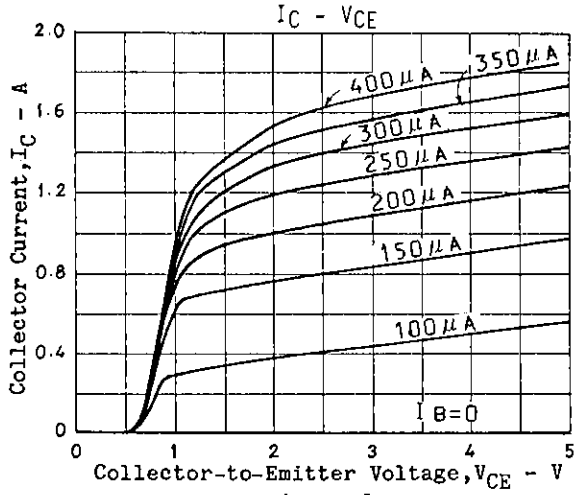
R1 ≅ 5kΩ  
R2 ≅ 500Ω

**Package Dimensions 2009A**  
(unit:mm)



JEDEC: TO-126

B: Base  
C: Collector  
E: Emitter



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