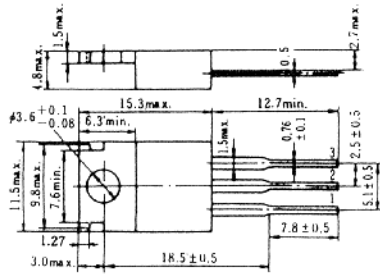


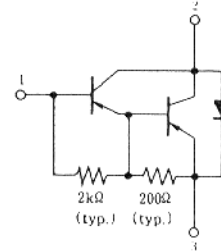
## 2SB791 (K)

SILICON PNP EPITAXIAL

MEDIUM SPEED AND POWER SWITCHING  
COMPLEMENTARY PAIR WITH 2SD970 (K)



1. Base
  2. Collector (Flange)
  3. Emitter
- (Dimensions in mm)



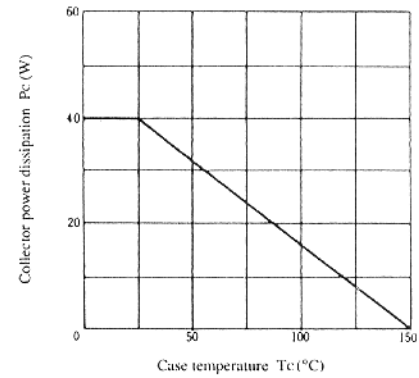
(JEDEC TO-220AB)

### ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SB791 (K)	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>	-7	V
Collector current	I <sub>C</sub>	-8	A
Collector peak current	i <sub>C(peak)</sub>	-12	A
Collector power dissipation	P <sub>C*</sub>	40	W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\* Value at T<sub>C</sub> = 25°C

### MAXIMUM COLLECTOR DISSIPATION CURVE

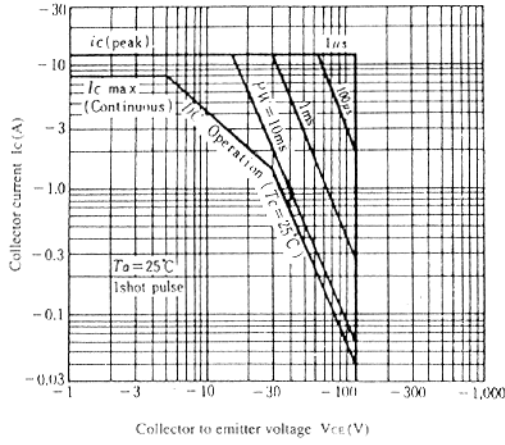


### ■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

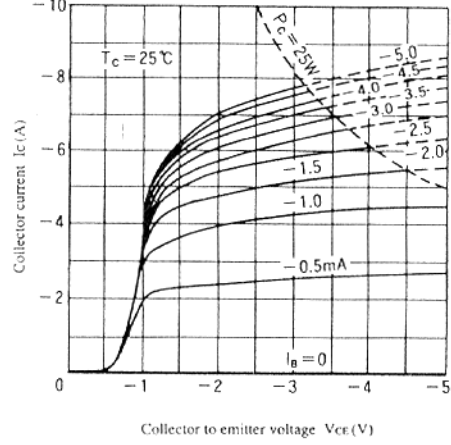
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -25mA, R <sub>BE</sub> = ∞	-120	—	—	V
Emitter to base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -50mA, I <sub>C</sub> = 0	-7	—	—	V
Collector cutoff current	I <sub>CB0</sub>	V <sub>CB</sub> = -120V, I <sub>E</sub> = 0	—	—	-100	μA
	I <sub>CE0</sub>	V <sub>CE</sub> = -100V, R <sub>BE</sub> = ∞	—	—	-10	μA
DC current transfer ratio	h <sub>FE</sub>	V <sub>CE</sub> = -3V, I <sub>C</sub> = -4A*	1000	—	20000	
Collector to emitter saturation voltage	V <sub>CE(sat)(1)</sub>	I <sub>C</sub> = -4A, I <sub>B</sub> = -8mA*	—	—	-1.5	V
	V <sub>CE(sat)(2)</sub>	I <sub>C</sub> = -8A, I <sub>B</sub> = -80mA*	—	—	-3.0	V
Base to emitter saturation voltage	V <sub>BE(sat)(1)</sub>	I <sub>C</sub> = -4A, I <sub>B</sub> = -8mA*	—	—	-2.0	V
	V <sub>BE(sat)(2)</sub>	I <sub>C</sub> = -8A, I <sub>B</sub> = -80mA*	—	—	-3.5	V
Turn on time	t <sub>on</sub>	I <sub>C</sub> = -4A, I <sub>B1</sub> = I <sub>B2</sub> = -8mA	—	0.5	—	μs
Storage time	t <sub>stg</sub>		—	1.6	—	μs
Fall time	t <sub>f</sub>		—	1.5	—	μs

\* Pulse Test

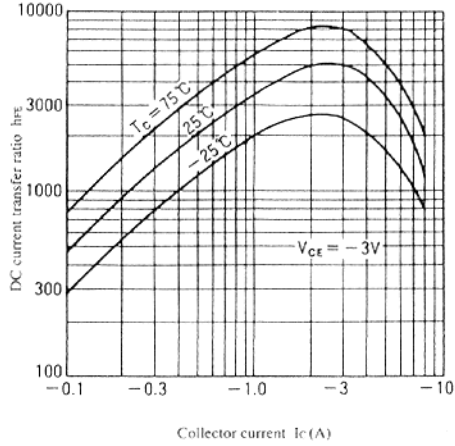
AREA OF SAFE OPERATION



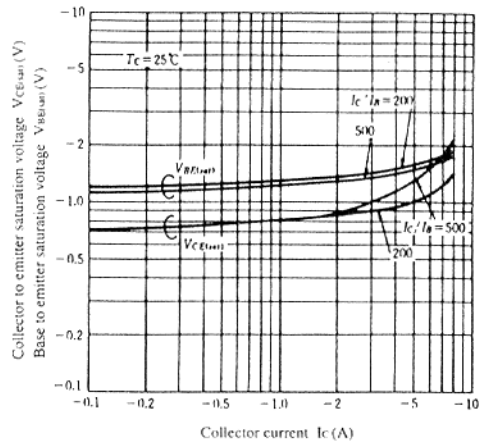
TYPICAL OUTPUT CHARACTERISTICS



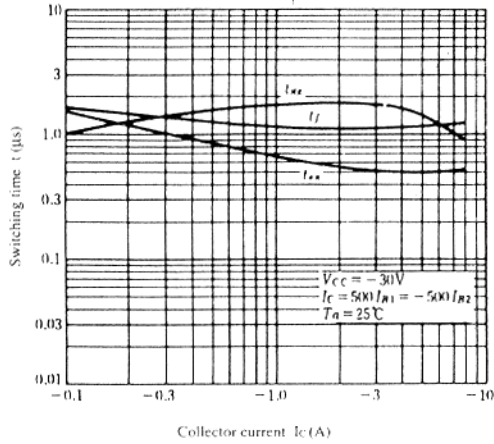
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT



TRANSIENT THERMAL RESISTANCE

