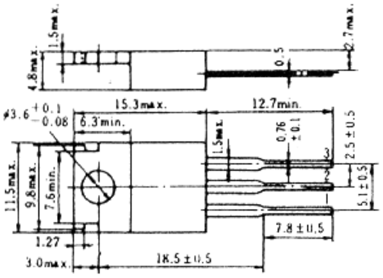
HITACHI

2SB727Ⓚ

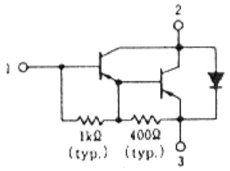
SILICON PNP EPITAXIAL

MEDIUM SPEED AND POWER SWITCHING
COMPLEMENTARY PAIR WITH 2SD768Ⓚ



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

(JEDEC TO-220AB)

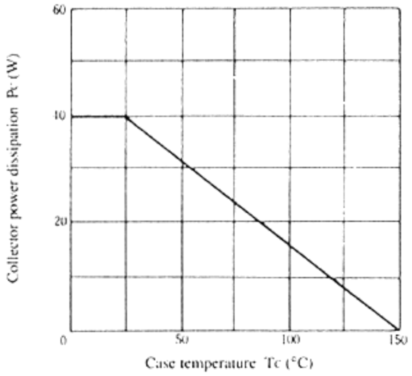


■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SB727Ⓚ	Unit
Collector to base voltage	V_{CBO}	−120	V
Collector to emitter voltage	V_{CEO}	−120	V
Emitter to base voltage	V_{EBO}	−7	V
Collector current	I_C	−6	A
Collector peak current	$i_{C(peak)}$	−10	A
Collector power dissipation	P_C*	40	W
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	−55 to +150	°C

* Value at Tc = 25°C

MAXIMUM COLLECTOR DISSIPATION CURVE



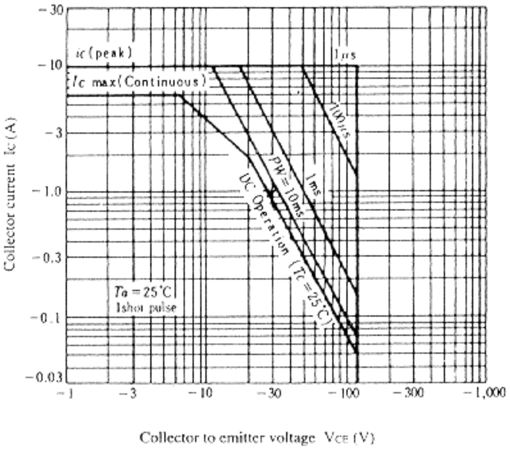
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -25mA$, $R_{BE} = \infty$	−120	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = -50mA$, $I_C = 0$	−7	—	—	V
Collector cutoff current	I_{CBO}	$V_{CB} = -120V$, $I_E = 0$	—	—	−100	μA
	I_{CEO}	$V_{CE} = -100V$, $R_{BE} = \infty$	—	—	−10	μA
DC current transfer ratio	h_{FE}	$V_{CE} = -3V$, $I_C = -3A$*	1000	—	20000	
Collector to emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -3A$, $I_B = -6mA$*	—	—	−1.5	V
	$V_{CE(sat)2}$	$I_C = -6A$, $I_B = -60mA$*	—	—	−3.0	V
Base to emitter saturation voltage	$V_{BE(sat)1}$	$I_C = -3A$, $I_B = -6mA$*	—	—	−2.0	V
	$V_{BE(sat)2}$	$I_C = -6A$, $I_B = -60mA$*	—	—	−3.5	V
Turn on time	t_{on}	$I_C = -3A$, $I_{B1} = -I_{B2} = -6mA$	—	1.0	—	μs
Turn off time	t_{off}		—	3.0	—	μs

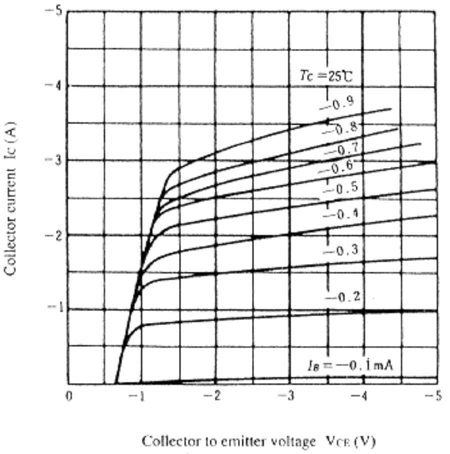
* Pulse Test

2SB727Ⓚ

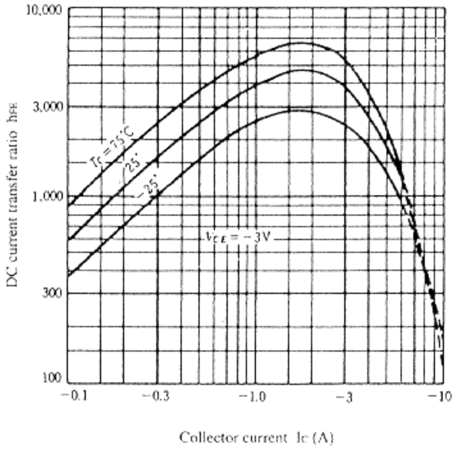
AREA OF SAFE OPERATION



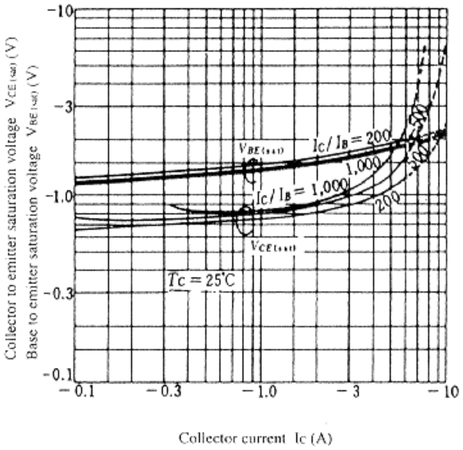
TYPICAL OUTPUT CHARACTERISTICS



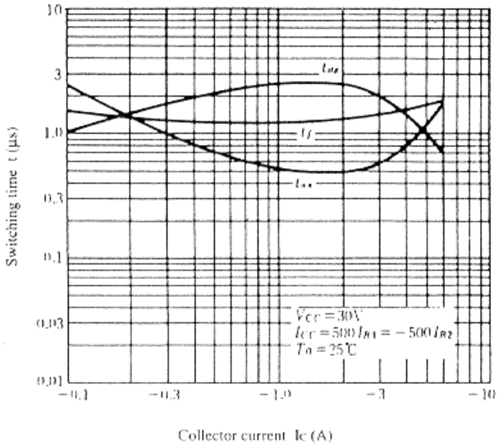
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT



TRANSIENT THERMAL RESISTANCE