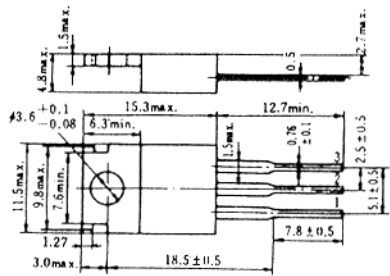
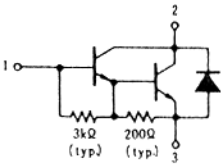


2SD768(K)

SILICON NPN EPITAXIAL
MEDIUM SPEED AND POWER SWITCHING
COMPLEMENTARY PAIR WITH 2SB727(K)



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



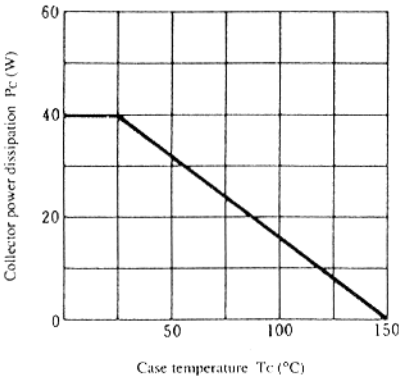
(JEDEC TO-220AB)

■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Item	Symbol	2SD768(K)	Unit
Collector to base voltage	V _{CB0}	120	V
Collector to emitter voltage	V _{CE0}	120	V
Emitter to base voltage	V _{EB0}	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 T_C = 25°C.

MAXIMUM COLLECTOR DISSIPATION
CURVE

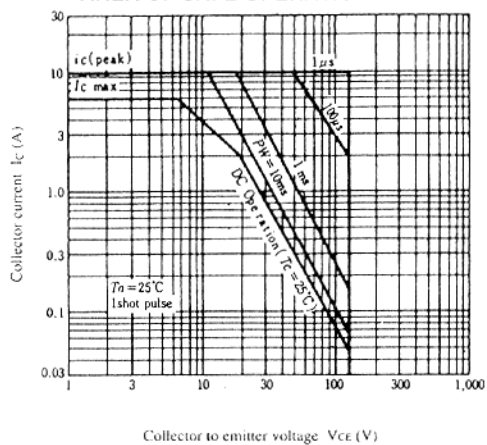


■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

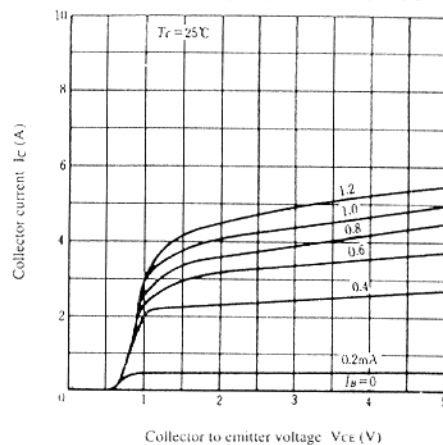
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter breakdown voltage	V _{(BR)CEO}	I _C = 25mA, R _{BE} = ∞	120	—	—	V
Emitter to base breakdown voltage	V _{(BR)EBO}	I _E = 50mA, I _C = 0	7	—	—	V
Collector cutoff current	I _{CBO}	V _{CB} = 120V, I _E = 0	—	—	100	μA
	I _{CEO}	V _{CE} = 100V	—	—	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	V
Base to emitter saturation voltage	V _{BE(sat)1}	I _C = 3A, I _B = 6mA*	—	—	2	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}	I _C = 3A, I _{B1} = -I _{B2} = 6mA	—	3.0	—	μs

* Pulse Test.

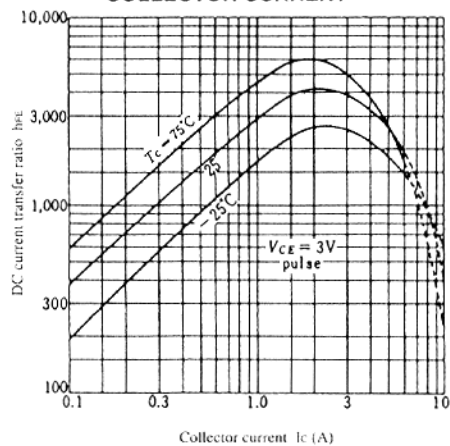
AREA OF SAFE OPERATION



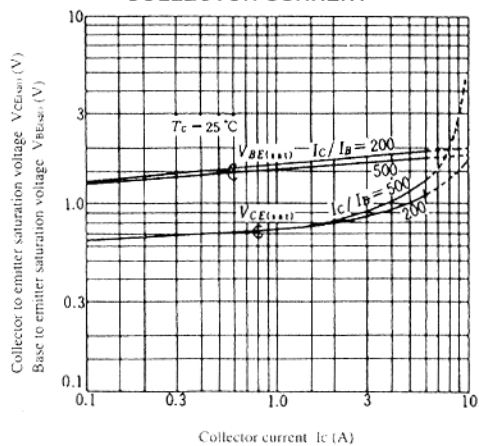
TYPICAL OUTPUT CHARACTERISTICS



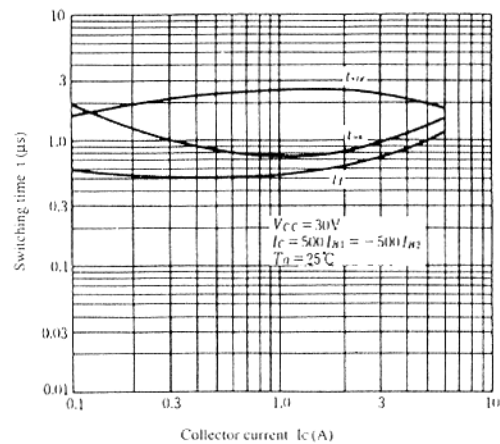
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT



SWITCHING TIME VS. COLLECTOR CURRENT



TRANSIENT THERMAL RESISTANCE

