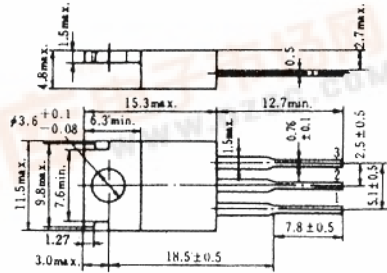
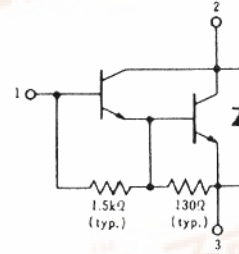


# 2SD1127(K)

SILICON NPN TRIPLE DIFFUSED  
POWER SWITCHING



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



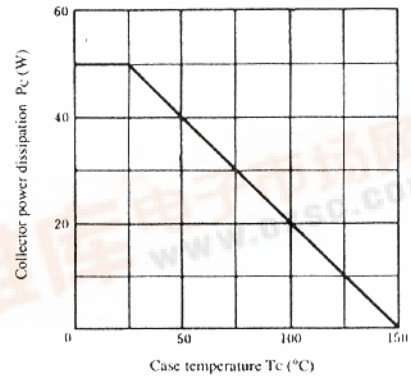
(JEDEC TO-220AB)

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

Item	Symbol	2SD1127(K)	Unit
Collector to base voltage	V <sub>CB0</sub>	120	V
Collector to emitter voltage	V <sub>CEO</sub>	120	V
Emitter to base voltage	V <sub>EBO</sub>	7	V
Collector current	I <sub>C</sub>	10	A
Collector peak current	i <sub>C(peak)</sub>	15	A
Collector power dissipation	P <sub>C*</sub>	50	W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C
C to E diode forward current	I <sub>D*</sub>	10	A

\* Value at T<sub>c</sub> = 25°C.

### MAXIMUM CHANNEL DISSIPATION CURVE



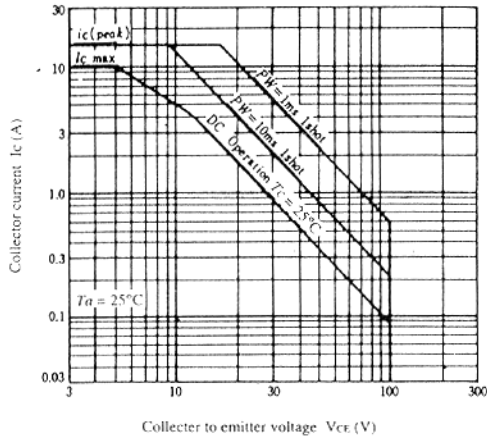
### ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter sustain voltage	V <sub>CEO(sus)</sub>	I <sub>C</sub> = 200mA, R <sub>BE</sub> = ∞	120	—	—	V
Emitter to base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 200mA, I <sub>C</sub> = 0	7	—	—	V
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = 120V, I <sub>E</sub> = 0	—	—	100	μA
DC current transfer ratio	h <sub>FE</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 10A*	1000	—	—	
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 10A, I <sub>B</sub> = 2.5mA*	—	—	1.5	V
Base to emitter saturation voltage	V <sub>BE(sat)</sub>		—	—	2.0	V
Turn on time	t <sub>on</sub>	I <sub>C</sub> = 5A, I <sub>B1</sub> = -I <sub>B2</sub> = 10mA	—	0.8	—	μs
Turn off time	t <sub>off</sub>		—	8.0	—	μs

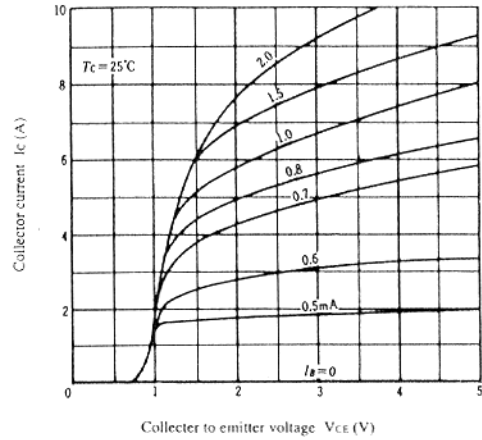
\* Pulse Test.

## 2SD1127

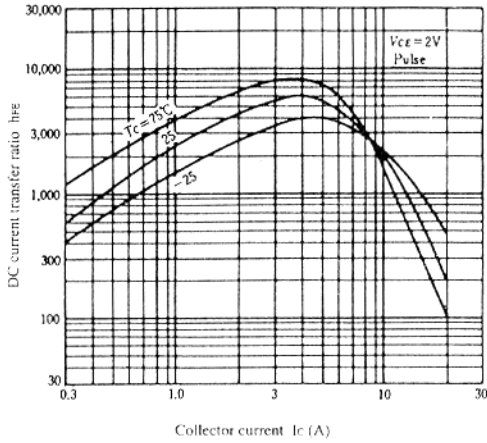
AREA OF SAFE OPERATION



TYPICAL OUTPUT CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT

