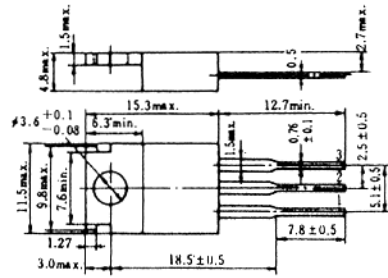
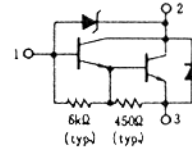


## 2SD1113K

SILICON NPN TRIPLE DIFFUSED  
IGNITER



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



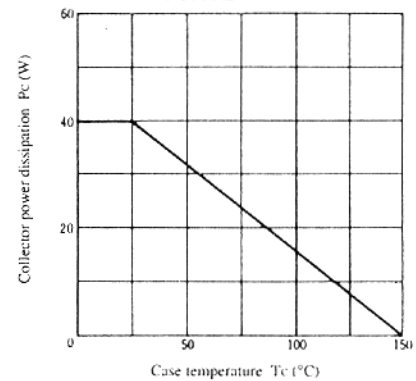
(JEDEC TO-220AB)

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

Item	Symbol	2SD1113K	Unit
Collector to base voltage	V <sub>CB0</sub>	300	V
Collector to emitter voltage	V <sub>CE0</sub>	300	V
Emitter to base voltage	V <sub>EB0</sub>	7	V
Collector current	I <sub>C</sub>	6	A
Collector peak current	i <sub>C(peak)</sub>	10	A
Collector power dissipation	P <sub>C</sub> *	40	W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>sig</sub>	-55 to +150	°C

\* Value at T<sub>C</sub> = 25°C.

### MAXIMUM COLLECTOR DISSIPATION CURVE

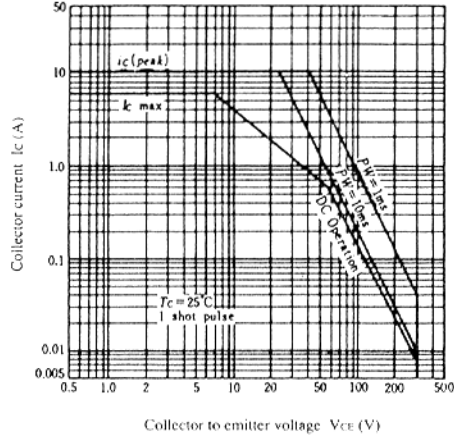


### ■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

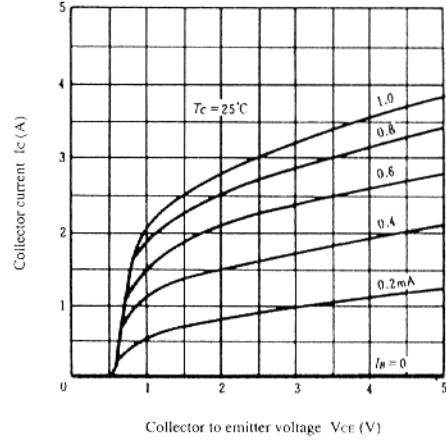
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 0.1mA, I <sub>E</sub> = 0	300	—	500	V
Collector to emitter sustain voltage	V <sub>CE0(sus)</sub>	I <sub>C</sub> = 3A, P <sub>W</sub> = 50μs, f = 50Hz, L = 10mH	300	—	—	V
Emitter to 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>CEO</sub>	V <sub>CE</sub> = 300V, R <sub>BE</sub> = ∞	—	—	100	μA
DC current transfer ratio	h <sub>FE</sub>	V <sub>CE</sub> = 2V, I <sub>C</sub> = 4A*	500	—	—	
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 4A, I <sub>B</sub> = 40mA*	—	—	1.5	V
Base to emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 4A, I <sub>B</sub> = 40mA*	—	—	2.0	V
Turn on time	t <sub>on</sub>	I <sub>C</sub> = 4A, I <sub>B1</sub> = -I <sub>B2</sub> = 40mA	—	2.0	—	μs
Turn off time	t <sub>off</sub>	I <sub>C</sub> = 4A, I <sub>B1</sub> = -I <sub>B2</sub> = 40mA	—	23	—	μs

\* Pulse Test.

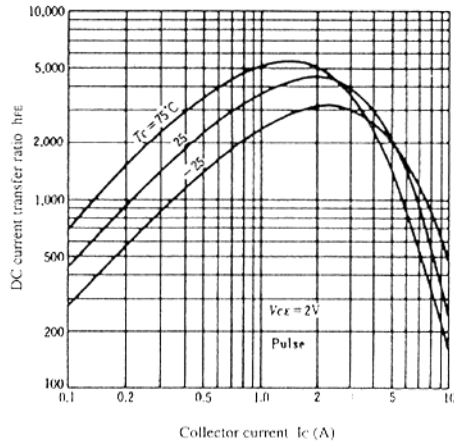
AREA OF SAFE OPERATION



TYPICAL OUTPUT CHARACTERISTICS



DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



SATURATION VOLTAGE VS. COLLECTOR CURRENT

