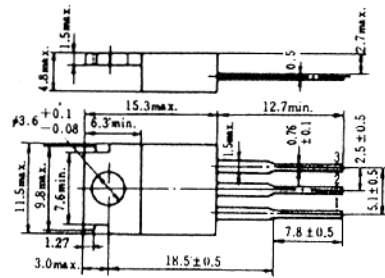


## 2SD1136

SILICON NPN TRIPLE DIFFUSED  
POWER SWITCHING  
TV HORIZONTAL DEFLECTION OUTPUT



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

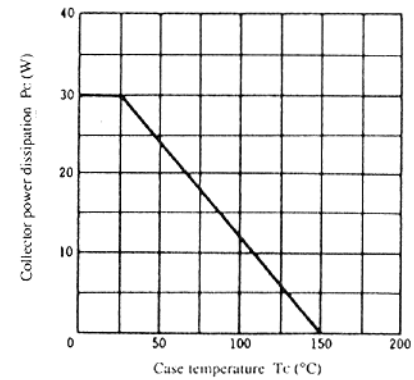
(JEDEC TO-220 AB)

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

Item	Symbol	2SD1136	Unit
Collector to base voltage	V <sub>CB0</sub>	200	V
Collector to emitter voltage	V <sub>CE0</sub>	80	V
Emitter to base voltage	V <sub>EB0</sub>	5	V
Collector current	I <sub>C</sub>	4	A
Collector peak current	i <sub>C(peak)</sub>	5	A
Collector surge current	I <sub>C(surge)</sub>	15	A
Collector power dissipation	P <sub>C</sub>	1.8	W
	P <sub>C*</sub>	30	W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-45 to +150	°C

\* Value at T<sub>C</sub> = 25°C.

### MAXIMUM COLLECTOR DISSIPATION CURVE



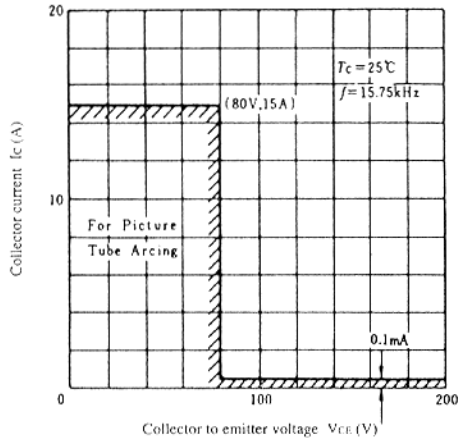
### ■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 1mA, I <sub>E</sub> = 0	200	—	—	V
Collector to emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 10mA, R <sub>BE</sub> = ∞	80	—	—	V
Emitter to base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = 1mA, I <sub>C</sub> = 0	5	—	—	V
Collector cutoff current	I <sub>CES</sub>	V <sub>CE</sub> = 150V, R <sub>BE</sub> = 0	—	—	1.0	mA
DC current transfer ratio	h <sub>FE</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 4A*	20	—	—	
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 4A, I <sub>B</sub> = 0.4A*	—	—	1.5	V
Base to emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 4A, I <sub>B</sub> = 0.4A*	—	—	1.5	V
Fall time	t <sub>f</sub>	I <sub>C</sub> = 3.5A, I <sub>B1</sub> = 0.45A, I <sub>B</sub> = 0	—	—	1.0	μs

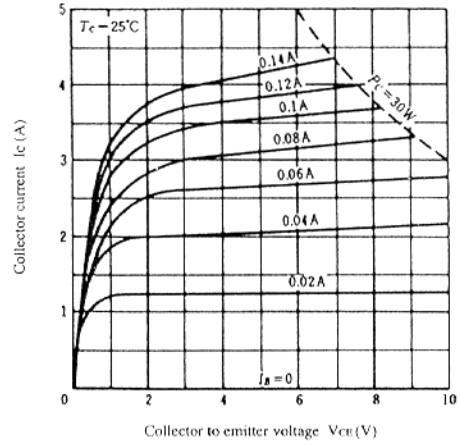
\* Pulse Test.

## 2SD1136

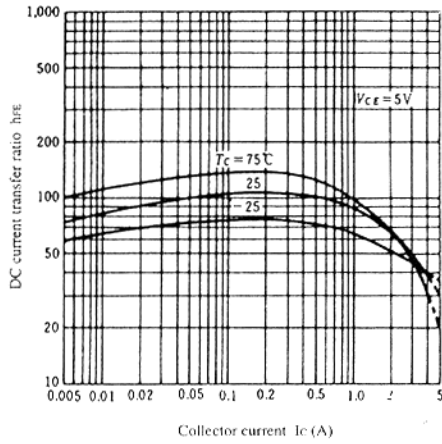
AREA OF SAFE OPERATION



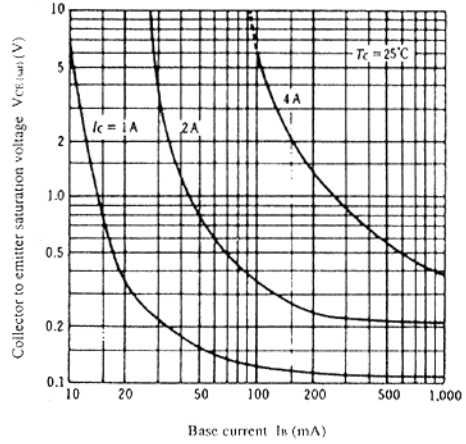
TYPICAL OUTPUT CHARACTERISTICS



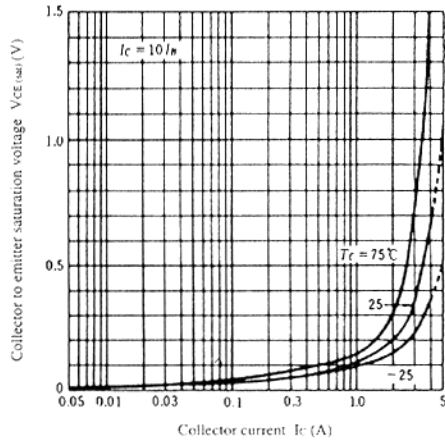
DC CURRENT TRANSFER RATIO VS. COLLECTOR CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. BASE CURRENT



COLLECTOR TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT



BASE TO EMITTER SATURATION VOLTAGE VS. COLLECTOR CURRENT

