

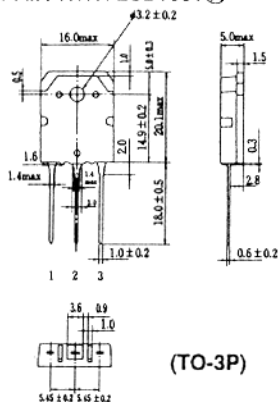
**2SD1435(K)**

SILICON NPN EPITAXIAL

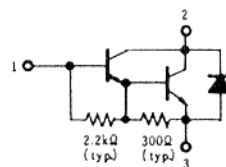
## LOW FREQUENCY POWER AMPLIFIER

## HIGH CURRENT SWITCHING

COMPLEMENTARY PAIR WITH 2SB1031 (K)



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

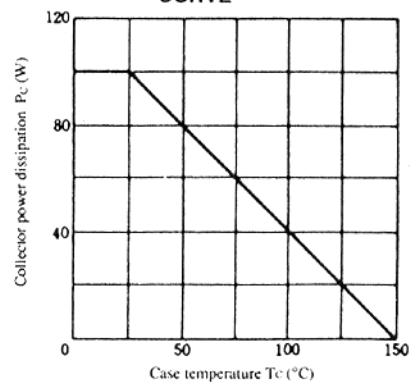


■ **ABSOLUTE MAXIMUM RATINGS** (Ta=25°C)

Item	Symbol	2SD1435	Unit
Collector to base voltage	V <sub>CB0</sub>	100	V
Collector to emitter voltage	V <sub>CE0</sub>	100	V
Emitter to base voltage	V <sub>EB0</sub>	7	V
Collector current	I <sub>C</sub>	15	A
Collector peak current	i <sub>C(peak)</sub>	20	A
Base current	I <sub>B</sub>	3	A
Collector power dissipation	P <sub>C*</sub>	100	W
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

\* Value at  $T_c = 25^\circ\text{C}$ .

### MAXIMUM COLLECTOR DISSIPATION CURVE

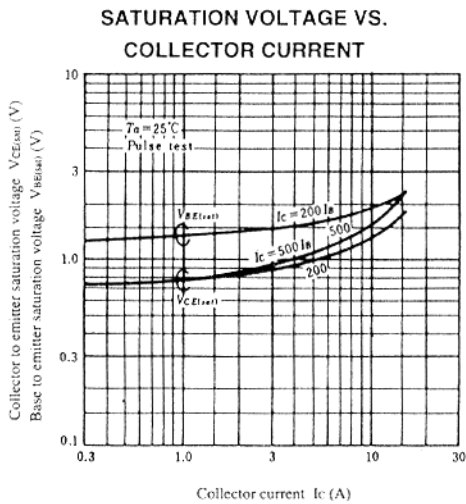
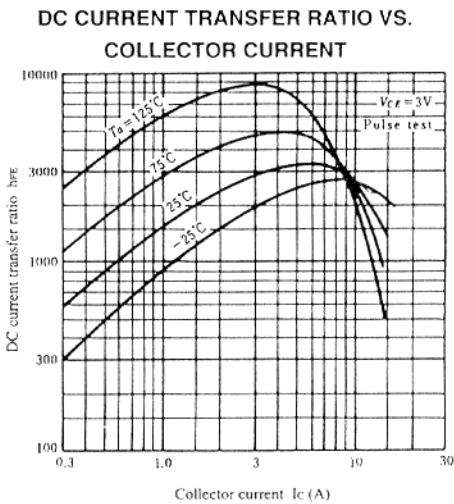
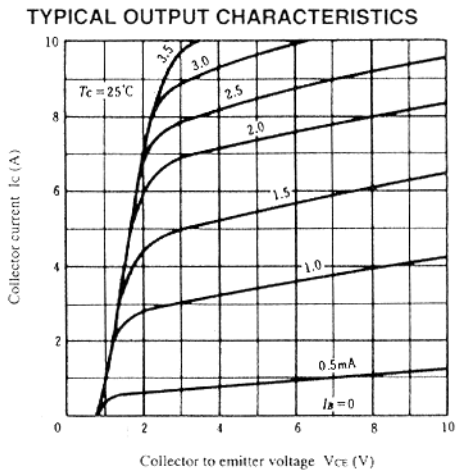
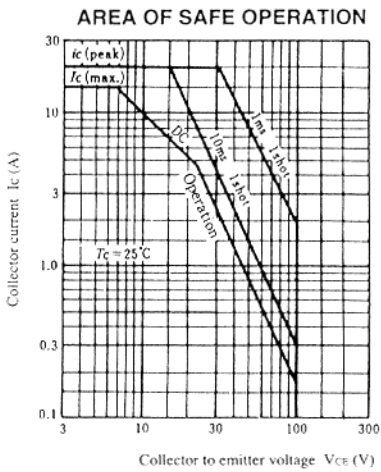


### ■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

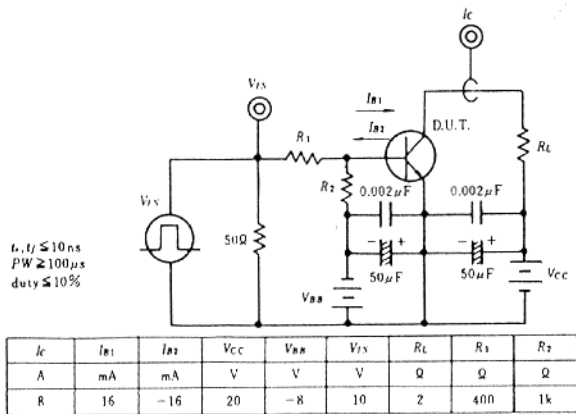
Item	Symbol	Test Condition	min.	typ.	max.	Unit
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	100	—	—	V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = 50\text{mA}, I_C = 0$	7	—	—	V
Collector to emitter sustain voltage	$V_{CEO(sus)}$	$I_C = 200\text{mA}, R_{BE} = \infty^*$	100	—	—	V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 100\text{V}, I_E = 0$	—	—	100	$\mu\text{A}$
	$I_{CEO}$	$V_{CE} = 80\text{V}, R_{BE} = \infty$	—	—	1.0	$\mu\text{A}$
DC current transfer ratio	$h_{FE}$	$V_{CE} = 3\text{V}, I_C = 8\text{A}^*$	1000	—	20000	
Collector to emitter saturation voltage	$V_{CE(sat)1}$	$I_C = 8\text{A}, I_B = 16\text{mA}^*$	—	—	2.0	V
Base to emitter saturation voltage	$V_{BE(sat)1}$		—	—	2.5	V
Collector to emitter saturation voltage	$V_{CE(sat)2}$	$I_C = 15\text{A}, I_B = 150\text{mA}^*$	—	—	3.0	V
Base to emitter saturation voltage	$V_{BE(sat)2}$		—	—	3.5	V
Turn on time	$t_{on}$	$I_C = 8\text{A}, I_{B1} = -I_{B2} = 16\text{mA}$	—	2	—	$\mu\text{s}$
Turn off time	$t_{off}$		—	8	—	$\mu\text{s}$

\* Pulse Test.

2SD1435



SWITCHING TIME TEST CIRCUIT



RESPONSE WAVEFORM

