



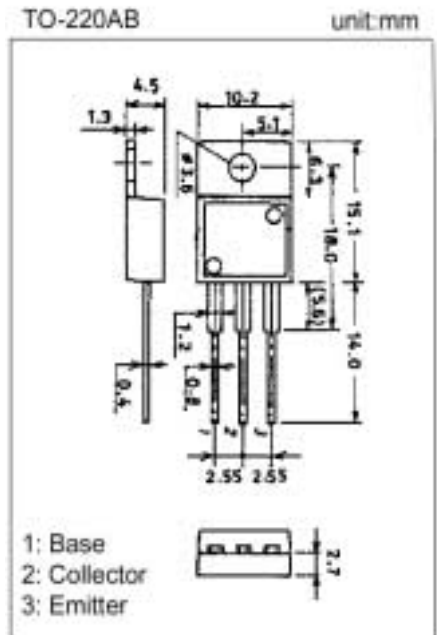
MJE13007

NPN SILICON TRANSISTOR

ELECTRONIC TRANSFORMERS ,  
POWER SWITCHING CIRCUIT

**ABSOLUTE MAXIMUM RATINGS (  $T_A=25^{\circ}C$  )**

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	700	V
Collector-Emitter Voltage	V <sub>CE0</sub>	400	V
Emitter-Base Voltage	V <sub>EB0</sub>	9	V
Collector Current	I <sub>c</sub>	8	A
Collector Power Dissipation (T <sub>c</sub> =25°C)	P <sub>c</sub>	80	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55~+150	°C



**ELECTRICAL CHARACTERISTICS (  $T_A = 25^{\circ}C$  )**

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	MAX.	UNIT
Collector-Emitter Sustaining Voltage	V <sub>CEO(sus)</sub>	I <sub>c</sub> =10mA, I <sub>B</sub> =0	400	-	V
Collector-Base Breakdown Voltage	V(BR)CBO	I <sub>E</sub> =0, I <sub>c</sub> =1mA	700	-	V
Emitter-Base Breakdown Voltage	V(BR)EBO	I <sub>E</sub> =1mA, I <sub>C</sub> =0	9	-	V
Collector Cut off current	I <sub>CB0</sub>	V <sub>CB</sub> =700V I <sub>E</sub> =0	-	10	μ A
Collector-Emitter Cut off Current	I <sub>CEO</sub>	V <sub>CE</sub> =400V I <sub>B</sub> =0	-	10	μ A
Emitter-Base Cut off Voltage	I <sub>EBO</sub>	V <sub>EB</sub> =7V I <sub>c</sub> =0	-	10	μ A
DC Current Gain	h <sub>FE1</sub>	V <sub>CE</sub> =5V, I <sub>c</sub> =2A,	8	50	-
	h <sub>FE2</sub>	V <sub>CE</sub> =5V, I <sub>c</sub> =5A,	5	30	-
Collector-Emitter Saturation Voltage	V <sub>CE(sat1)</sub>	I <sub>c</sub> =2A, I <sub>B</sub> =0.4A	-	1	V
	V <sub>CE(sat2)</sub>	I <sub>c</sub> =5A, I <sub>B</sub> =1A	-	2	V
	V <sub>CE(sat3)</sub>	I <sub>c</sub> =8A, I <sub>B</sub> =2A	-	3	V
Fall Time	t <sub>f</sub>	I <sub>c</sub> =5A I <sub>B1</sub> =-1 B2=1A V <sub>CC</sub> =45V	-	0.9	μ S
Frequency Characteristics	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>c</sub> =0.5A, f=1MHz	4	-	MHz