



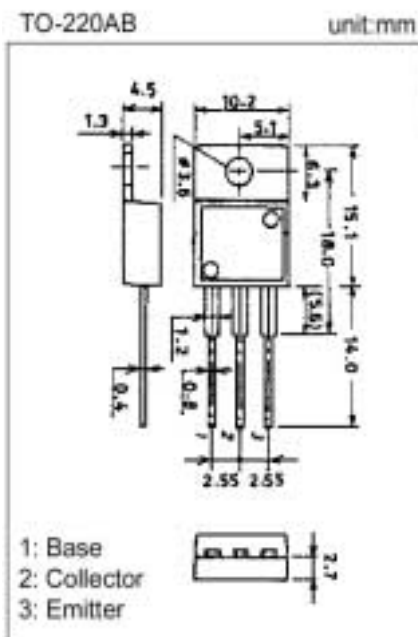
MJE13007

NPN SILICON TRANSISTOR

ELECTRONIC TRANSFORMERS ,
POWER SWITCHING CIRCUIT

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V _{CB0}	700	V
Collector-Emitter Voltage	V _{CEO}	400	V
Emitter-Base Voltage	V _{EBO}	9	V
Collector Current	I _c	8	A
Collector Power Dissipation ($T_c=25^\circ\text{C}$)	P _c	80	W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	-55~+150	°C



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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	MAX.	UNIT
Collector-Emitter Sustaining Voltage	V _{CEO(sus)}	I _c =10mA, I _B =0	400	-	V
Collector-Base Breakdown Voltage	V(BR)CBO	I _E =0, I _c =1mA	700	-	V
Emitter-Base Breakdown Voltage	V(BR)EBO	I _E =1mA, I _C =0	9	-	V
Collector Cut off current	I _{CB0}	V _{CB} =700V I _E =0	-	10	μ A
Collector-Emitter Cut off Current	I _{CEO}	V _{CE} =400V I _B =0	-	10	μ A
Emitter-Base Cut off Voltage	I _{EBO}	V _{EB} =7V I _c =0	-	10	μ A
DC Current Gain	hFE1	V _{CE} =5V, I _c =2A,	8	50	-
	hFE2	V _{CE} =5V, I _c =5A,	5	30	-
Collector-Emitter Saturation Voltage	V _{CE(sat1)}	I _c =2A, I _B =0.4A	-	1	V
	V _{CE(sat2)}	I _c =5A, I _B =1A	-	2	V
	V _{CE(sat3)}	I _c =8A, I _B =2A	-	3	V
Fall Time	t _f	I _c =5A I _{B1} =-1 B2=1A V _{CC} =45V	-	0.9	μ S
Frequency Characteristics	f _T	V _{CE} =10V, I _c =0.5A, f=1MHz	4	-	MHz