

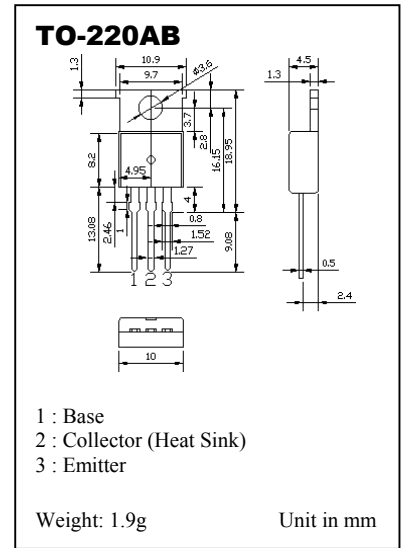
NPN SILICON TRIPLE DIFFUSED PLANAR TRANSISTOR

...designed for switching regulator applications.

MAXIMUM RATINGS (Ta= 25 °C)

Characteristic	Symbol	Value	Unit
Collector to base voltage	V _{CB0}	500	V
Collector to emitter voltage	V _{CEO}	400	V
Emitter to base voltage	V _{EBO}	7	V
Collector current	I _C	7	A
Collector current (peak)	I _{C(peak)}	14	A
Base Current	I _B	3	A
Collector power dissipation	P _C	1.75	W
T _c = 25 °C		50	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to 150	°C

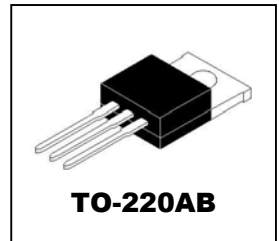
PW≤300µs, duty cycle≤10%



ELECTRICAL CHARACTERISTICS (Ta= 25 °C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector Cutoff Current	I _{CBO}	V _{CB} =400V, I _E =0	-	-	10	µA
Emitter Cutoff Current	I _{EBO}	V _{EB} =5V, I _C =0	-	-	10	µA
DC Current Gain	h _{FE(1)}	V _{CE} =5V, I _C =0.8A	15	-	50	-
	h _{FE(2)}	V _{CE} =5V, I _C =4A	10	-	-	-
	h _{FE(3)}	V _{CE} =5V, I _C =10mA	10	-	-	-
Collector to emitter saturation voltage	V _{CE(sat)}	I _C =4A, I _B =-0.8A	-	-	0.8	V
Base emitter Saturation Voltage	V _{BE(sat)}	I _C =4A, I _B =-0.8A	-	-	1.5	V
Gain bandwidth product	f _T	V _{CE} =10V, I _C =0.8A	-	20	-	MHz
Output Capacitance	C _{ob}	V _{CB} =10V, f=1MHz	-	80	-	pF
Collector to Base breakdown voltage	V _{(BR)CBO}	I _C =1mA, I _E =0	500	-	-	V
Collector to Emitter breakdown voltage	V _{(BR)CEO}	I _C =5mA, R _{BE} =∞	400	-	-	V
Emitter to base breakdown voltage	V _{(BR)EBO}	I _E =1mA, I _C =0	7	-	-	V
Collector to emitter Sustain Voltage	V _{CEX(sus)}	I _C =3A, I _{B1} =-0.3A, I _{B2} =-1.2A, L=1mH	400	-	-	V
Turn On time	t _{on}	I _C =5A, I _{B1} =1A,	-	-	0.5	µs
Fall time	t _f	I _{B2} =-2A, R _L =40ohms,	-	-	2.5	µs
Storage time	t _{stg}	V _{CC} =200V	-	-	0.3	µs

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Classification of h_{FE(1)}

Class	L	M	N
h _{FE(1)}	15 to 30	20 to 40	30 to 50

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