

TO-220 Plastic-Encapsulate Transistors

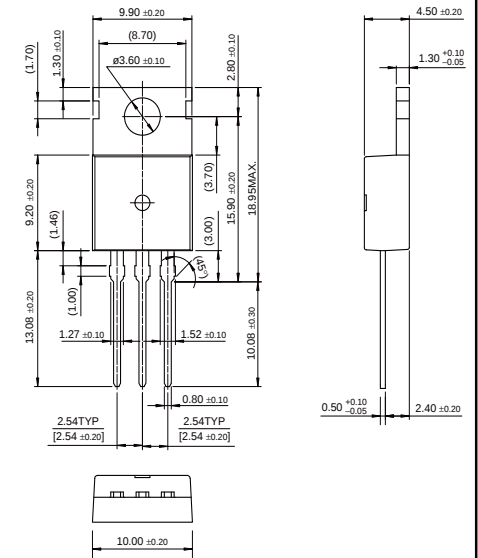
FEATURES

- NPN Silicon Transistor
- High speed Switching
- Suitable for Switching Regulator and Motor Control
- High Voltage Mode Application

MECHANICAL DATA

- Case style:TO-220 molded plastic
- Mounting position:any

TO-220



Unit: inch (mm)

MAXIMUM RATINGS

(Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV _{CBO}	700	V
Collector-Emitter Voltage	BV _{CEO}	400	V
Emitter-Base Voltage	BV _{EBO}	9	V
Collector Current	I _C	12	A
Collector Power Dissipation	P _C	100	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55~150	°C

Electrical Characteristics (T_a=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV _{CBO}	I _C = 100μA, I _E = 0	700			V
Collector-emitter breakdown voltage	BV _{CEO}	I _C = 10mA, I _B = 0	400			V
Emitter-base breakdown voltage	BV _{EBO}	I _E = 100μA, I _C = 0	9			V
Collector cut-off current	I _{CBO}	V _{CB} = 700V, I _E = 0			0.1	mA
Collector cut-off current	I _{CEO}	V _{CE} = 400V, I _B = 0			1	mA
Emitter cut-off current	I _{EBO}	V _{EB} = 9V, I _C = 0			0.1	mA
*DC current gain	h _{FE}	V _{CE} = 5V, I _C = 5A V _{CE} = 5V, I _C = 8A	8 6		40 30	
*Collector-emitter saturation voltage	V _{CE (sat)}	I _C = 5A, I _B = 1A I _C = 8A, I _B = 1.6A I _C = 12A, I _B = 3A			1 1.5 3	V
*Base -emitter saturation voltage	V _{BE (sat)}	I _C = 5A, I _B = 1A I _C = 8A, I _B = 1.6A			1.2 1.6	V
Transition frequency	f _T	V _{CE} = 10V, I _B = 0.5A	4			MHz
Turn On Time	t _{ON}	V _{CC} = 125V, I _C = 8A			1.1	μs
Storage Time	t _{STG}	I _{B1} = 1.6A, I _{B2} = -1.6A			3.0	μs
Fall Time	t _F	R _L = 15.6Ω			0.7	μs

* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%