



LGE

13009

TO-220 Plastic-Encapsulate Transistors(NPN)



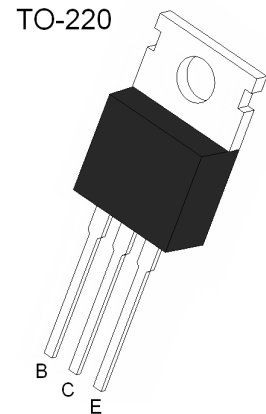
High Voltage Mode Application

High speed Switching

Suitable for Switching Regulator and Motor Control

Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	BV _{CB0}	700	V
Collector-Emitter Voltage	BV _{CEO}	400	V
Emitter-Base Voltage	BV _{EB0}	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 (Ta=25°C)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-base breakdown voltage	BV _{CB0}	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 _{EB0}	I _E = 100μA, I _C = 0	9			V
Collector cut-off current	I _{CB0}	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 _{EB0}	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 I _{B1} = 1.6A, I _{B2} = -1.6A R _L = 15.6Ω			1.1	μs
Storage Time	t _{STG}				3.0	μs
Fall Time	t _F				0.7	μs

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

PACKAGE	PACKING	BOX	CARTON	BOX SIZE (mm)	CARTON SIZE(mm)
TO-220AB	50PCS/TUBE	1000PCS	5000PCS	550*160*380	570*220*180