



HE13009

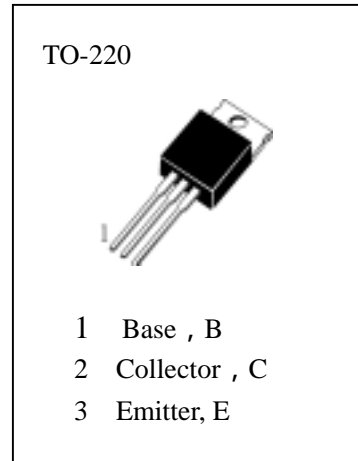
HIGH VOLTAGE SWITCH MODE APPLICATIONS

High Speed Switching

Suitable for Switching Regulator and Motor Control

ABSOLUTE MAXIMUM RATINGS ($T_a=25$)

T_{stg} —Storage Temperature.....	-55~150
T_j —Junction Temperature.....	150
P_C —Collector Dissipation($T_c=25$).....	100W
V_{CBO} —Collector-Base Voltage.....	700V
V_{CEO} —Collector-Emitter Voltage.....	400V
V_{EBO} —Emitter-Base Voltage.....	9V
I_C —Collector Current (DC)	12A
I_B —Base Current.....	6A



ELECTRICAL CHARACTERISTICS ($T_a=25$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
V_{CEO}	Collector-Emitter Breakdown Voltage	400			V	$I_C=10mA, I_B=0$
I_{EBO}	Emitter-Base Cut-off Current			1	mA	$V_{EB}=9V, I_C=0$
$H_{FE} (1)$	DC Current Gain	8		40		$V_{CE}=5V, I_C=5A$
$H_{FE} (2)$		6		30		$V_{CE}=5V, I_C=8A$
$V_{CE(sat)1}$	Collector- Emitter Saturation Voltage			1	V	$I_C=5A, I_B=1A$
$V_{CE(sat)2}$				1.5	V	$I_C=8A, I_B=1.6A$
$V_{CE(sat)3}$				3	V	$I_C=12A, I_B=3A$
$V_{BE(sat)1}$	Base-Emitter Saturation Voltage			1.2	V	$I_C=5A, I_B=1A$
$V_{BE(sat)2}$				1.6	V	$I_C=8A, I_B=1.6A$
C_{ob}	Output Capacitance		180		pF	$V_{CB}=10V, f=0.1MHz$
f_T	Current Gain-Bandwidth Product	4			MHz	$V_{CE}=10V, I_C=0.5A$
t_{ON}	Turn On Time			1.1	μs	} $V_{CC}=125V, I_C=8A,$ $I_{B1}=1.6A, I_{B2}=-1.6A$
t_{STG}	Storage Time			3	μs	
t_F	Fall Time			0.7	μs	