



HE13003

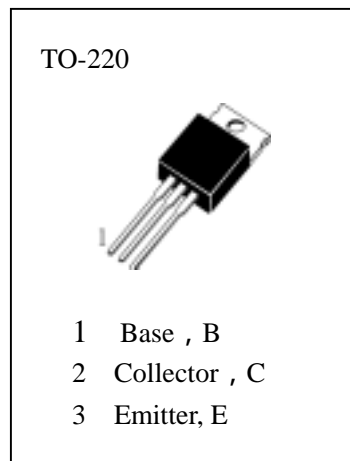
HIGH VOLTAGE SWITCH MODE APPLICATIONS

High Speed Switching

Suitable for Switching Regulator and Motor Control

ABSOLUTE MAXIMUM RATINGS ($T_a=25$)

T_{stg} —Storage Temperature.....	-65~150
T_j —Junction Temperature.....	150
P_C —Collector Dissipation ($T_c=25$)	50W
V_{CBO} —Collector-Base Voltage.....	700V
V_{CEO} —Collector-Emitter Voltage.....	400V
V_{EBO} —Emitter-Base Voltage.....	9V
I_C —Collector Current(DC).....	1.5A
I_B —Base Current.....	0.75A



ELECTRICAL CHARACTERISTICS ($T_a=25$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CEO}	Collector-Emitter Breakdown Voltage	400			V	$I_C=5mA, I_B=0$
I_{EBO}	Emitter-Base Cut-off Current			10	μA	$V_{EB}=9V, I_C=0$
$HFE(1)$	DC Current Gain	10		40		$V_{CE}=5V, I_C=0.5A$
$HFE(2)$		5				$V_{CE}=2V, I_C=1A$
$V_{CE(sat)1}$	Collector- Emitter Saturation Voltage			0.5	V	$I_C=0.5A, I_B=0.1A$
$V_{CE(sat)2}$				1	V	$I_C=1A, I_B=0.25A$
$V_{CE(sat)3}$				3	V	$I_C=1.5A, I_B=0.5A$
$V_{BE(sat)1}$	Base-Emitter Saturation Voltage			1	V	$I_C=0.5A, I_B=100mA$
$V_{BE(sat)2}$				1.2	V	$I_C=1A, I_B=0.25A$
f_T	Current Gain-Bandwidth Product	5			MHZ	$V_{CE}=10V, I_C=0.1A, f=1MHz$
t_{ON}	Turn On Time			1.1	μs	$V_{CC}=125V, I_C=1A,$ $I_{B1}=0.2A, I_{B2}=-0.2A$ $R_L=125$
t_{STG}	Storage Time			4.0	μs	
t_F	Fall Time			0.7	μs	

hFE Classification

H1	H2	H3	H4	H5
10-16	14-21	19-26	24-31	29-40

