

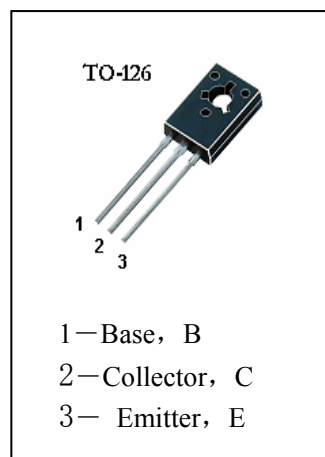


■ HIGH VOLTAGE SWITCH MODE APPLICATIONS

High Speed Switching
 Suitable for Switching Regulator and Motor Control

■ ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$)

- T_{stg} —Storage Temperature..... -65~150°C
- T_j —Junction Temperature.....150°C
- P_C —Collector Dissipation.....30W
- V_{CBO} —Collector-Base Voltage.....600V
- V_{CEO} —Collector-Emitter Voltage.....400V
- V_{EBO} —Emitter-Base Voltage.....9V
- I_C —Collector Current.....1.5A



1—Base, B
 2—Collector, C
 3— Emitter, E

■ ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CBO}	Collector-Base Breakdown Voltage	600			V	$I_C=1\text{mA}, I_E=0$
BV_{CEO}	Collector-Emitter Breakdown Voltage	400			V	$I_C=10\text{mA}, I_B=0$
BV_{EBO}	Emitter-Base Breakdown Voltage	9			V	$I_E=1\text{mA}, I_C=0$
h_{FE}	DC Current Gain	10		40		$V_{CE}=10\text{V}, I_C=0.1\text{A}$
$V_{CE(sat)1}$	Collector- Emitter Saturation Voltage			0.8	V	$I_C=1\text{A}, I_B=500\text{mA}$
$V_{CE(sat)2}$	Collector- Emitter Saturation Voltage			0.8	V	$I_C=0.5\text{A}, I_B=100\text{mA}$
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			1.2	V	$I_C=0.5\text{A}, I_B=100\text{mA}$
I_{CBO}	Collector Cut-off Current			10	μA	$V_{CB}=500\text{V}, I_E=0$
I_{EBO}	Emitter-Base Cut-off Current			10	μA	$V_{EB}=9\text{V}, I_C=0$
f_T	Current Gain-Bandwidth Product	8			MHz	$V_{CE}=10\text{V}, I_C=0.1\text{A}, f=1\text{MHz}$
t_{ON}	Turn On Time			1.1	μs	$V_{CC}=125\text{V}, I_C=1\text{A},$ $I_{B1}=0.2\text{A}, I_{B2}=-0.2\text{A}$ $R_L=125\Omega$
t_{STG}	Storage Time			4.0	μs	
t_F	Fall Time			0.7	μs	

■ h_{FE} Classification

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