



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..... $-65\sim 150^{\circ}\text{C}$

T_j —Junction Temperature..... 150°C

P_C —Collector Dissipation..... 30W

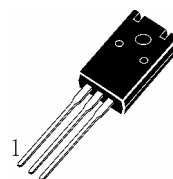
V_{CBO} —Collector-Base Voltage..... 600V

V_{CEO} —Collector-Emitter Voltage..... 400V

V_{EBO} —Emitter-Base Voltage..... 9V

I_C —Collector Current..... 1.5A

TO-126ML



1—Emitter, E

2—C ollector, C

3— Base, B

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		$V_{\text{CE}}=10\text{V}$, $I_C=0.1\text{A}$
$V_{\text{CE(sat)1}}$	Collector- Emitter Saturation Voltage			0.8	V	$I_C=1\text{A}$, $I_B=500\text{mA}$
$V_{\text{CE(sat)2}}$	Collector- Emitter Saturation Voltage			0.8	V	$I_C=0.5\text{A}$, $I_B=100\text{mA}$
$V_{\text{BE(sat)}}$	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	$V_{\text{CB}}=500\text{V}$, $I_E=0$
I_{EBO}	Emitter-Base Cut-off Current			10	μA	$V_{\text{EB}}=9\text{V}$, $I_C=0$
f_{T}	Current Gain-Bandwidth Product	8			MHz	$V_{\text{CE}}=10\text{V}$, $I_C=0.1\text{A}$, $f=1\text{MHz}$
t_{ON}	Turn On Time			1.1	μs	$V_{\text{CC}}=125\text{V}$, $I_C=1\text{A}$, $I_{\text{B1}}=0.2\text{A}$, $I_{\text{B2}}=-0.2\text{A}$ $R_{\text{L}}=125\Omega$
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

