



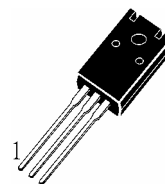
HIGH VOLTAGE SWITCH MODE APPLICATIONS

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 $^{\circ}\text{C}$
T_j	Junction Temperature	150 $^{\circ}\text{C}$
P_C	Collector Dissipation	40W
V_{CBO}	Collector-Base Voltage	700V
V_{CEO}	Collector-Emitter Voltage	400V
V_{EBO}	Emitter-Base Voltage	9V
I_c	Collector Current	1.5A
I_B	Base Current	0.75A

TO-126ML



1—Emitter, E
2—Collector, C
3—Base, B

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

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CEO}	Collector-Emitter Breakdown Voltage	400			V	$I_C=5\text{mA}$, $I_B=0$
I_{EBO}	Emitter-Base Cut-off Current			10	μA	$V_{\text{EB}}=9\text{V}$, $I_C=0$
H_{FE1}	DC Current Gain	10		40		$V_{\text{CE}}=5\text{V}$, $I_C=0.5\text{A}$
H_{FE2}	DC Current Gain	5				$V_{\text{CE}}=2\text{V}$, $I_C=1\text{A}$
$V_{\text{CE(sat)1}}$	Collector- Emitter Saturation Voltage			0.5	V	$I_C=0.5\text{A}$, $I_B=0.1\text{A}$
$V_{\text{CE(sat)2}}$	Collector- Emitter Saturation Voltage			1	V	$I_C=1\text{A}$, $I_B=0.25\text{A}$
$V_{\text{CE(sat)3}}$	Collector- Emitter Saturation Voltage			3	V	$I_C=1.5\text{A}$, $I_B=0.5\text{A}$
$V_{\text{BE(sat)1}}$	Base-Emitter Saturation Voltage			1	V	$I_C=0.5\text{A}$, $I_B=0.1\text{A}$
$V_{\text{BE(sat)2}}$	Base-Emitter Saturation Voltage			1.2	V	$I_C=1\text{A}$, $I_B=0.25\text{A}$
f_T	Current Gain-Bandwidth Product	4			MHz	$V_{\text{CE}}=10\text{V}$, $I_C=0.1\text{A}$
t_{ON}	Turn On Time			1.1	μs	$V_{\text{CC}}=125\text{V}$, $I_C=1\text{A}$, $I_{\text{B1}}=0.2\text{A}$, $I_{\text{B2}}=-0.2\text{A}$ $R_L=125\Omega$
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

