General Description

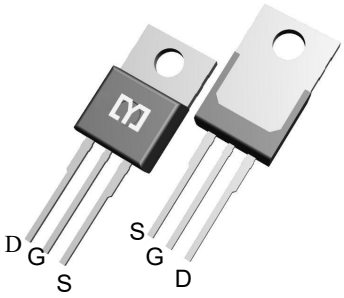
MY740P the silicon N-channel Enhanced VDMOSFETs, is obtained by the self-aligned planar Technology which reduce the conduction loss, improve switching performance and enhance the avalanche energy. The transistor can be used in various power switching circuit for system miniaturization and higher efficiency.

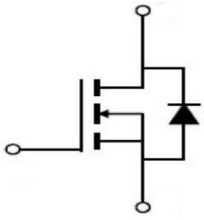
Features

V_{DSS}	450	V
I_D	10	A
$P_D(T_C=25℃)$	135	W
$R_{DS(ON)}(atV_{GS}=10V)$	0.53	Ω

Application

- Battery protection
- Load switch
- Uninterruptible power supply





Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MY740P	TO-220	MY740P	1000

Absolute Maximum Ratings (T_C=25℃unless otherwise noted)

Symbol	Parameters	Ratings	Unit
V_{DSS}	Drain-Source Voltage	450	V
V_{GS}	Gate-Source Voltage-Continuous	±30	V
I_D	Drain Current-Continuous（Note 2）	10	A
I_{DM}	Drain Current-Single Plused（Note 1）	40	A
P_D	Power Dissipation （Note 2）	135	W
T_j	Max.Operating junction temperature	150	℃

Electrical Characteristics at T_j=25 ℃ unless otherwise specified

Symbo	Parameters	Min	Typ	Max	Units	Conditions
Static Characteristics						
B_{VDSS}	Drain-Source Breakdown VoltageCurrent （Note 1）	450	--	--	V	I_D=250μA, V_{GS}=0V, T_J=25°C
$V_{GS(th)}$	Gate Threshold Voltage	2.0	--	4.0	V	V_{DS}=V_{GS}, I_D=250μA
$R_{DS(on)}$	Drain-Source On-Resistance	--	0.48	0.53	Ω	V_{GS}=10V, I_D=1A
I_{GSS}	Gate-Body Leakage Current	--	--	±100	nA	V_{GS}=±30V, V_{DS}=0
I_{DSS}	Zero Gate Voltage Drain Current	--	--	1	μA	V_{DS}=400V, V_{GS}=0
gfs	Forward Transconductance	5.8	--	--	S	V_{DS}=15V, I_D=5A

Switching Characteristics						
$T_{d(on)}$	Turn-On Delay Time	--	17	--	ns	V_{DS}=250V, I_D=10A, R_G=25Ω（Note 2）
T_r	Rise Time	--	10	--	ns	
$T_{d(off)}$	Turn-Off Delay Time	--	10	--	ns	
T_f	Fall Time	--	10	--	ns	
Q_g	Total Gate Charge	--	35	50	nC	V_{DS}=400V V_{GS}=10V, I_D=10A（Note 2）
Q_{gs}	Gate-Source Charge	--	11	--	nC	
Q_{gd}	Gate-Drain Charge	--	12	--	nC	
Dynamic Characteristics						
C_{iss}	Input Capacitance	--	750	--	pF	V_{DS}=25V, V_{GS}=0, f=1MHz
C_{oss}	Output Capacitance	--	220	--	pF	
C_{rss}	Reverse Transfer Capacitance	--	27	--	pF	
I_S	Continuous Drain-Source Diode Forward Current（Note 2）	--	--	10	A	
V_{SD}	Diode Forward On-Voltage	--	--	1.4	V	I_S=5A, V_{GS}=0
$R_{th(j-c)}$	Thermal Resistance, Junction to Case	--	--	0.93	°C/W	

Note 1: Repetitive Rating : Pulse width limited by maximum junction temperature
Note 2: Pulse test: PW <= 300us , duty cycle <= 2%.