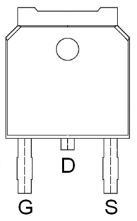
GPM750N10LTF

100V N-Channel MOSFET

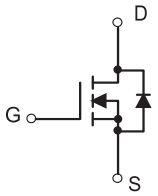
Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
100V	78mΩ@10V	15A

TO-252-2L



Schematic diagram



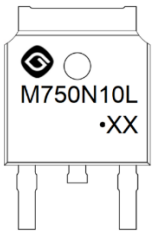
Feature

- Trench Technology Power MOSFET
- Low $R_{DS(ON)}$
- Low Gate Charge
- Low Gate Resistance
- 100% UIS Tested
- 100% ΔV_{DS} Tested

Application

- Power Switching Application

MARKING:



M750N10L = Device Code
XX = Date Code
Solid Dot = Green Indicater

ABSOLUTE MAXIMUM RATINGS (T_A = 25℃ unless otherwise noted)

Parameter		Symbol	Value	Unit
Drain - Source Voltage		V_{DS}	100	V
Gate - Source Voltage		V_{GS}	±20	V
Continuous Drain Current[1]	T_C = 25℃	I_D	15	A
Continuous Drain Current[1]	T_C = 100℃	I_D	10.5	A
Continuous Drain Current[6]	T_A = 25℃	I_D	5	A
Pulsed Drain Current[2]		I_{DM}	45	A
Single Pulsed Avalanche Current[3]		I_{AS}	12.5	A
Single Pulsed Avalanche Energy[3]		E_{AS}	39	mJ
Power Dissipation[5]	T_C = 25℃	P_D	37	W
Thermal Resistance from Junction to Ambient[6]		$R_{\theta JA}$	50	℃/W
Thermal Resistance from Junction to Case		$R_{\theta JC}$	3.3	℃/W
Junction Temperature		T_J	150	℃
Storage Temperature		T_{STG}	-55~ +150	℃

MOSFET ELECTRICAL CHARACTERISTICS (T_J = 25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Off Characteristics						
Drain - Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = 250μA	100			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 100V, V_{GS} = 0V			1	μA
Gate - Body Leakage Current	I_{GSS}	V_{GS} = ±20V, V_{DS} = 0V			±100	nA
On Characteristics[4]						
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 250μA	1	1.5	2	V
Drain-source On-resistance	$R_{DS(on)}$	V_{GS} = 10V, I_D = 10A		78	100	mΩ
Forward Transconductance	g_{FS}	V_{DS} = 5V, I_D = 10A		16.5		S
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{DS} = 45V, V_{GS} = 0V, f = 1MHz		1029		pF
Output Capacitance	C_{oss}			32		
Reverse Transfer Capacitance	C_{rss}			30		
Gate Resistance	R_g	V_{DS} = 0V, V_{GS} = 0V, f = 1MHz		1.5		Ω
Switching Characteristics						
Total Gate Charge	Q_g	V_{DS} = 45V, V_{GS} = 10V, I_D = 10A		26.5		nC
Gate-source Charge	Q_{gs}			2.7		
Gate-drain Charge	Q_{gd}			6.7		
Turn-on Delay Time	$t_{d(on)}$	V_{DD} = 45V, V_{GS} = 10V, R_L = 4.5Ω R_G = 3Ω		24		ns
Turn-on Rise Time	t_r			3.2		
Turn-off Delay Ttime	$t_{d(off)}$			6.5		
Turn-off Fall Time	t_f					
Source - Drain Diode Characteristics						
Diode Forward Voltage[4]	V_{SD}	V_{GS} = 0V, I_S = 10A			1.2	V

Notes :

1.The maximum current rating is limited by package.And device mounted on a large heatsink

2.Pulse Test : Pulse Width ≤ 10μs, duty cycle ≤ 1%.

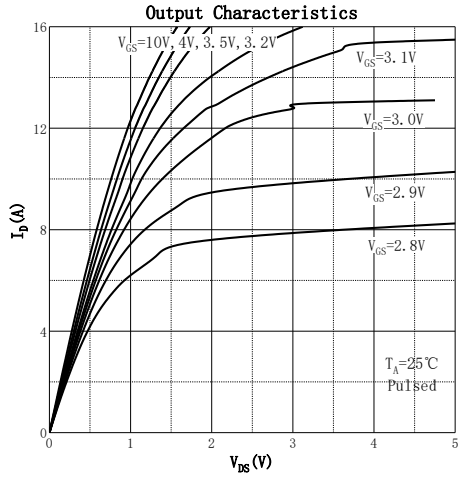
3.E_{AS} condition: V_{DD} = 50V,V_{GS} = 10V, L = 0.5mH, R_G = 25Ω Starting T_J = 25°℃.

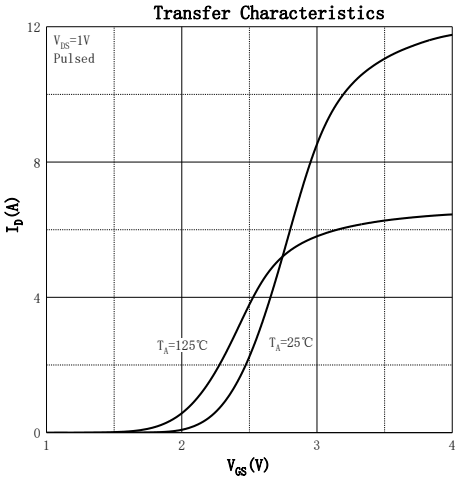
4.Pulse Test : Pulse Width ≤ 300μs, duty cycle ≤ 2%.

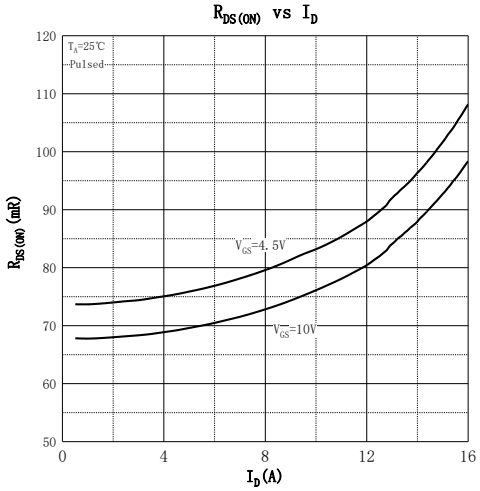
5.The power dissipation P_D is limited by $T_{J(MAX)}$ = 150°C.And device mounted on a large heatsink

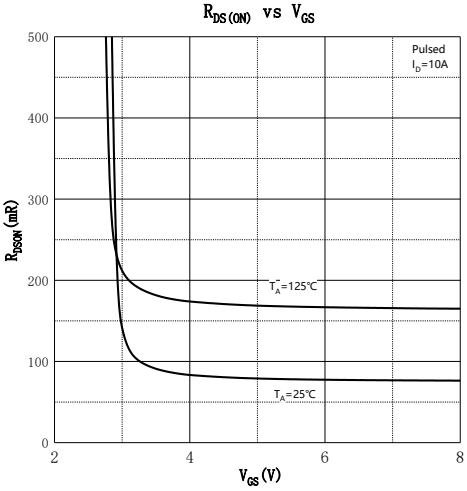
6.Device mounted on 1in^2 FR-4 board with 2oz. Copper, in a still air environment with T_A =25°C.

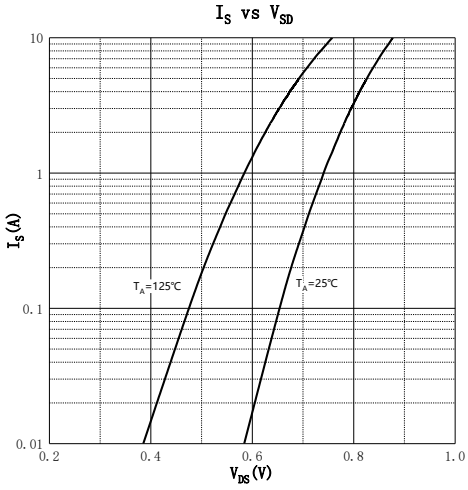
Typical Characteristics

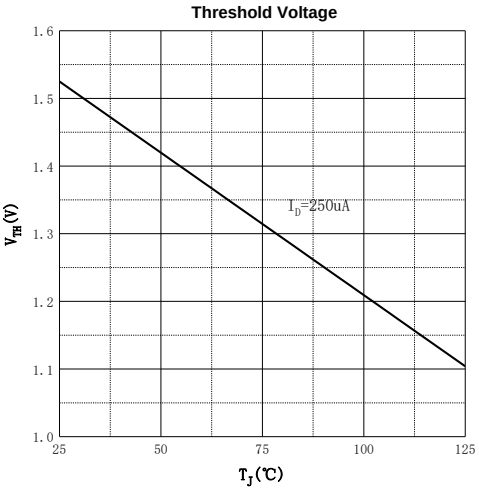




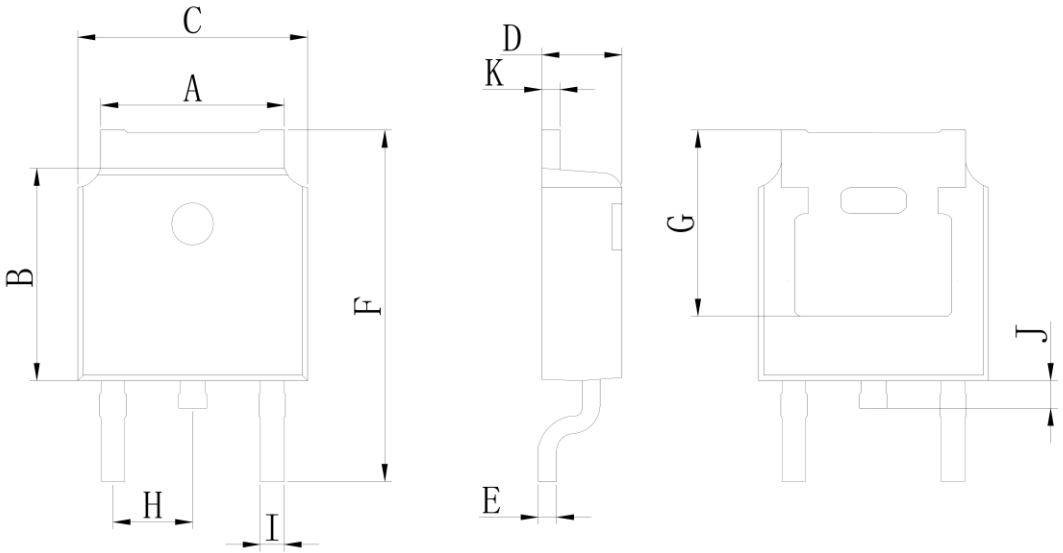








TO-252-2L Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	5.050	5.650	0.199	0.222
B	5.800	6.400	0.228	0.252
C	6.250	6.850	0.246	0.270
D	2.200	2.400	0.087	0.094
E	0.400	0.600	0.016	0.024
F	9.710	10.310	0.382	0.406
G	5.050	5.650	0.199	0.222
H	2.100	2.500	0.083	0.098
I	0.700	0.900	0.028	0.035
J	0.500	0.700	0.020	0.028
K	0.400	0.600	0.016	0.024

单击下面可查看定价，库存，交付和生命周期等信息

>>GP(格瑞宝)