

Rev.A Dec.-2023

TO-220FL          N          MOS

N-CHANNEL MOSFET in a TO-220FL Plastic Package.

Low gate charge, low crss, fast switching,Have good Electromagnetic Interference performance.

DC/DC

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	650	V
Drain Current	$I_D(T_c=25^\circ\text{C})$	10	A
Drain Current - Pulsed	$I_{DM}$	40	A
Gate-Source Voltage	$V_{GS}$	$\pm 30$	V
Single-Pulse Avalanche Energy	$E_{AS}$	280	mJ
Reverse Current	$I_{AR}$	8	A
Power Dissipation	$P_D(T_c=25^\circ\text{C})$	40	W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to 150	
Thermal Resistance, Junction to Ambient	$R_{JA}$	62.5	/W
Thermal Resistance, Junction to Case	$R_{JC}$	3.1	/W

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V$ $I_D=250\mu A$	650	680		V
Zero-Voltage Drain Current	$I_{DSS}$	$V_{DS}=650V$ $V_{GS}=0V$			1.0	$\mu A$
Gate-Source Leakage Current Forward	$I_{GSS}$	$V_{GS}=\pm 30V$ $V_{DS}=0V$			$\pm 10$	$\mu A$
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	2.0	3.2	4.0	V
Static Drain-Source Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=4.75A$		0.73	0.85	
Input Capacitance	$C_{iss}$	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		1550		pF
Output Capacitance	$C_{oss}$			30		
Reverse Transfer Capacitance	$C_{rss}$			9		
Turn-On Gate Charge	$Q_G$	$V_{DS}=520V,$ $I_D=10.0A,$ $V_{GS}=10V$		45		nC
Gate-Source Charge	$Q_{GS}$			6.8		
Gate-Drain Charge	$Q_{GD}$			1.2		

Turn-On Delay Time

 $t_{d(on)}$ 
 $V_{DD}=325V$   $I_D=10A$   
 Single Pulse  $T_c=25^\circ C$   $V_{GS}=10V$   $P_{tot}=21W$







