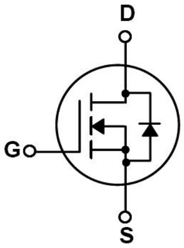
TO-252 N MOS
N-CHANNEL MOSFET in a TO-252 Plastic Package.

V_{DS}=500V I_D=4A
$R_{DS(ON)}$@10V ≤ 2.2q(Typ. 1.7q)
Fast Switching.
HF Product.

These devices are well suited for power switch circuit of adaptor and charger, intergrate fast recovery diode.



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PIN1 G PIN 2 D PIN 3 S PIN 4 D

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	500	V
Drain Current	I_D(Tc=25)	4	A
Drain Current - Pulsed	I_{DM}	8	A
Gate-Source Voltage	V_{GS}	±30	V
Single Pulsed Avalanche Energy	E_{AS}	176.4	mJ
Avalanche Current	I_{AS}	6.3	A
Power Dissipation	P_D(Tc=25)	50	W
Operating and Storage Temperature Range	T_J,T_{STG}	-55 to 150	
Junction to Ambient	$R_{\theta JA}$	110	/W
Junction to Case	$R_{\theta JC}$	2.5	/W

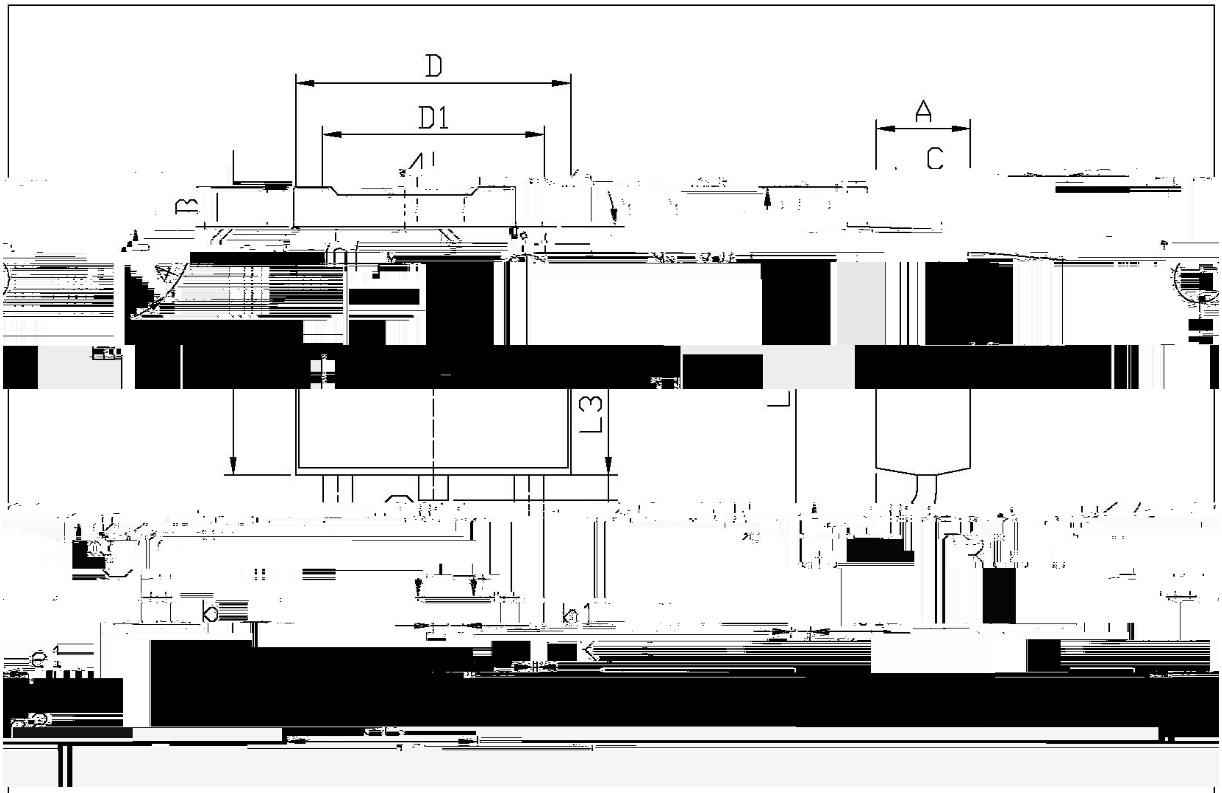
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250εA	500			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=500V V_{GS}=0V			1	εA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±30V V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250εA	2.0		4.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=2.0A		1.7	2.2	q
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS} = 0 V I_S = 1.0A			1.4	V
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		350		pF
Output Capacitance	C_{oss}			145		
Reverse Transfer Capacitance	C_{rss}			5		
Total Gate Charge	Q_G	V_{DS}= 400V I_D=4.0A V_{GS}= 10V		8.5		nC
Gate-Source Charge	Q_{GS}			3.2		
Gate-Drain Charge	Q_{GD}			1.5		

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=100V I_D=4.0A V_{GS}=10V R_G=25q		4.3		ns
Turn-On Rise Time	t_r			17.2		
Turn-Off Delay Time	$t_{d(off)}$			22		
Turn-Off Fall Time	t_f			23.2		
Maximum Continuous Drain-Source Diode Forward Current	I_S				4	A
Maximum Pulsed Drain-Source Diode Forward Current	I_{SM}				8	A
Reverse Recovery Time	trr	V_{GS}=0V I_S=5.0A dI_F/dt=100 A/εs		92		ns
Reverse Recovery Charge	Qrr			1.45		μC

/ Package Dimensions



单位：mm

Symbol	Dimensions In Millimeters Min	Max	Symbol	Dimensions In Millimeters Min	Max
A	2.20	2.40	E	[illegible]	[illegible]
B	0.95	1.25	e1	2.24	[illegible]
b	0.70	0.90	e2	4.43	[illegible]
b1	0.45	0.55	L1	9.85	10.35
C	0.45	0.55	L2	1.70	[illegible]
D	6.45	6.75	L3	0.60	[illegible]
D1	5.10	5.50	K	0.00	0.10

TO-252