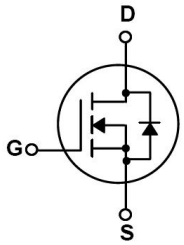
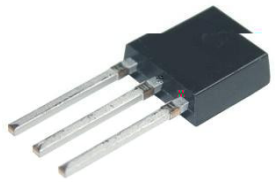
TO-251 N MOS N-CHANNEL MOSFET in a TO-251 Plastic Package.

Super high dense cell design for low $R_{DS(on)}$, Rugged and reliable,surface.

DC/DC

These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies.



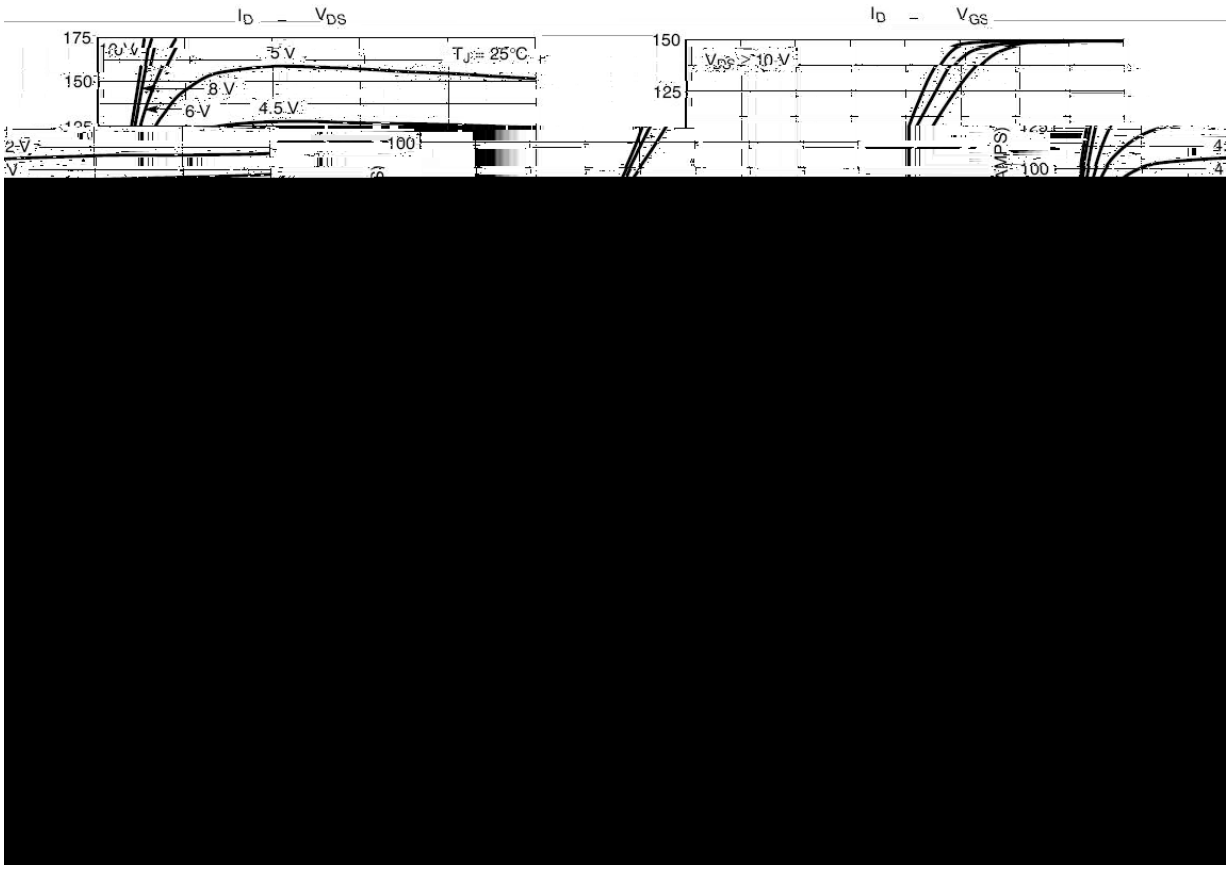


PIN1 G PIN 2 D PIN 3 S

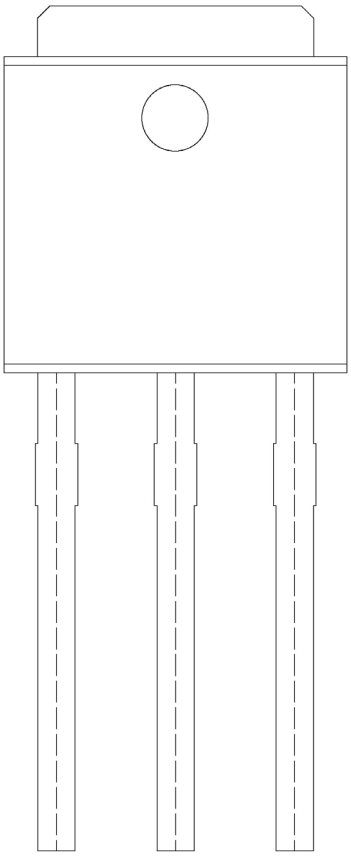
See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	30	V
Drain Current	I_D(Tc=25)	62.8	A
Drain Current Pulsed	I_{DM}	140	A
Gate-Source Voltage	V_{GS}	±20	V
Single Pulsed Avalanche Energy	E_{SA}	71.7	mJ
Power Dissipation	P_D	1.36	W
Power Dissipation (T_A=25)	P_D(Tc=25)	62.5	W
Junction and Storage Temperature Range	T_J,T_{STG}	-55 to 150	
Thermal Resistance, Junction-to-Ambient	R_{dJA}	110	/W

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250εA	30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=20V	V_{GS}=0V			1.5	εA
Gate-Body Leakage Current, Forward	I_{GSS}	V_{GS}=±20V	V_{DS}=0V			±0.1	εA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250εA	1.0	1.2	3.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=20A		5.6	8.0	mq
		V_{GS}=4.5V	I_D=20A		8.1	13	mq
Forward Transconductance	g_{FS}	V_{DS}=10V	I_D=15A		27		S
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V	I_S=20A			1.2	V
Input Capacitance	C_{iss}	V_{DS}=20V f=1.0MHz	V_{GS}=0V		1333		pF
Output Capacitance	C_{oss}				600		
Reverse Transfer Capacitance	C_{rss}				218		
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=10V V_{GS}=10V	I_D=36A R_G=3.0q		6.9		ns
Turn-On Rise Time	t_r				1.3		
Turn-Off Delay Time	$t_{d(off)}$				18.4		
Turn-Off Fall Time	t_f				5.5		


I_D – V_{DS}
175
150
125
10 V
5 V
8 V
6 V
4.5 V
T_J = 25°C
2 V
100
I_D – V_{GS}
150
125
V_{DS} > 10 V
100


$R_{DS(on)}$ – T_J
2.0
I_D = 36 A
3000
V_{DS} = 0 V
V_{GS} = 0 V
T_J = 25°C
V_{GS} = 10 V
1.6
2500
2000



BR

70N03

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Note:

BR: Company Code

70N03: Product Type.