■ DESCRIPTION

●ELECTRONIC BALLAST

●ELECTRONIC TRANSFORMER

●SWITCH MODE POWER SUPPLY

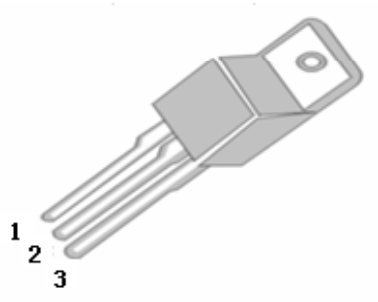
■ FEATURES:

●LOW THERMAL RESISTANCE ●HIGH INPUT RESISTANCE ●FAST SWITCHING ●ROHS COMPLIANT

■ MAXIMUM RATINGS (Tc=25℃)

PARAMETER	SYMBOL	VALUE	UNIT
Drain-source Voltage	VDS	600	V
gate-source Voltage	VGS	±30	V
Continuous Drain Current(TC=25℃)	ID	7	A
Drain Current-Pulsed	IDM	28	A
Total Dissipation	PD	125	W
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55-150	℃
Single Pulse Avalanche Energy	EAS	230	mJ

■ MECHANICAL

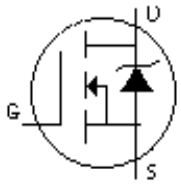


TO-220

1-GATE 栅极

2-DRAIN 漏极

3-SOURCE 源极



■ ELECTRONIC CHARACTERISTICS (Tc=25℃)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Drain-source Breakdown Voltage	BVDSS	VGS=0V, ID=250μA	600		V
Gate Threshold Voltage	VGS(TH)	VGS=VDS ,ID=250μA	2	4	V
Drain-source Leakage Current	IDSS	VDS=600V,VGS=0V		1	uA
Drain-Source Diode Forward Voltage	VSD	VGS=0V, IS=7A		1.4	V
Gate-body Leakage Current (VDS= 0)	IGSS	VGS=±30V		±100	nA
Forward Transconductance	gfs	Vds=10V Id=3.5A	1		S
Static Drain-source On Resistance	RDS(ON)	VGS=10V,ID=3.5A		1.2	Ω
Thermal Resistance Junction-case	RthJ-c			2.5	℃/W

■ DYNAMIC CHARACTERISTICS (Tc=25℃)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Input Capacitance	Ciss	VDS=25V, VGS=0V, f=1.0MHZ	-	1080	-	pF
output Capacitance	Coss		-	110	-	pF
Reverse Transfer Capacitance	Crss		-	12.6	-	pF

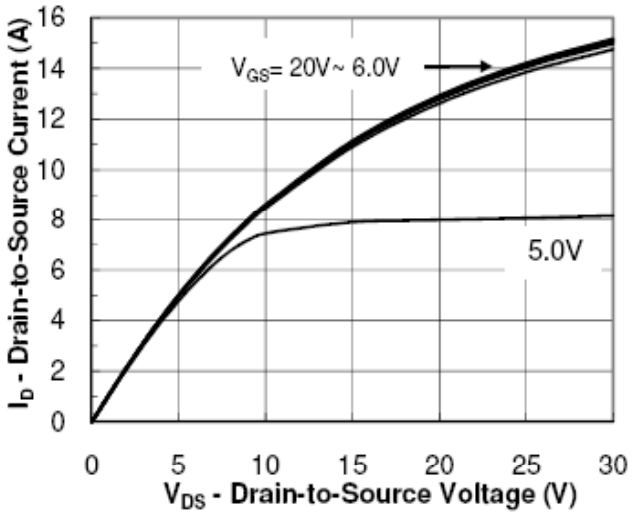
■ SWITCHING CHARACTERISTICS (Tc=25℃)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Turn-On Delay Time	td(on)	VDD=300V, ID=7.0A, RG=25Ω	-	20	-	ns
Turn-On Rise Time	tr		-	60	-	ns
Turn-Off Delay Time	td(off)		-	81	-	ns
Turn-Off Rise Time	tf		-	60	-	ns
Total Gate Charge	Qg	VDS=480V, ID=7.0A, VGS=10V	-	26	-	nC
Gate-Source Charge	Qgs		-	6	-	nC
Gate-Drain Charge	Qgd		-	9.2	-	nC

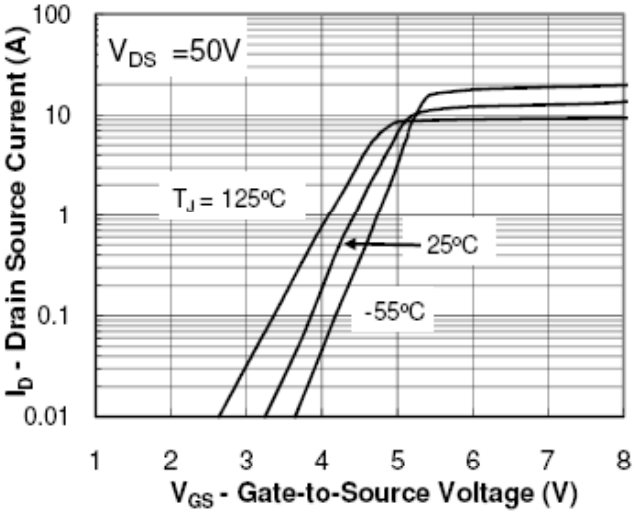
■ DRAIN-SOURCE DIODE MAXIMUM RATINGS AND CHARACTERISTICS (Tc=25℃)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Max. Diode Forward Cuurent	Is		-	-	7	A
Max. Pulsed Forward Cuurent	ISM		-	-	28	A
Diode Forward Voltage	VSD	VGS=0V, IS=7.0A	-	-	1.4	V
Reverse Recovery Time	trr	VGS=0V, IS=7.0A, dIF/dt=100A/μs	-	360	-	ns
Reverse Recovery Charge	Qrr		-	3.4	-	μC

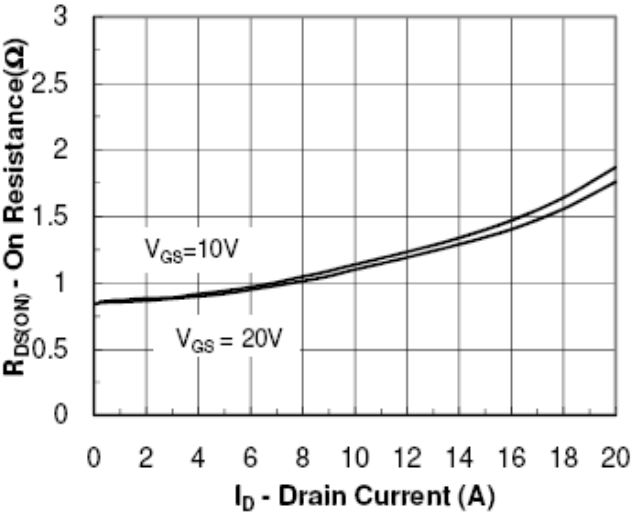
■ CHARACTERISTICS CURVE



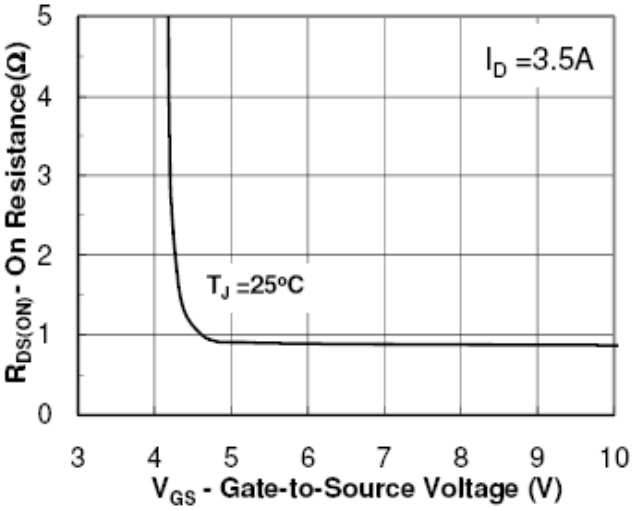
Output Characterisic



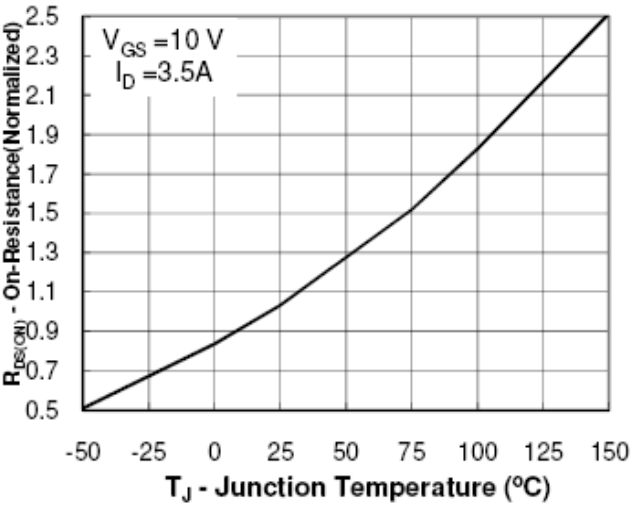
Transfer Characterisic



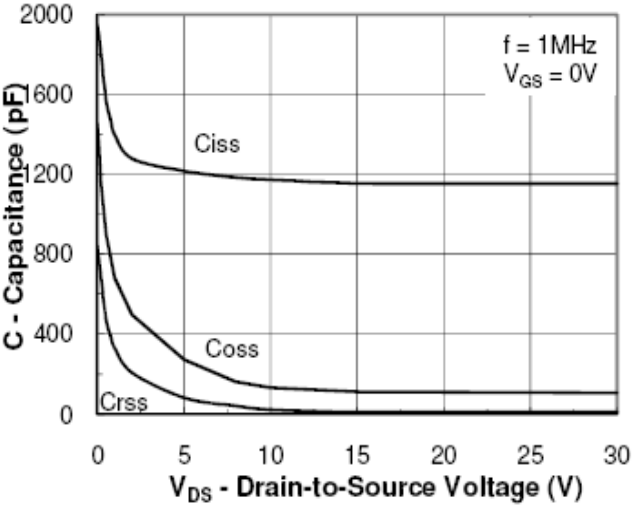
On Resistance Vs Drain Current



On Resistance Vs Gate Source Voltage

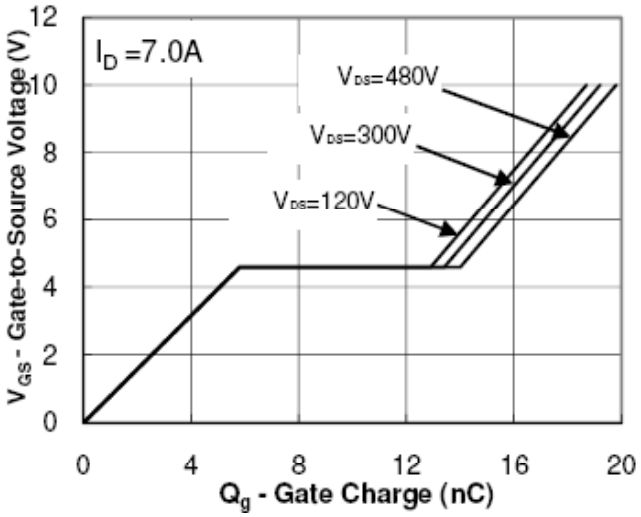


On Resistance Vs Junction Temperature

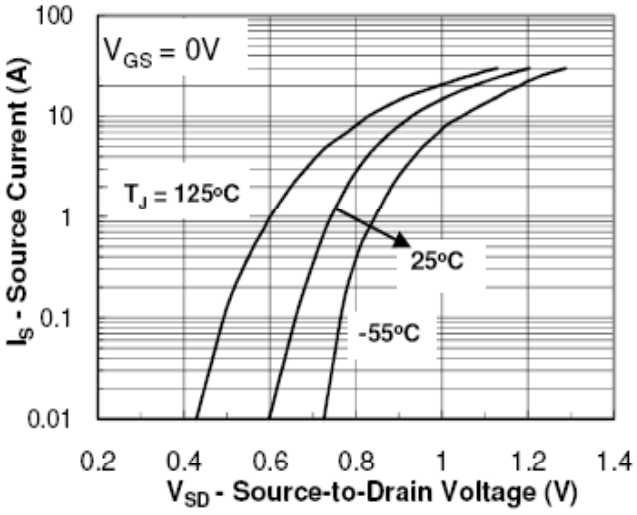


Capacitance

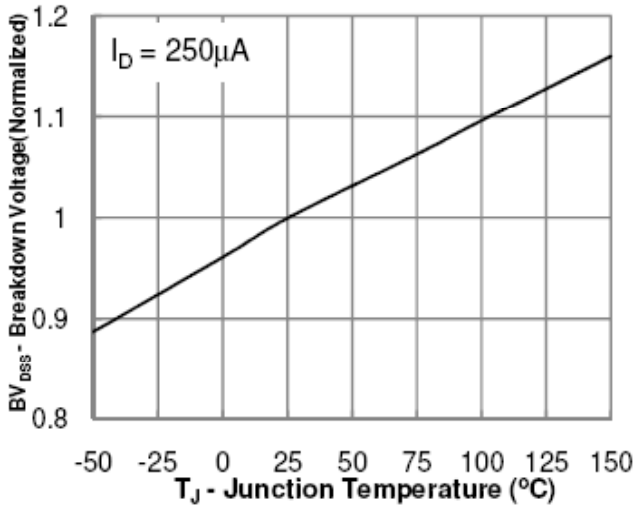
■ CHARACTERISTICS CURVE



Gate Charge Waveform



Source-Drain Diode Forward Voltage



Breakdown Voltage Vs Junction Temperature

TO-220 MECHANICAL DATA

UNIT: mm

SYMBOL	MIN	NOM	MAX	SYMBOL	MIN	NOM	MAX
A	4		4.8	e	2.44	2.54	2.64
B	1.2		1.4	F	1.1		1.4
B1	1		1.4	L	12.5		14.5
b1	0.75		0.95	L1	3	3.5	4
c	0.4		0.55	ΦP	3.7	3.8	3.9
D	15		16.5	Q	2.5		3
D1	5.9		6.9	Q1	2		2.9
E	9.9		10.7