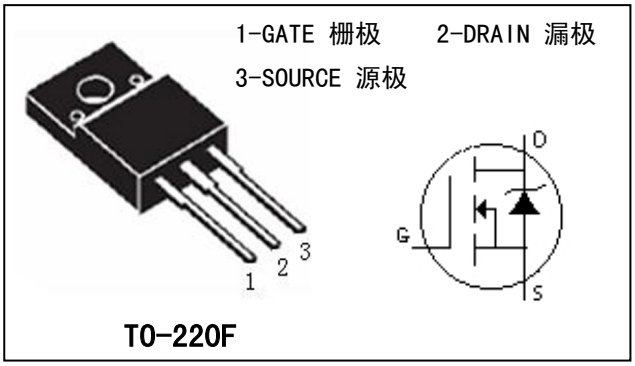
DESCRIPTION
- Electronic Ballast
- Electronic Transformer
- Switch Mode Power Supply

FEATURES
- Low Thermal Resistance
- High Iput Resistance
- Fast Switching
- ROHS Compliant



TO-220F

■ 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	4	A
Drain Current-Pulsed	IDM	16	A
Total Dissipation	PD	36	W
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55-150	℃
Single Pulse Avalanche Energy	EAS	128	mJ

■ 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		25	uA
Drain-Source Diode Forward Voltage	VSD	VGS=0V，IS=4A		1.4	V
Gate-body Leakage Current (VDS = 0)	IGSS	VGS=±30V		±100	nA
Forward Transconductance	gfs	Vds=10V Id=2.0A	1		S
Static Drain-source On Resistance	RDS(ON)	VGS=10V,ID=2.0A		2.5	Ω
Thermal Resistance Junction-case	RthJ-c			3.47	℃/W

■ DYNAMIC CHARACTERISTICS（Tc=25℃）

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Input Capacitance	Ciss	VDS=25V,VGS=0V, f=1.0MHZ	-	610	-	pF
output Capacitance	Coss		-	70	90	pF
Reverse Transfer Capacitance	Crss		-	8	11	pF

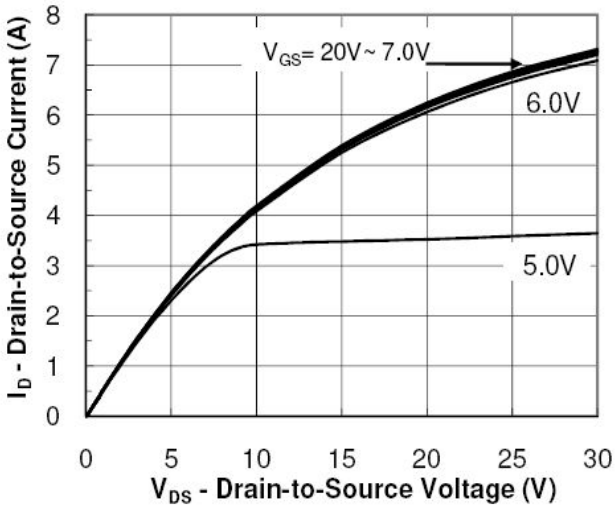
■ SWITCHING CHARACTERISTICS（Tc=25℃）

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Turn-On Delay Time	td(on)	VDD=300V,ID=4.0A, RG=25Ω	-	13	35	ns
Turn-On Rise Time	tr		-	45	100	ns
Turn-Off Delay Time	td(off)		-	20	60	ns
Turn-Off Rise Time	tf		-	35	80	ns
Total Gate Charge	Qg	VDS=480V，ID=4.0A, VGS=10V	-	13.3	-	nC
Gate-Source Charge	Qgs		-	4.1	-	nC
Gate-Drain Charge	Qgd		-	2.8	-	nC

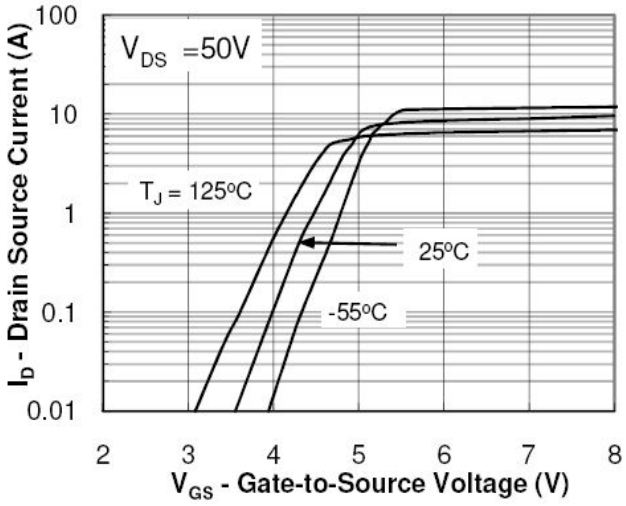
■ DRAIN-SOURCE DIODE　MAXIMUM RATINGS AND CHARACTERISTICS（Tc=25℃）

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Max. Diode Forward Cuurent	Is		-	-	4	A
Max. Pulsed Forward Cuurent	ISM		-	-	16	A
Diode Forward Voltage	VSD	VGS=0V,IS=4.0A	-	-	1.4	V
Reverse Recovery Time	trr	VGS=0V,IS=4.0A, dIF/dt=100A/μs	-	390	-	ns
Reverse Recovery Charge	Qrr		-	1.5	-	μC

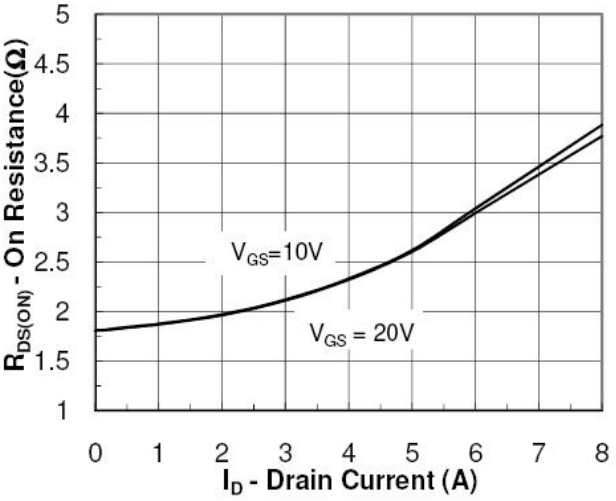
■ CHARACTERISTICS CURVE



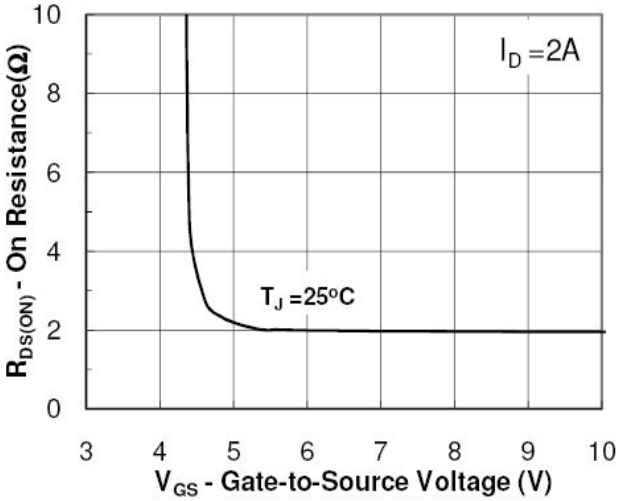
Output Characterisic



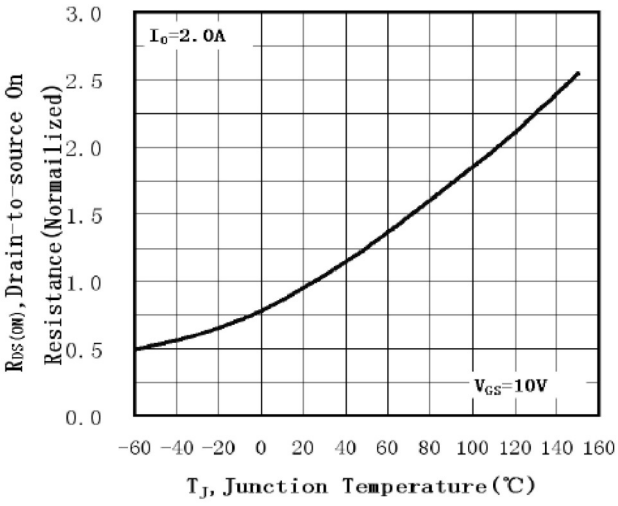
Transfer Characterisic



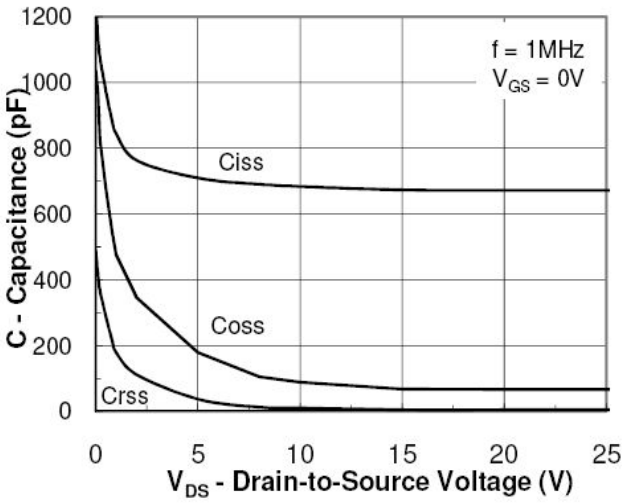
On Resistance Vs Drain Current



On Resistance Vs Gate Source Voltage

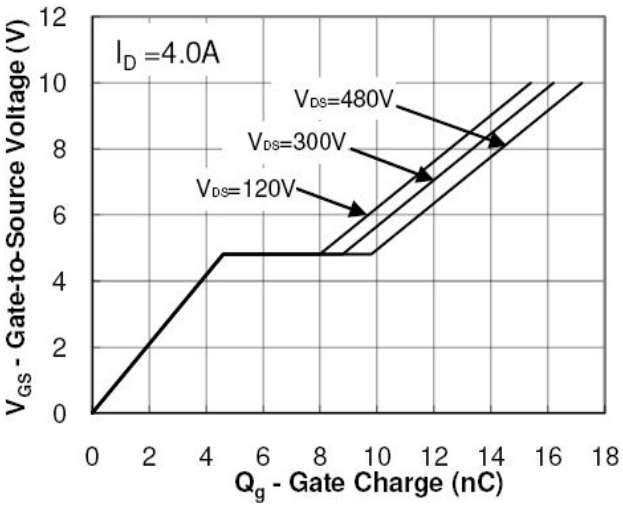


On Resistance Vs Junction Temperature

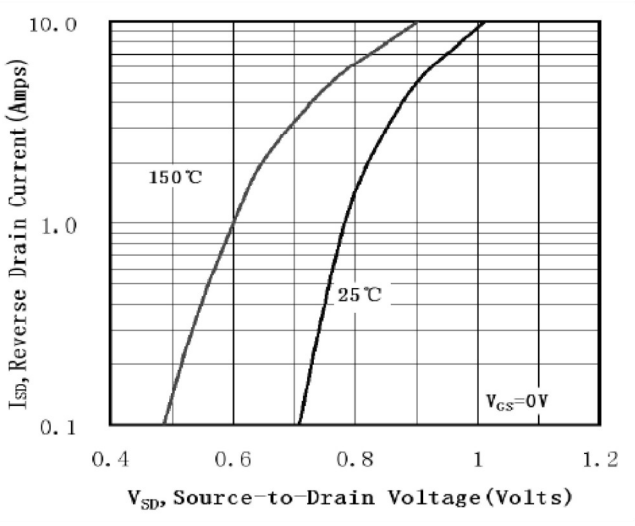


Capacitance

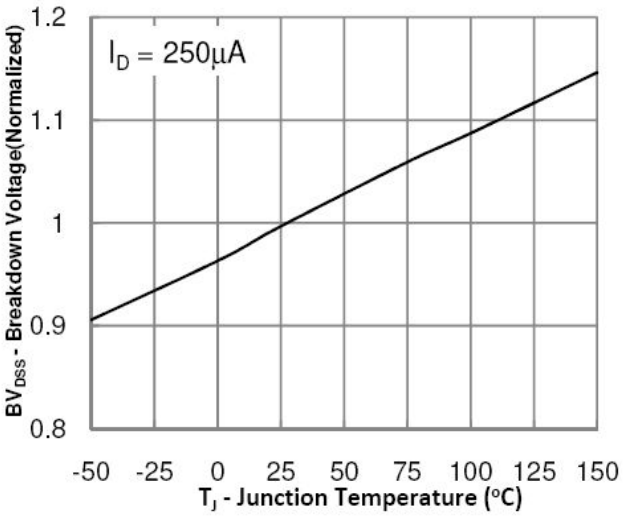
■ CHARACTERISTICS CURVE



Gate Charge Waveform



Source-Drain Diode Forward Voltage



Breakdown Voltage Vs Junction Temperature

TO-220F MECHANICAL DATA

UNIT：mm

SYMBOL	MIN	NOM	MAX	SYMBOL	MIN	NOM	MAX
A	4.5		4.9	E1	6.5	7	7.5
A1	2.3		2.9	e	2.44	2.54	2.64
b	0.65		0.9	L	12.5		14.3
b1	1.1		1.7	L1	9.45		10.05
b2	1.2		1.4	L2	15		16
c	0.35		0.65	L3	3.2		4.4
D	14.5		16.5	ΦP	3		3.3
D1	6.1		6.9	Q	2.5		2.9
E	9.6		10.3				

