

DESCRIPTION

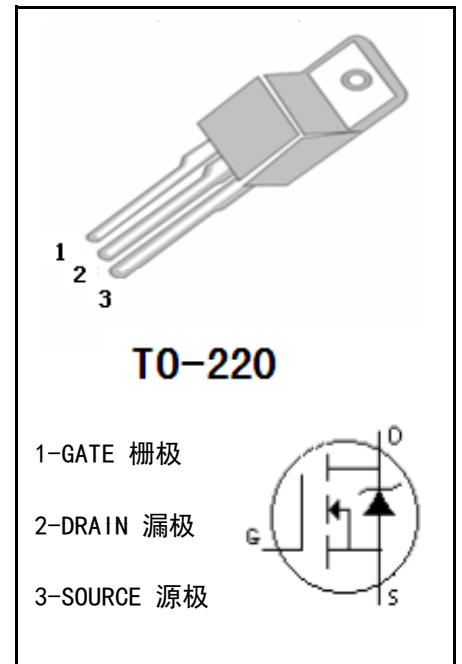
- ELECTRONIC BALLAST
- ELECTRONIC TRANSFORMER
- SWITCH MODE POWER SUPPLY

FEATURES:

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

MAXIMUM RATINGS (T_c=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Drain-source Voltage	VDS	60	V
gate-source Voltage	VGS	±20	V
Continuous Drain Current (T _C =25°C)	ID	50	A
Drain Current-Pulsed	IDM	200	A
Total Dissipation	PD	80	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55-150	°C
Single Pulse Avalanche Energy (L=0.5mH)	EAS	250	mJ

MECHANICAL

ELECTRONIC CHARACTERISTICS (T_c=25°C)

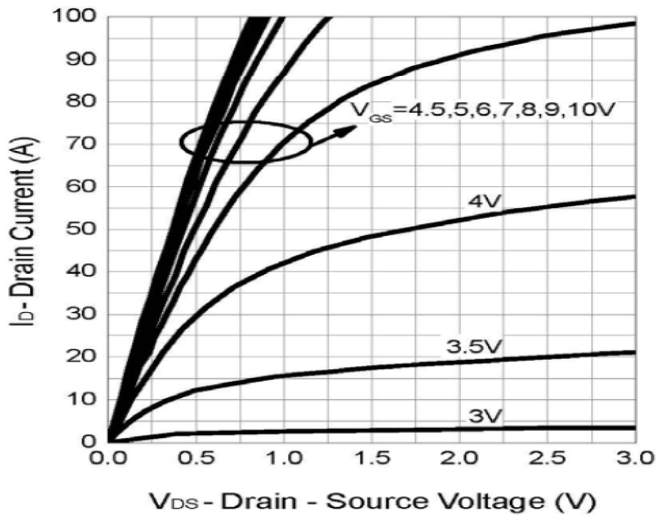
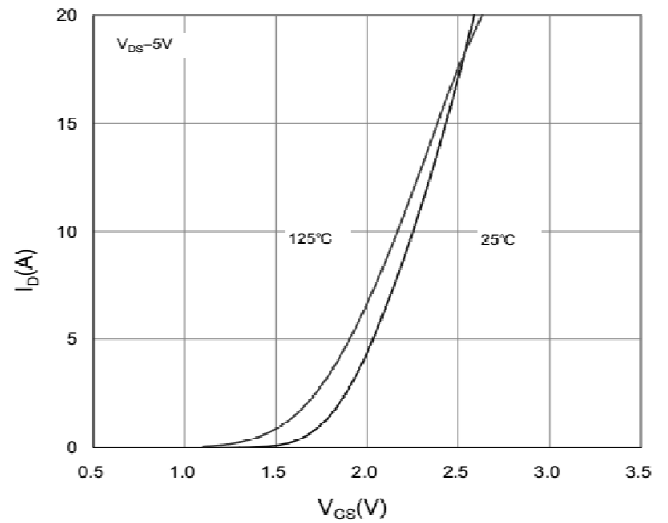
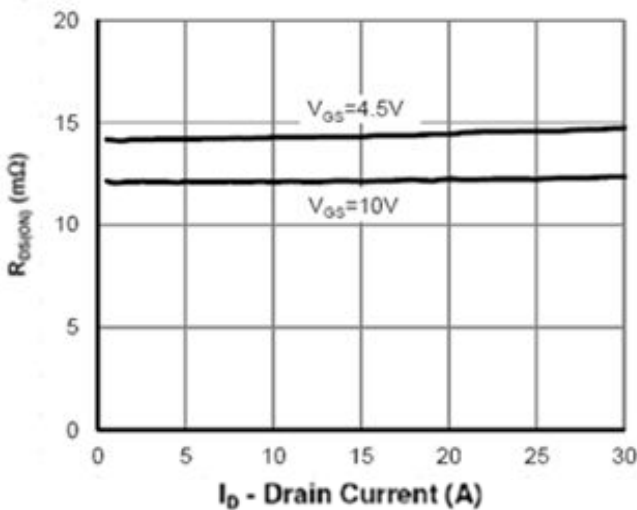
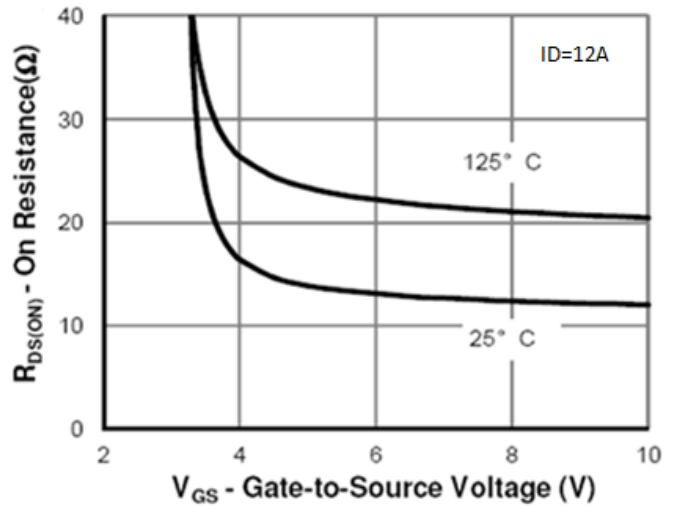
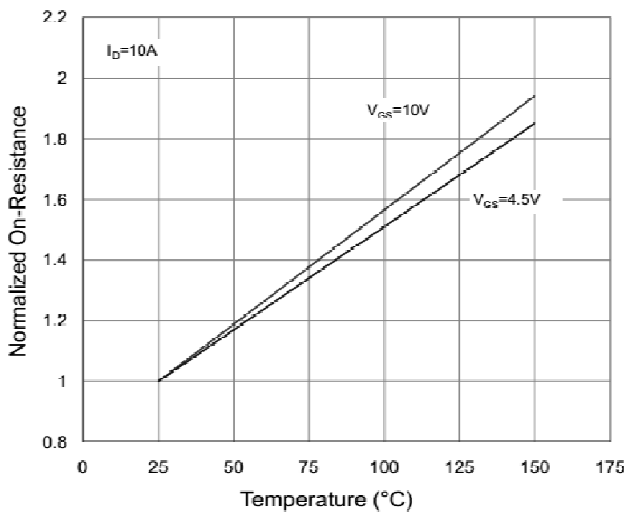
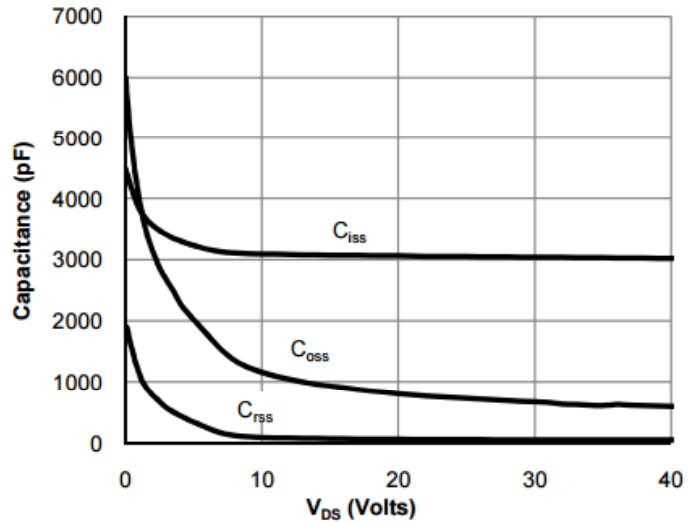
CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Drain-source Breakdown Voltage	BVDSS	VGS=0V, ID=250 μA	60		V
Gate Threshold Voltage	VGS (TH)	VGS=VDS, ID=250 μA	1	2.5	V
Drain-source Leakage Current	IDSS	VDS=60V, VGS=0V		10	uA
Drain-Source Diode Forward Voltage	VSD	VGS=0V, IS=10A		1.5	V
Gate-body Leakage Current (VDS = 0)	IGSS	VGS=±20V		±100	nA
Static Drain-source On Resistance	RDS (ON)	VGS=10V, ID=10A		18.5	mΩ
		VGS=10V, ID=20A		15	mΩ
Thermal Resistance Junction-case	RthJ-c			1.56	°C/W

■ DYNAMIC CHARACTERISTICS ($T_c=25^{\circ}\text{C}$)

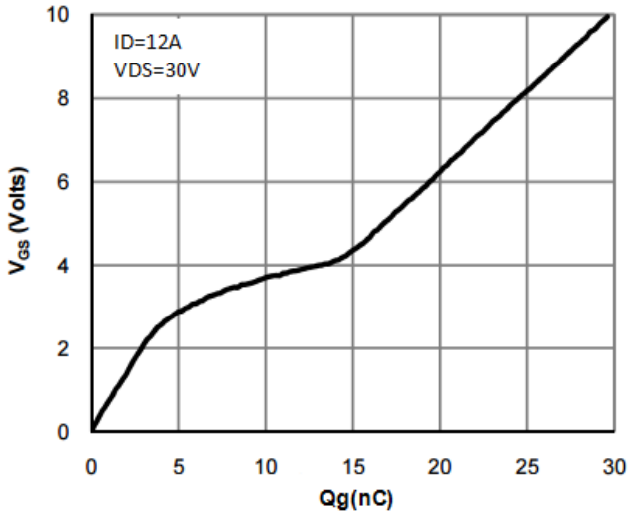
CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Input Capacitance	C_{iss}	VDS=35V, VGS=0V, f=1.0MHZ	-	3100	-	pF
output Capacitance	C_{oss}		-	130	-	pF
Reverse Transfer Capacitance	C_{rss}		-	100	-	pF
Gate resistance	RG	VDS=0V, VGS=0V, f=1.0MHZ	-	1.65	-	Ω

■ SWITCHING CHARACTERISTICS ($T_c=25^{\circ}\text{C}$)

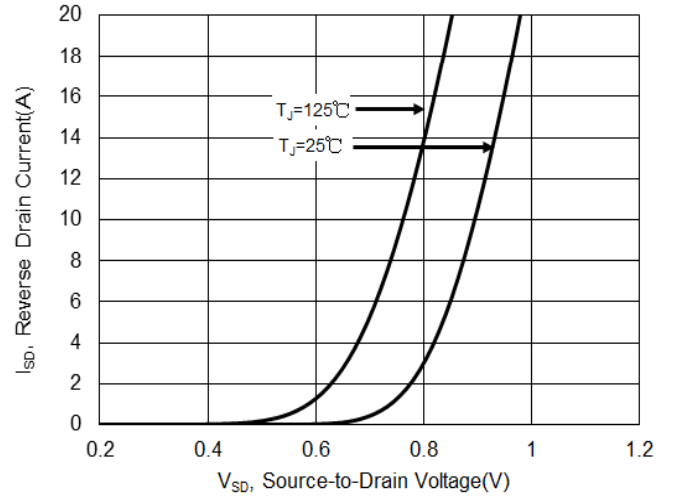
CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Total Gate Charge	Q_g	VDD=30V, ID=12A, VGS=10V	-	30	-	nC
Gate-Source Charge	Q_{gs}		-	9	-	nC
Gate-Drain Charge	Q_{gd}		-	15	-	nC

CHARACTERISTICS CURVE

Output Characteristic

Transfer Characteristic

On Resistance Vs Drain Current

On Resistance Vs Gate Source Voltage

On Resistance Vs Junction Temperature

Capacitance

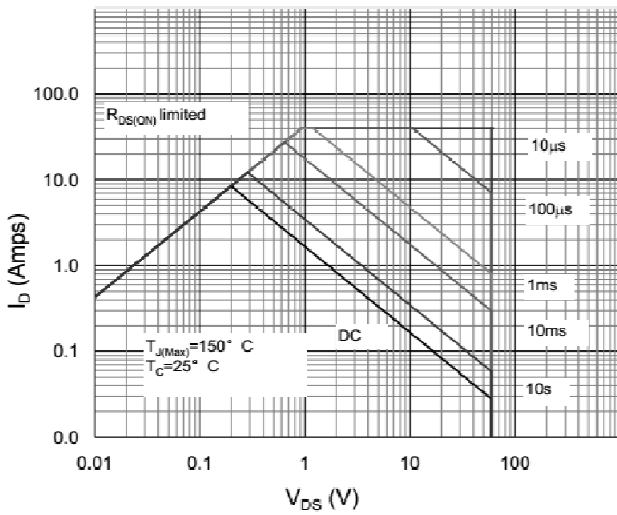
■ CHARACTERISTICS CURVE



Gate Charge Waveform



Source-Drain Diode Forward Voltage



Normalized Gate Threshold Voltage Vs 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				

