■ DESCRIPTION

●ELECTRONIC BALLAST

●ELECTRONIC TRANSFORMER

●SWITCH MODE POWER SUPPLY

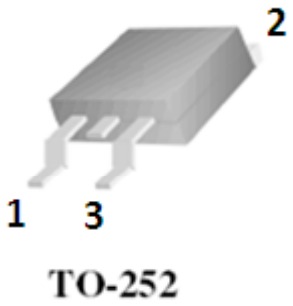
■ FEATURES:

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

■ MAXIMUM RATINGS (Tc=25℃)

PARAMETER	SYMBOL	VALUE	UNIT
Drain-source Voltage	VDS	60	V
gate-source Voltage	VGS	±20	V
Continuous Drain Current	ID	65	A
Drain Current-Pulsed	IDM	260	A
Total Dissipation	PD	85	W
Junction Temperature	Tj	175	℃
Storage Temperature Range	Tstg	-55-175	℃
Single Pulse Avalanche Energy (L=0.5mH)	EAS	400	mJ

■ MECHANICAL

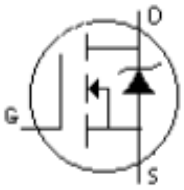


TO-252

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	60		V
Gate Threshold Voltage	VGS(TH)	VGS=VDS , ID=250μA	1	2.5	V
Drain-source Leakage Current	IDSS	VDS=60V, VGS=0V		1	uA
Drain-Source Diode Forward Voltage	VSD	VGS=0V, IS=10A		1.2	V
Gate-body Leakage Current (VDS = 0)	IGSS	VGS=±20V		±100	nA
Static Drain-source On Resistance	RDS(ON)	VGS=4.5V, ID=8A		11	mΩ
		VGS=10V, ID=15A		9	mΩ
Thermal Resistance Junction-case	RthJ-c			1.76	℃/W

■ DYNAMIC CHARACTERISTICS (Tc=25℃)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Input Capacitance	Ciss	VDS=20V, VGS=0V, f=1.0MHZ	-	1650	-	pF
output Capacitance	Coss		-	-	400	pF
Reverse Transfer Capacitance	Crss		-	-	230	pF
Gate resistance	RG	VgsDCBias=0V, Speed=MED	-	3.2	7	Ω

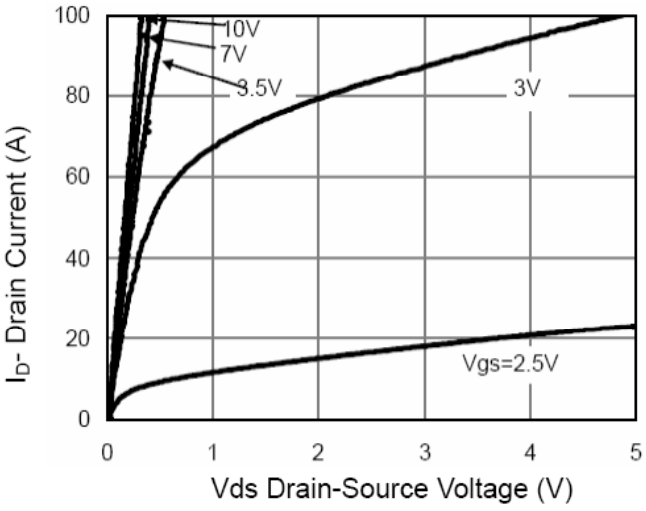
■ SWITCHING CHARACTERISTICS (Tc=25℃)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Turn-On Delay Time	td(on)	VDD=20V, ID=20A, VGS=10V, RG=3Ω	-	18	-	ns
Turn-On Rise Time	tr		-	13	-	ns
Turn-Off Delay Time	td(off)		-	49	-	ns
Turn-Off Rise Time	tf		-	14	-	ns
Total Gate Charge	Qg	VDS=20V, ID=20A, VGS=10V	-	37	-	nC
Gate-Source Charge	Qgs		-	4	-	nC
Gate-Drain Charge	Qgd		-	13	-	nC

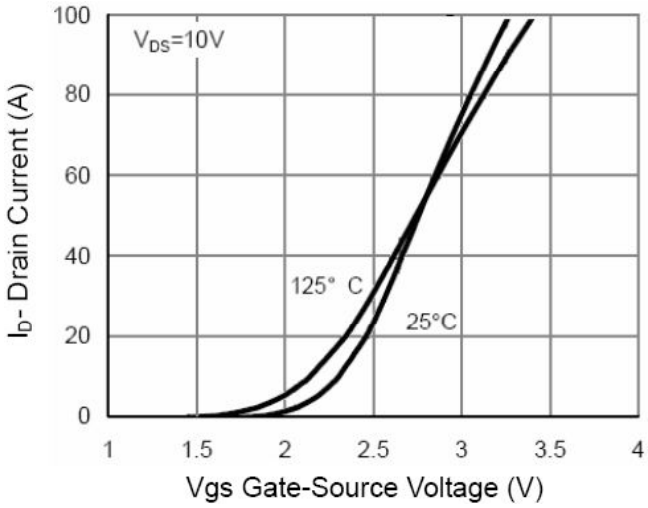
■ DRAIN-SOURCE DIODE MAXIMUM RATINGS AND CHARACTERISTICS (Tc=25℃)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Diode Forward Voltage	VSD	VGS=0V, IS=10A	-	-	1.2	V
Reverse Recovery Time	trr	TJ=25℃, IF=20A, di/dt=100A/μs	-	30	-	ns
Reverse Recovery Charge	Qrr		-	35	-	nC

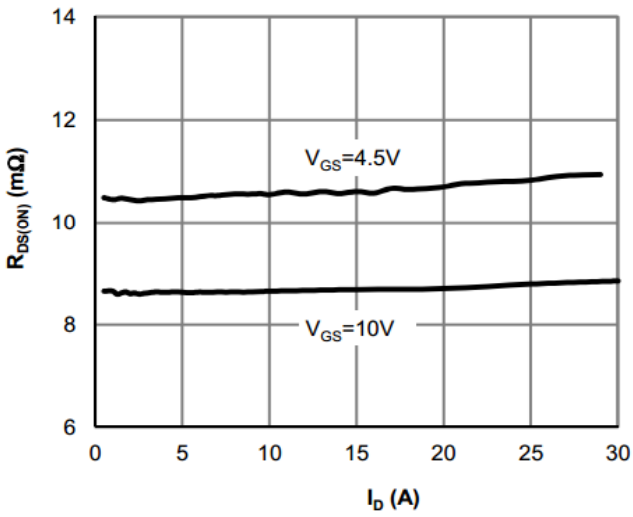
CHARACTERISTICS CURVE



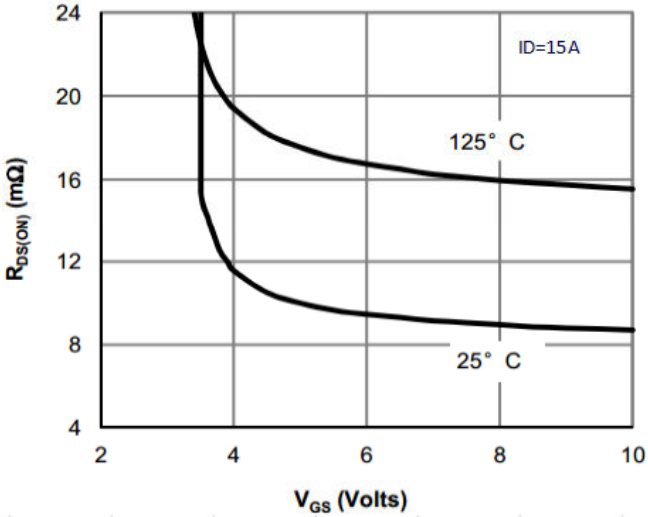
Output Characterisic



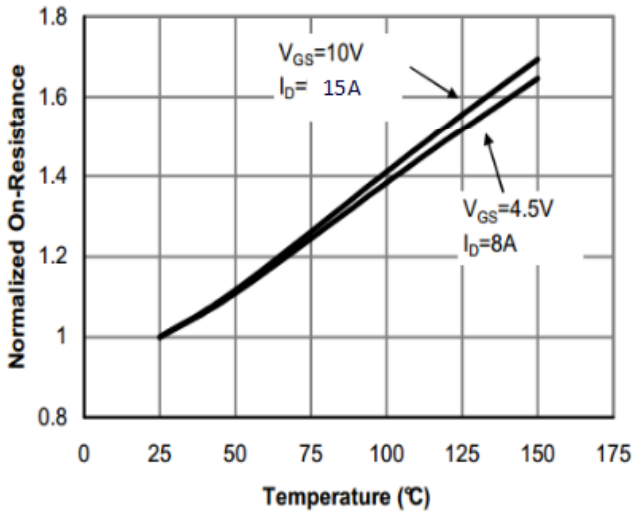
Transfer Characterisic



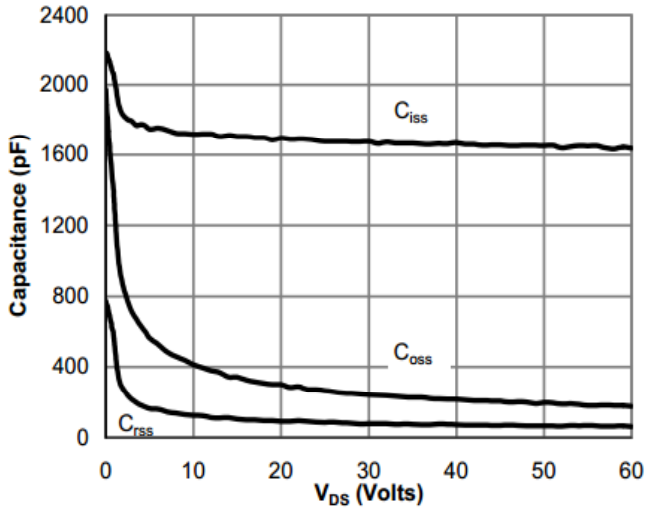
On Resistance Vs Drain Current



On-Resistance vs. Gate-Source Voltage

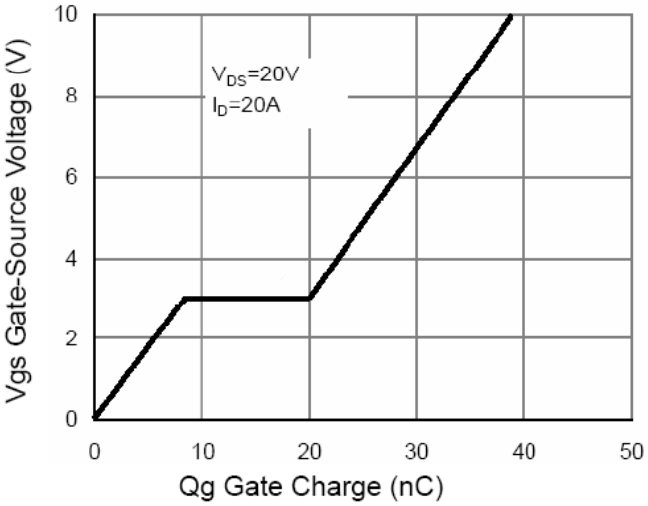


On Resistance Vs Junction Temperature

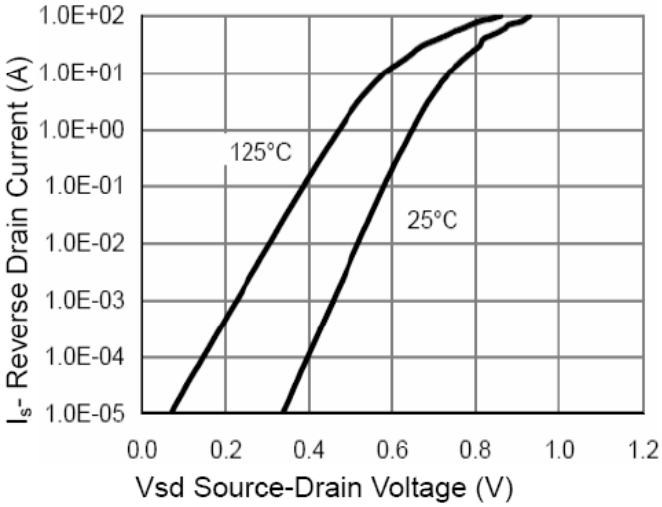


Capacitance

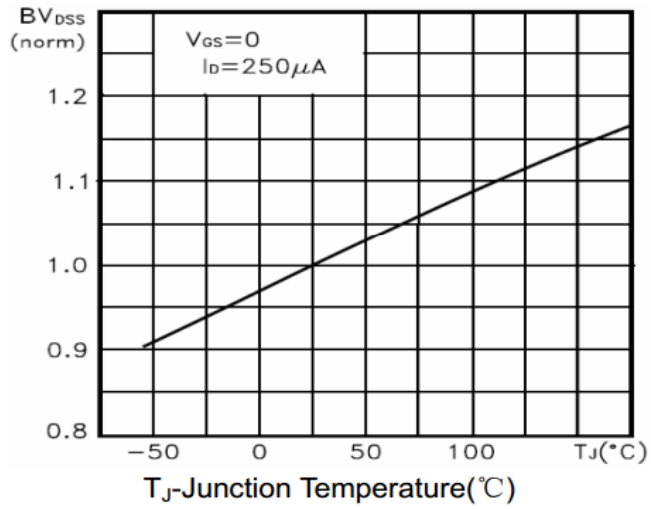
CHARACTERISTICS CURVE



Gate Charge Waveform



Source-Drain Diode Forward Voltage



Breakdown Voltage Vs Junction Temperature

TO-252 MECHANICAL DATA

UNIT: mm

SYMBOL	MIN	NOM	MAX	SYMBOL	MIN	NOM	MAX
A	2.10		2.50	E	5.80		6.30
B	0.80		1.25	e1	2.25	2.30	2.35
b	0.50		0.85	e2	4.45		4.75
b1	0.50		0.90	L1	9.50		10.20
b2	0.45		0.60	L2	0.90		1.45
C	0.45		0.60	L3	0.60		1.10
D	6.35		6.75	K	-0.1		0.10
D1	5.10		5.50