

DESCRIPTION

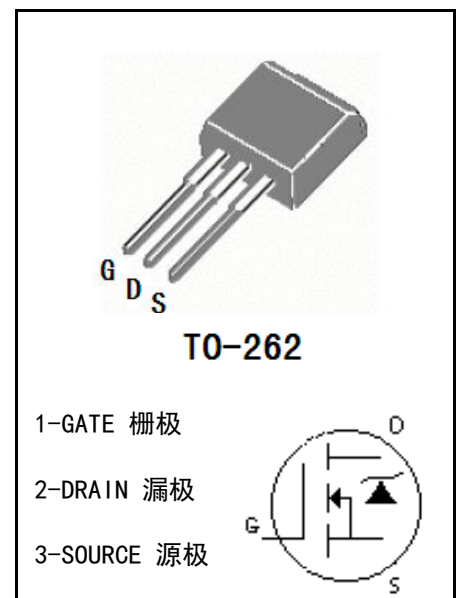
- ELECTRONIC BALLAST
- ELECTRONIC TRANSFORMER
- SWITCH MODE POWER SUPPLY

FEATURES:

- LOW THERMAL RESISTANCE
- HIGH INPUT RESISTANCE
- FAST SWITCHING
- ROHS COMPLIANT
- THESE ARE HALOGEN_FREE DEVICES

MAXIMUM RATINGS (T_c=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Drain-source Voltage	VDS	700	V
gate-source Voltage	VGS	±30	V
Continuous Drain Current (T _c =25°C)	ID	7	A
Drain Current-Pulsed	IDM	28	A
Total Dissipation	PD	147	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55-150	°C
Single Pulse Avalanche Energy	EAS	510	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	700		V
Gate Threshold Voltage	VGS (TH)	VGS=VDS, ID=250 μA	2	4	V
Drain-source Leakage Current	IDSS	VDS=700V, VGS=0V		1	μA
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	g _{fs}	V _{ds} =10V, I _d =3.5A	2		S
Static Drain-source On Resistance	R _{DS (ON)}	VGS=10V, ID=3.5A		1.65	Ω
Thermal Resistance Junction-case	R _{thJ-c}			0.85	°C/W

■ DYNAMIC CHARACTERISTICS (T_c=25°C)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Input Capacitance	C _{iss}	V _{DS} =25V, V _{GS} =0V, f=1.0MHz	-	1120	1500	pF
output Capacitance	C _{oss}		-	-	135	pF
Reverse Transfer Capacitance	C _{rss}		-	-	60	pF

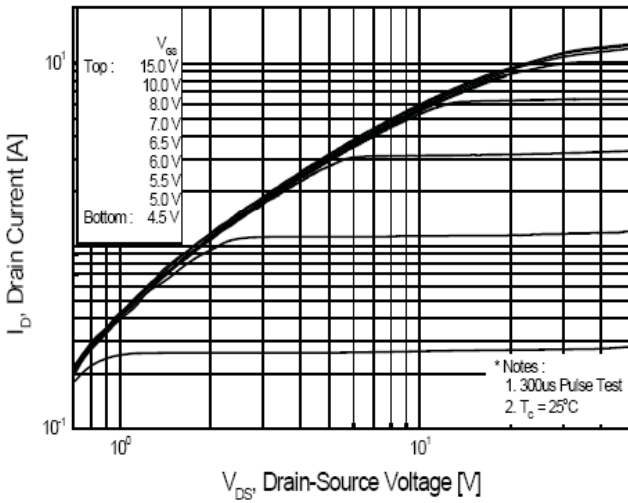
■ SWITCHING CHARACTERISTICS (T_c=25°C)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Turn-On Delay Time	t _{d(on)}	V _{DD} =350V, I _D =7.0A, R _G =25Ω	-	35	80	ns
Turn-On Rise Time	t _r		-	75	165	ns
Turn-Off Delay Time	t _{d(off)}		-	80	-	ns
Turn-Off Rise Time	t _f		-	50	120	ns
Total Gate Charge	Q _g	V _{DS} =560V, I _D =7.0A, V _{GS} =10V	-	24	-	nC
Gate-Source Charge	Q _{gs}		-	6.1	-	nC
Gate-Drain Charge	Q _{gd}		-	7.7	-	nC

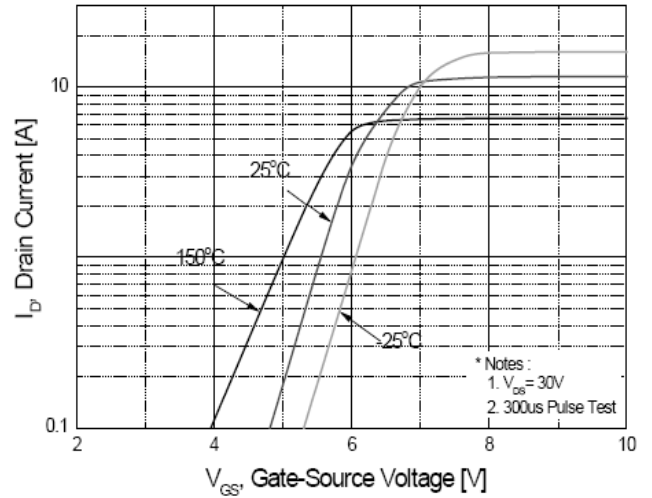
■ DRAIN-SOURCE DIODE MAXIMUM RATINGS AND CHARACTERISTICS (T_c=25°C)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Max. Diode Forward Current	I _s		-	-	7	A
Max. Pulsed Forward Current	I _{SM}		-	-	28	A
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =7.0A	-	-	1.4	V
Reverse Recovery Time	t _{rr}	V _{GS} =0V, I _S =7.0A, dI _F /dt=100A/μs	-	320	-	ns
Reverse Recovery Charge	Q _{rr}		-	2.4	-	μC

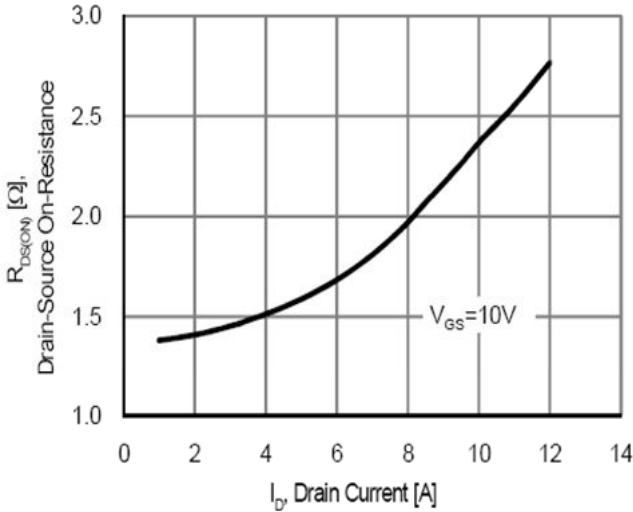
CHARACTERISTICS CURVE



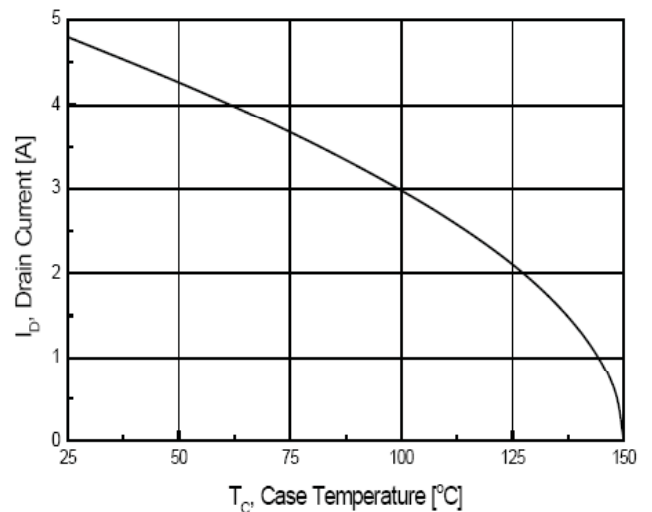
Output Characteristic



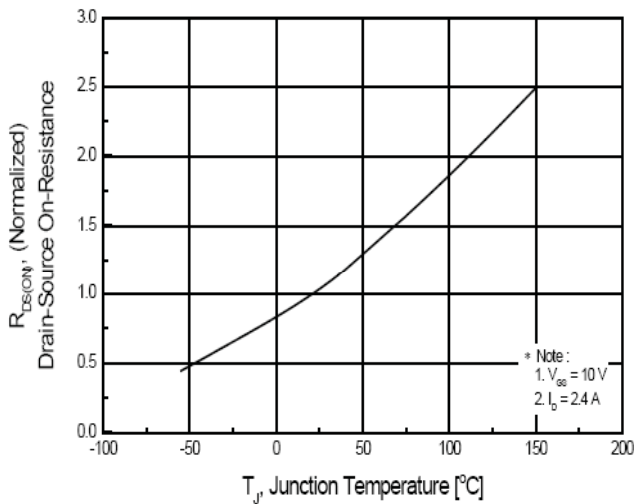
Transfer Characteristic



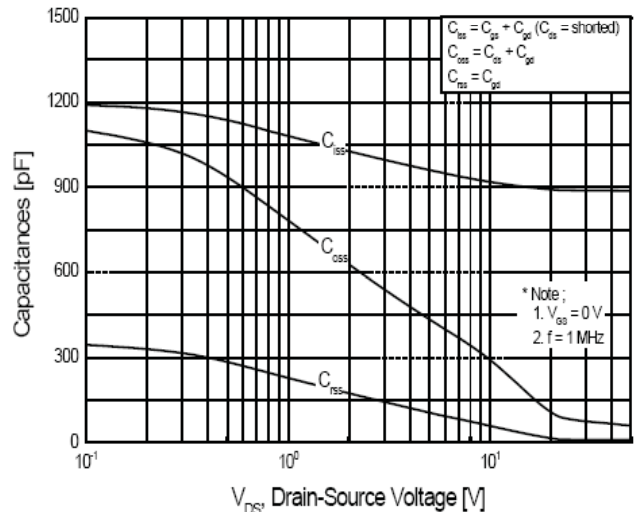
On Resistance Vs Drain Current



Maximum Drain Current vs Case Temperature



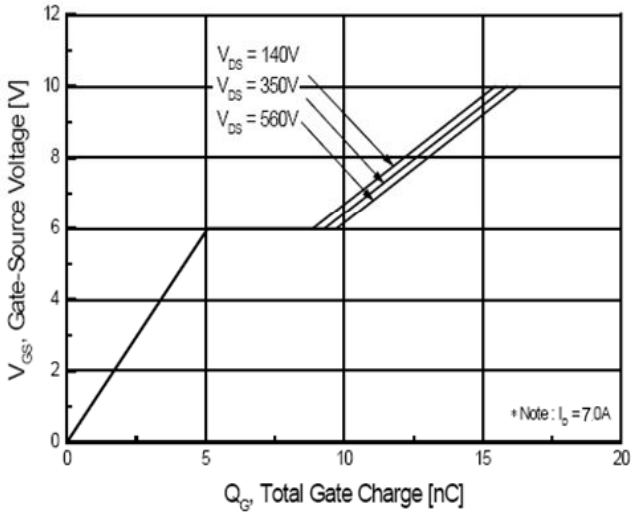
On Resistance Vs Junction Temperature



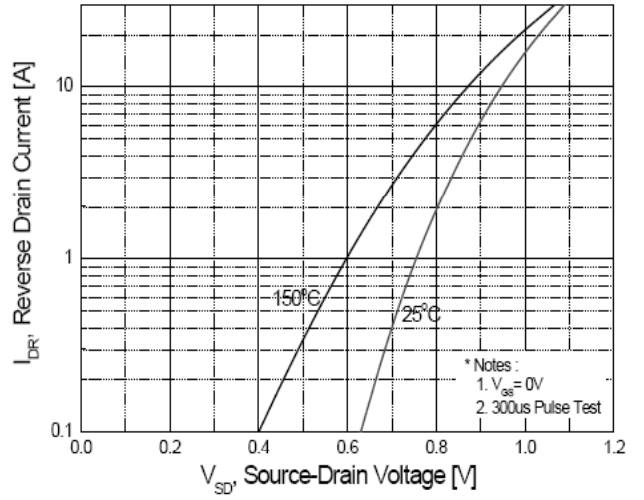
Capacitance



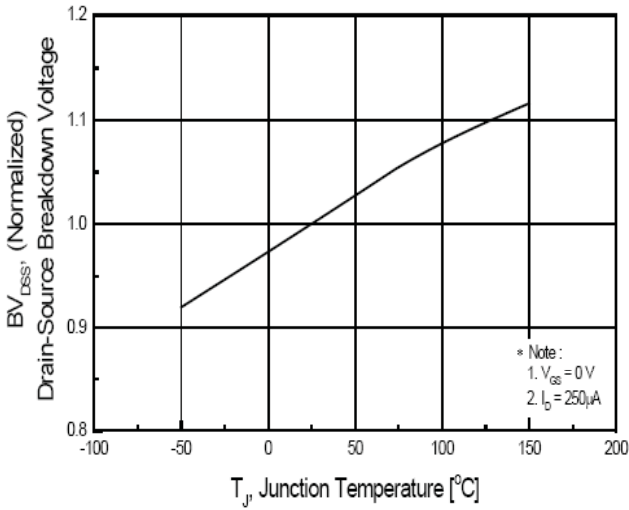
CHARACTERISTICS CURVE



Gate Charge Waveform



Source-Drain Diode Forward Voltage



Breakdown Voltage Vs Junction Temperature

TO-262 MECHANICAL DATA

UNIT: mm

SYMBOL	MIN	NOM	MAX	SYMBOL	MIN	NOM	MAX
A	4.42		4.72	e	2.44	2.54	2.64
A1	2.40		2.80	e1	4.98		5.18
b	0.76		0.86	E	9.95		10.25
b1	1.22		1.40	L	12.50		13.60
c	0.33		0.43	L1	3.30	3.50	3.80
C2	1.22		1.35	L2	1.22		1.40
D	8.99		9.29				

