■ DESCRIPTION

●ELECTRONIC BALLAST

●ELECTRONIC TRANSFORMER

●SWITCH MODE POWER SUPPLY

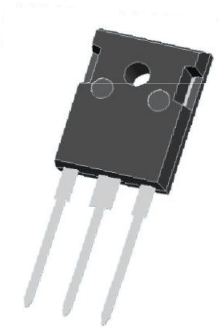
■ FEATURES:

●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	47	A
Drain Current-Pulsed	IDM	140	A
Total Dissipation	PD	420	W
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55-150	℃
Single Pulse Avalanche Energy	EAS	1150	mJ

■ MECHANICAL



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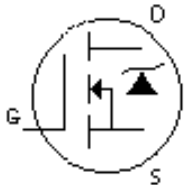
1-GATE 栅极

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=250uA	600		V
Gate Threshold Voltage	VGS(TH)	VGS=VDS ,ID=250μA	2.5	4.5	V
Drain-source Leakage Current	IDSS	VDS=600V,VGS=0V		1	uA
Drain-Source Diode Forward Voltage	VSD	VGS=0V, IS=20A		1.3	V
Gate-body Leakage Current (VDS = 0)	IGSS	VGS=±30V		±0.1	uA
Forward Transconductance	gfs	Vds=10V Id=23A	20		S
Static Drain-source On Resistance	RDS(ON)	VGS=10V,ID=23A		70	mΩ
Thermal Resistance Junction-case	RthJ-c			0.9	℃/W

■ DYNAMIC CHARACTERISTICS (Tc=25℃)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Input Capacitance	Ciss	VDS=25V, VGS=0V, f=1.0MHZ	-	3150	-	pF
output Capacitance	Coss		-	950	-	pF
Reverse Transfer Capacitance	Crss		-	10	-	pF

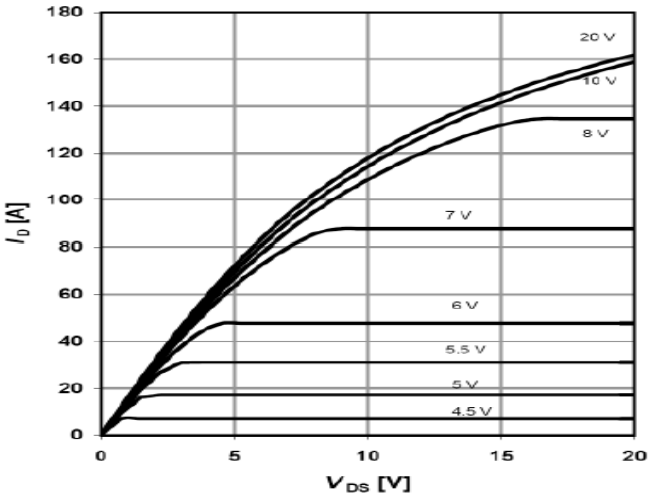
■ SWITCHING CHARACTERISTICS (Tc=25℃)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Turn-On Delay Time	td(on)	VDD=480V, ID=23A, RG=20Ω, VGS=10V	-	16	-	ns
Turn-On Rise Time	tr		-	12	-	ns
Turn-Off Delay Time	td(off)		-	83	-	ns
Turn-Off Rise Time	tf		-	5	-	ns
Total Gate Charge	Qg	VDS=480V, ID=23A, VGS=10V	-	170	-	nC
Gate-Source Charge	Qgs		-	21	-	nC
Gate-Drain Charge	Qgd		-	87	-	nC

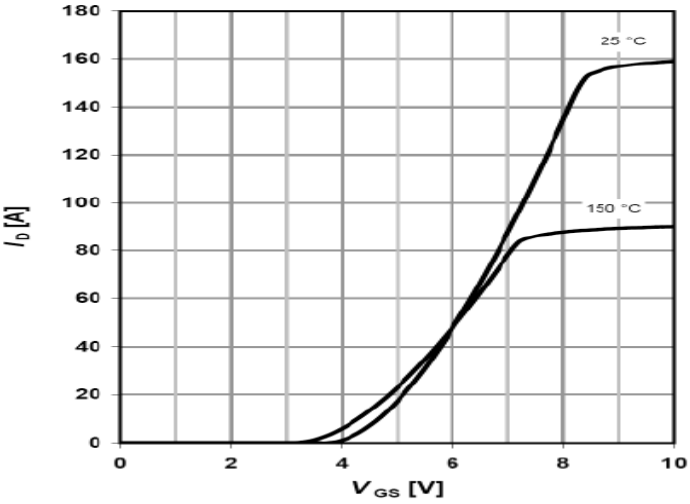
■ DRAIN-SOURCE DIODE MAXIMUM RATINGS AND CHARACTERISTICS (Tc=25℃)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Max. Diode Forward Cuurent	Is		-	-	47	A
Max. Pulsed Forward Cuurent	ISM		-	-	140	A
Diode Forward Voltage	VSD	VGS=0V, IS=20A	-	-	1.3	V
Reverse Recovery Time	trr	VGS=0V, IS=23A, dIF/dt=100A/μs,	-	720	-	ns
Reverse Recovery Charge	Qrr		-	19	-	μC

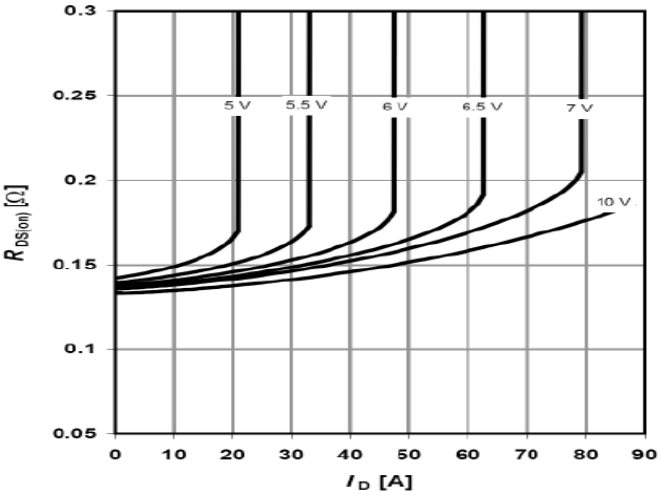
CHARACTERISTICS CURVE



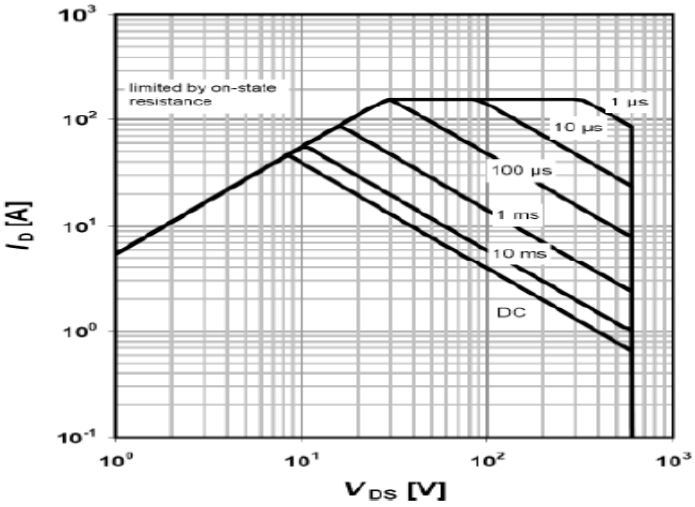
Output Characterisic



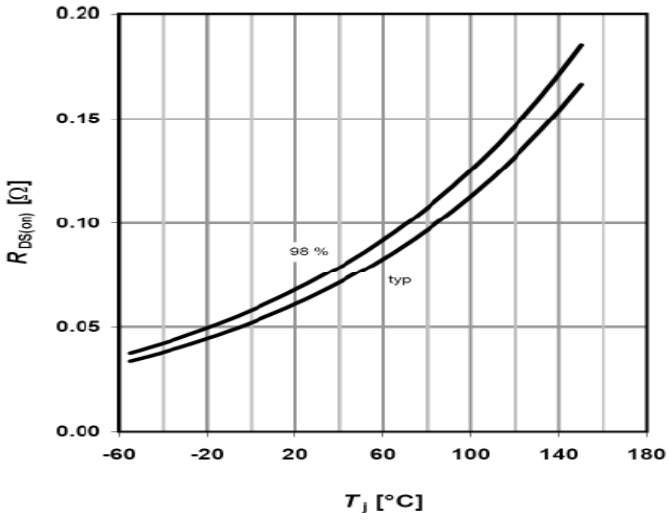
Transfer Characterisic



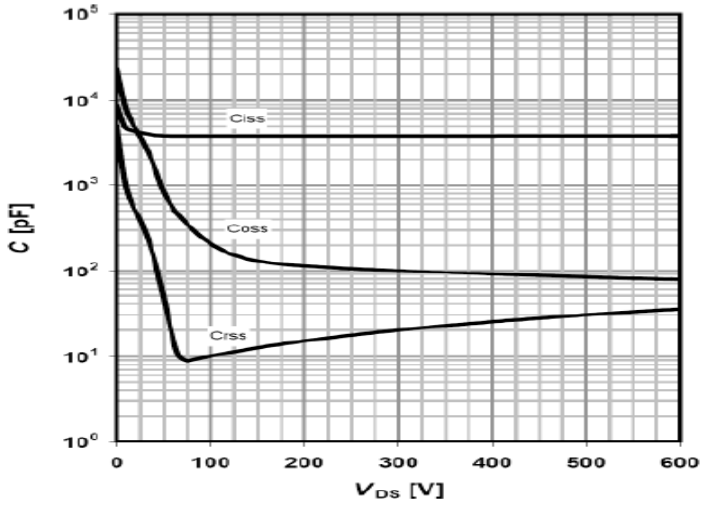
On Resistance Vs Drain Current



Safe Operating Area

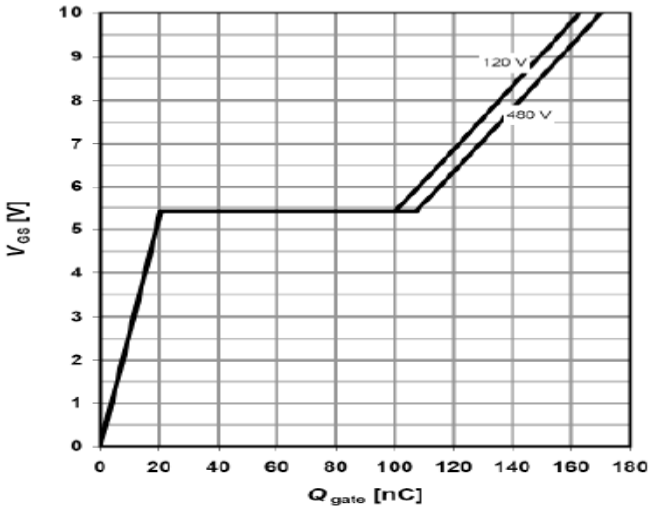


On Resistance Vs Junction Temperature

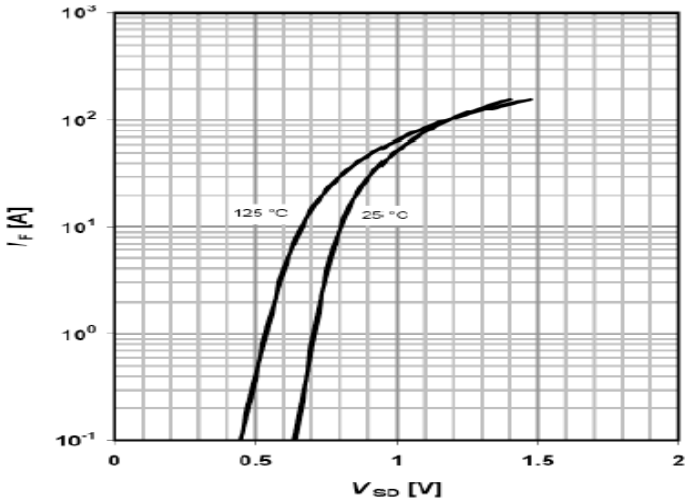


Capacitance

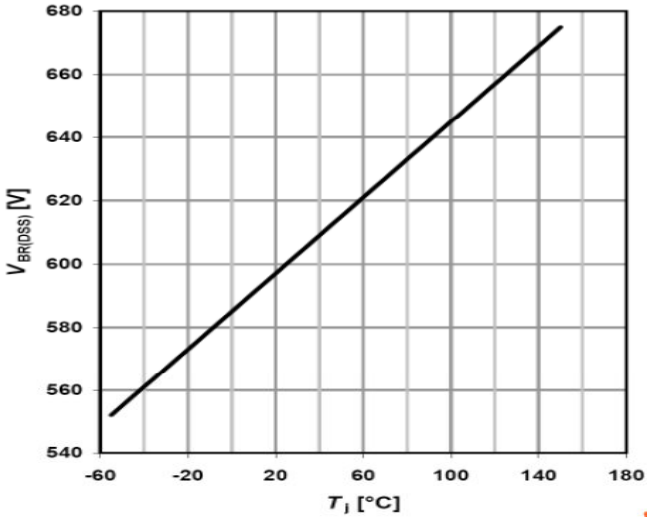
CHARACTERISTICS CURVE



Gate Charge Waveform

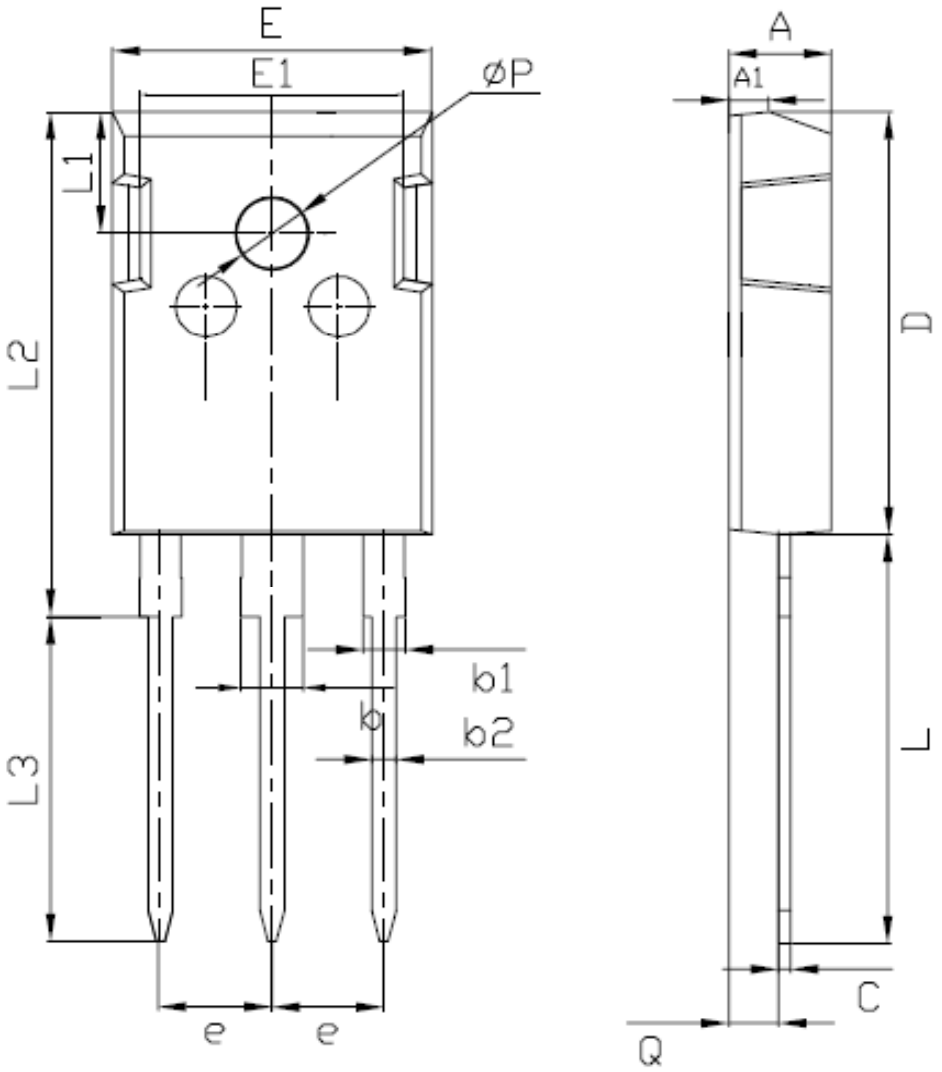


Source-Drain Diode Forward Voltage



Breakdown Voltage Vs Junction Temperature

TO-247 MECHANICAL DATA

UNIT: mm

SYMBOL	MIN	NOM	MAX	SYMBOL	MIN	NOM	MAX
A	4.60		5.15	A1	1.30		1.60
b	2.86		3.26	b1	1.86		2.26
b2		1.20		C		0.50	
D	19.00		21.00	E	15.45		15.75
E1	12.00		13.06	e		5.45	
L	14.00		14.60	L1	5.20		5.88
L2	24.00		24.40	L3	10.00		10.60
P		3.50		Q	2.30		2.70