

DESCRIPTION

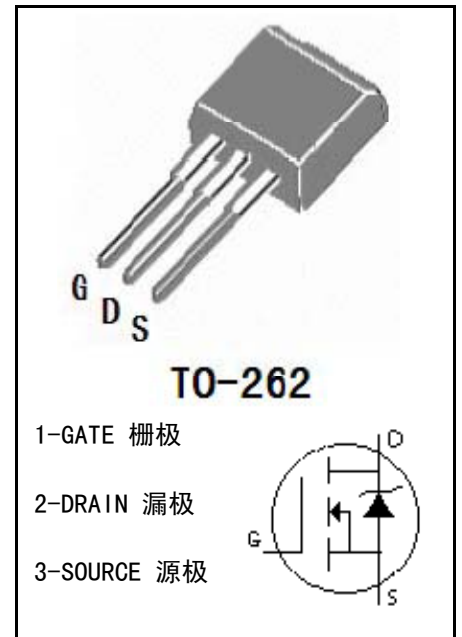
- ELECTRONIC BALLAST
- ELECTRONIC TRANSFORMER
- SWITCH MODE POWER SUPPLY

FEATURES:

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

MAXIMUM RATINGS (T_c=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Drain-source Voltage	V _{DS}	650	V
gate-source Voltage	V _{GS}	±30	V
Continuous Drain Current (T _C =25°C)	I _D	10	A
Drain Current-Pulsed	I _{DM}	32	A
Total Dissipation	PD	90	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55-150	°C
Single Pulse Avalanche Energy (I _{AS} =10A)	EAS	165	mJ

MECHANICAL

ELECTRONIC CHARACTERISTICS (T_c=25°C)

CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Drain-source Breakdown Voltage	B _V D _{SS}	V _{GS} =0V, I _D =250 μA	650		V
Gate Threshold Voltage	V _{GS} (TH)	V _{GS} =V _{DS} , I _D =250 μA	2.5	4.5	V
Drain-source Leakage Current	I _{DSS}	V _{DS} =650V, V _{GS} =0V		1	μA
Drain-Source Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =10A		1.3	V
Gate-body Leakage Current (V _{DS} = 0)	I _{GSS}	V _{GS} =±30V		±100	nA
Static Drain-source On Resistance	R _{DS} (ON)	V _{GS} =10V, I _D =5A		500	mΩ
Thermal Resistance Junction-case	R _{thJ-c}			1.39	°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	-	550	-	pF
output Capacitance	C _{oss}		-	140	-	pF
Reverse Transfer Capacitance	C _{rss}		-	7	-	pF

■ SWITCHING CHARACTERISTICS (T_c=25°C)

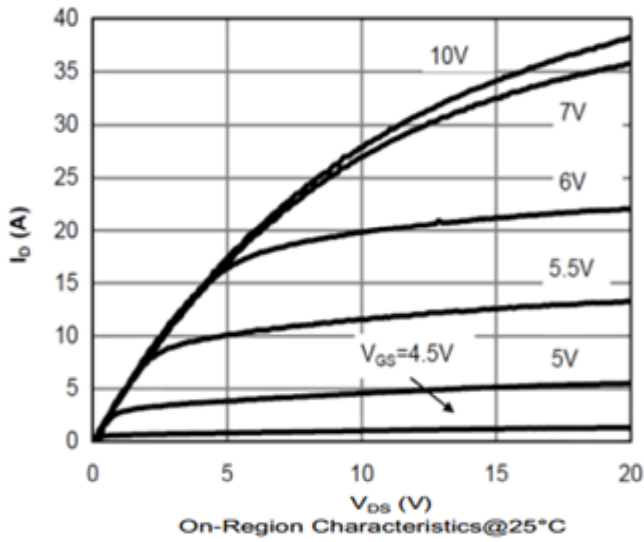
CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Turn-On Delay Time	t _{d(on)}	V _{DD} =400V, I _D =5A, R _G =20 Ω, V _{GS} =10V	-	16	-	ns
Turn-On Rise Time	t _r		-	10	-	ns
Turn-Off Delay Time	t _{d(off)}		-	112	-	ns
Turn-Off Rise Time	t _f		-	10	-	ns
Total Gate Charge	Q _g	V _{DS} =480V, I _D =5A, V _{GS} =10V	-	36	-	nC
Gate-Source Charge	Q _{gs}		-	4	-	nC
Gate-Drain Charge	Q _{gd}		-	4	-	nC

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

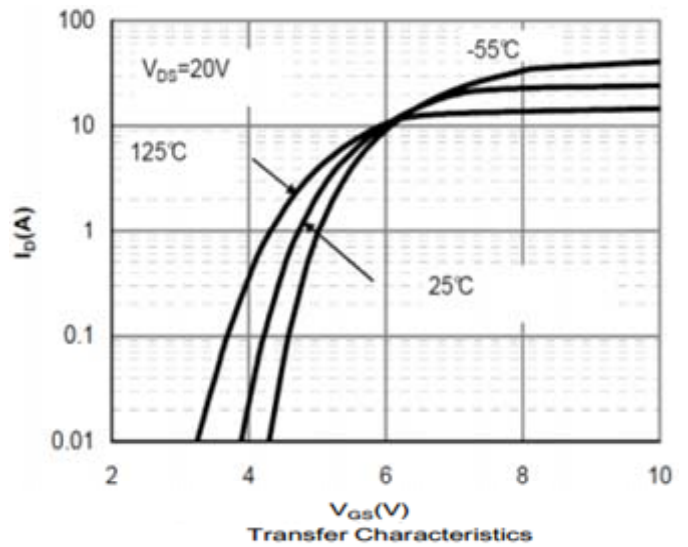
CHARACTERISTICS	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Max. Diode Forward Current	I _s		-	-	10	A
Max. Pulsed Forward Current	I _{SM}		-	-	32	A
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =10A	-	-	1.3	V
Reverse Recovery Time	t _{rr}	V _{GS} =0V, I _S =5A, dI _F /dt=100A/μs,	-	242	-	ns
Reverse Recovery Charge	Q _{rr}		-	3.2	-	μC



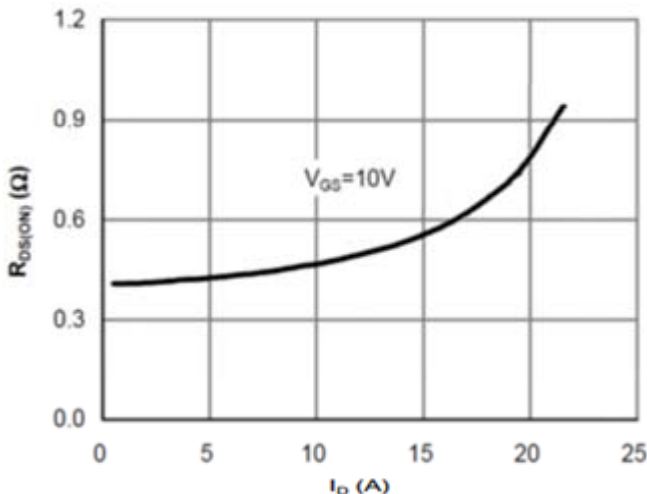
CHARACTERISTICS CURVE



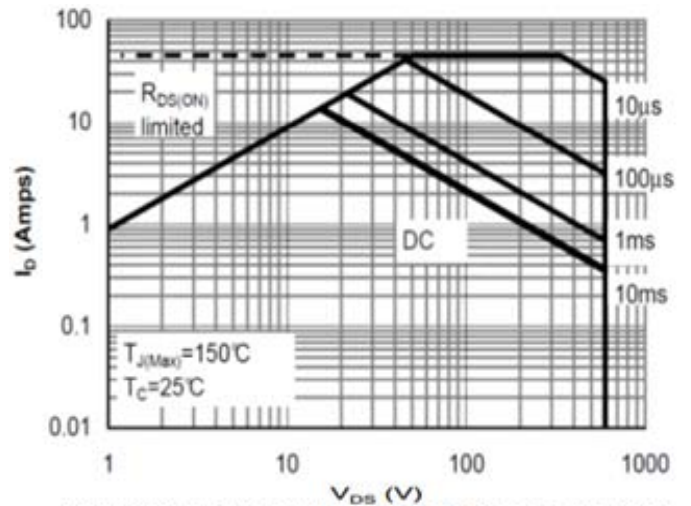
Output Characteristic



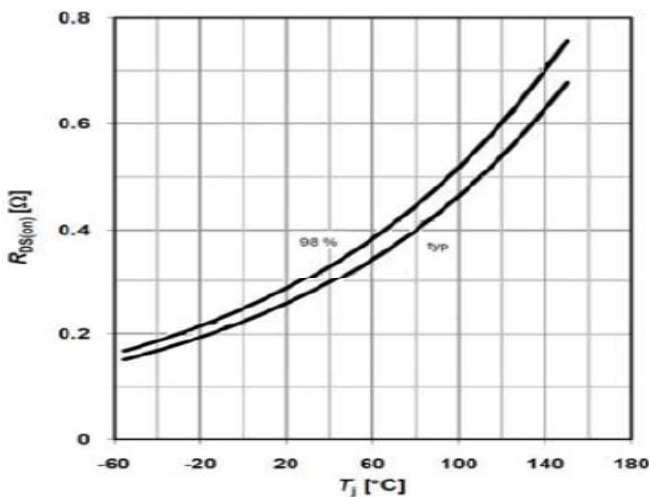
Transfer Characteristic



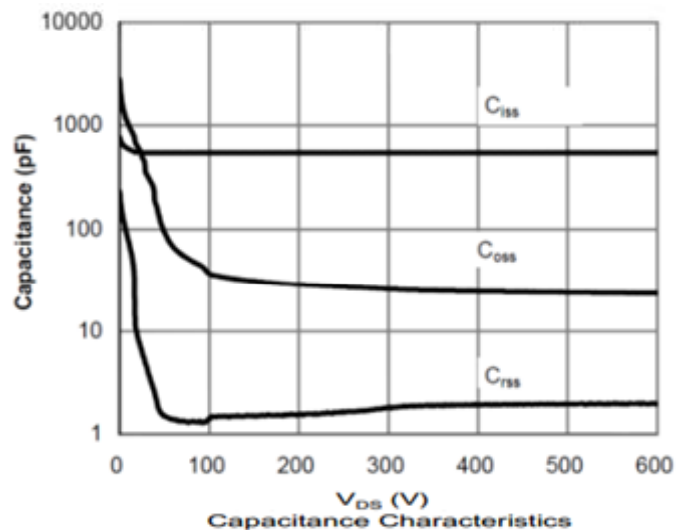
On Resistance Vs Drain Current



Safe Operating Area



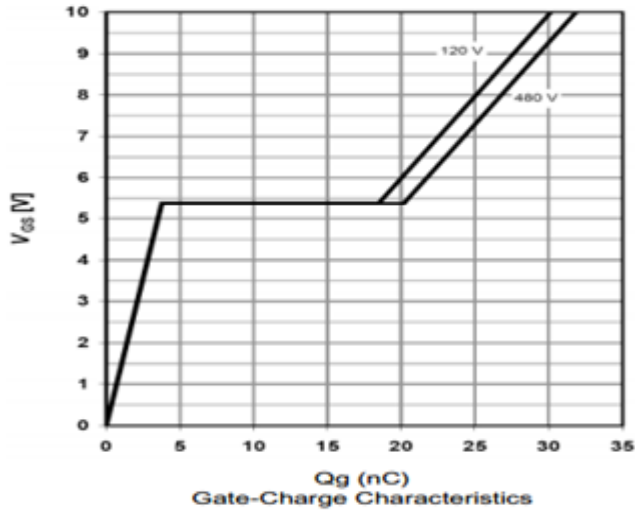
On Resistance Vs Junction Temperature



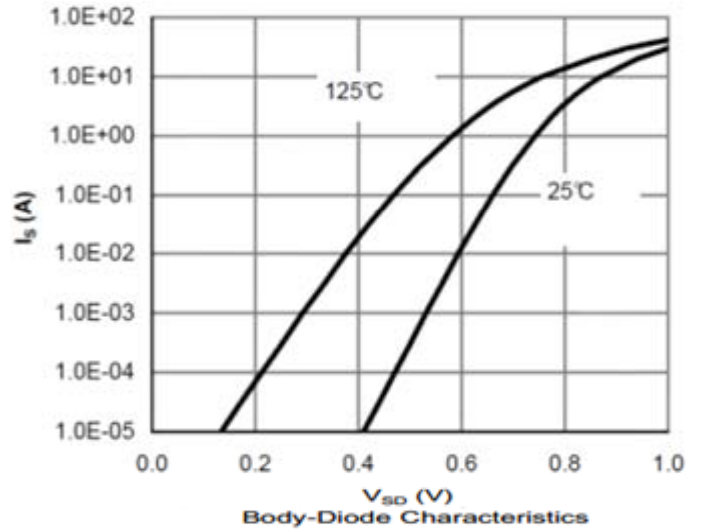
Capacitance



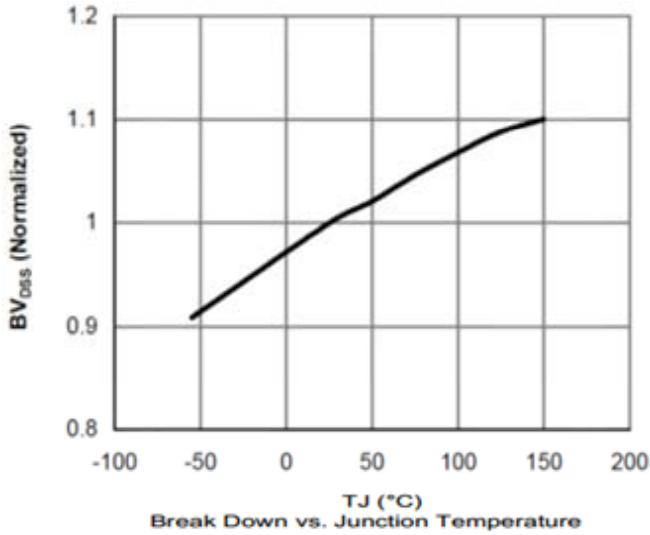
CHARACTERISTICS CURVE



Gate Charge Waveform



Source-Drain Diode Forward Voltage



Breakdown Voltage Vs Junction Temperature



TO-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				

