FEATURES

Adopt advanced trench technology to provide excellent RDS(ON), low gate charge and operation with gate voltages as low as 4.5V. This device is suitable for use as a Battery protection or in other Switching application.

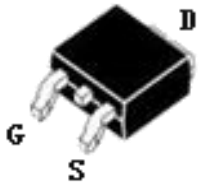
MAIN CHARACTERISTICS

I_D	11A
V_{DSS}	650V
R_{DSON}-typ V_{GS}=10V	340mΩ

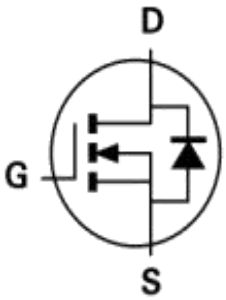
APPLICATIONS

- Solar inverters
- LCD/LED/PDP TV
- Telecom/Server Power supplies
- AC-DC Power Supply

PACKAGE



TO-252



MECHANICAL DATA

- Case: Molded plastic
- Mounting Position: Any
- Molded Plastic: UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Solder bath temperature 275℃ maximum,10s per JESD 22-B106

Product specification classification

Part Number	Package	Mode Name	Pack
LX252F11N65	TO-252	LX252F11N65	Tube

Maximum Ratings at T_C=25°C unless otherwise specified

Characteristics	Symbol	Value	Unit
		252	
Drain-Source Voltage	V_{DS}	650	V
Gate-Source Voltage	V_{GS}	±30	V
Continue Drain Current	I_D	11	A
Pulsed Drain Current (Note1)	I_{DM}	31.8	A
Power Dissipation	P_D	84.5	W
Single Pulse Avalanche Energy (Note1)	E_{AS}	220	mJ
Operating Temperature Range	T_J	-50 to +150	°C
Storage Temperature Range	T_{STG}	-50 to +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.48	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	62	°C/W

Note1:Pulse test: 300 μs pulse width, 2 % duty cycle

Electrical Characteristics at T_C=25°C unless otherwise specified

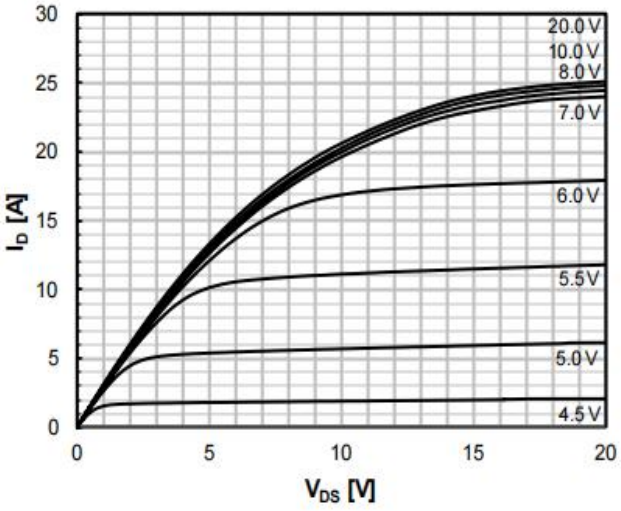
Characteristics	Test Condition	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{GS} = 0 V,I_D = 250 μA	BV_{DSS}	650	-	-	V
Drain-Source Leakage Current	V_{DS} =650 V, V_{GS} = 0 V	I_{DSS}	-	-	1	μA
Gate Leakage Current	V_{GS} = ± 30 V, V_{DS} = 0 V	I_{GSS}	-	-	±100	nA
Gate-Source Threshold Voltage	V_{DS} = V_{GS} , I_D = 250 μA	$V_{GS(th)}$	2	-	4	V
Drain-Source On-State Resistance	VGS=10V, ID=1A	RDS(on)	-	340	380	mΩ
Input Capacitance	VDS=50V , VGS=0V , f=400KHz	C_{iss}	-	747	-	pF
Output Capacitance		C_{oss}	-	55	-	pF
Reverse Transfer Capacitance		C_{rss}	-	3.3	-	pF
Turn-on Delay Time(Note2)	VDD = 325V, ID = 10.6 A, VGS =10V, RG =25Ω	$t_{d(ON)}$	-	18	-	ns
Rise Time(Note2)		t_r	-	31	-	ns
Turn-Off Delay Time(Note2)		$t_{d(OFF)}$	-	65	-	ns
Fall Time(Note2)		t_f	-	28	-	ns
Total Gate Charge(Note2)	VDS = 520V, VGS = 10V, ID = 10.6 A	Q_G	-	20	-	nC
Gate to Source Charge(Note2)		Q_{GS}	-	3.7	-	nC
Gate to Drain Charge(Note2)		Q_{GD}	-	9	-	nC

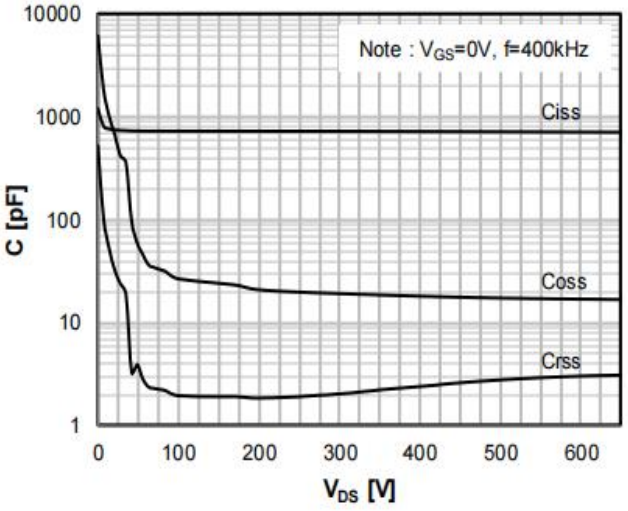
Source-Drain Diode Characteristics at Ta=25°C unless otherwise specified

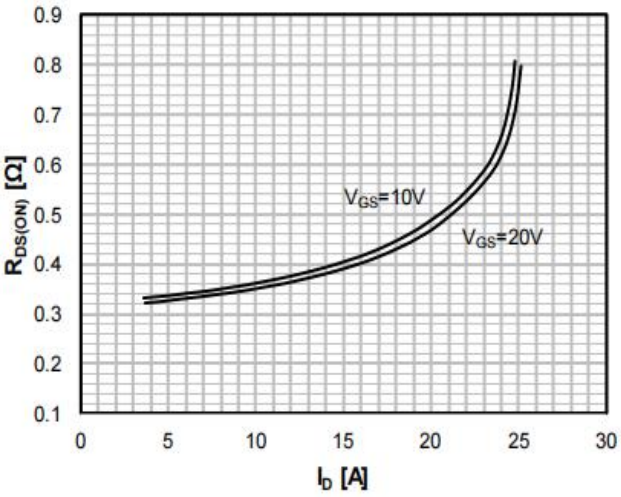
Characteristics	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse recovery time	ISD = 10.6A, VDD = 100V, di/dt = 100A/us	t_{rr}	-	323	-	ns
Reverse recovery current		I_{rr}	-	17.5	-	A
Reverse recovery charge		Q_{rr}		2.8		uC
Drain-Source Diode Forward Voltage	VGS=0V , IS=10.6A , TJ=25℃	V_{SD}	-	1.4	-	V

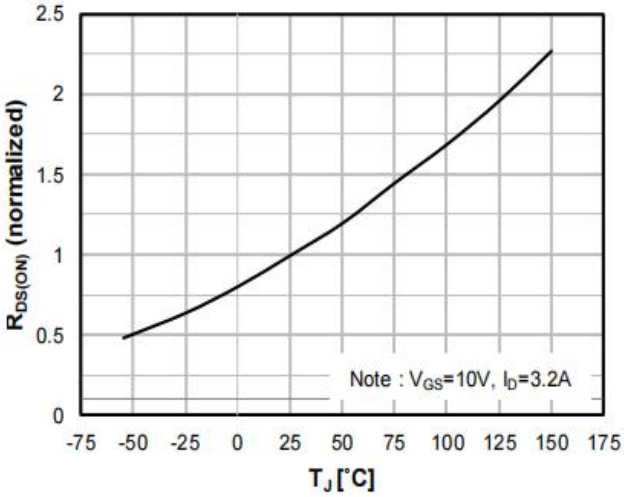
Note2:Pulse test: 300 μs pulse width, 2 % duty cycle

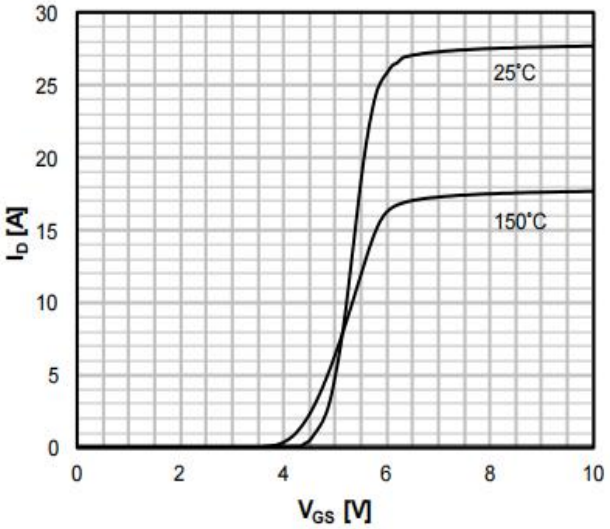
RATINGS AND CHARACTERISTIC CURVES

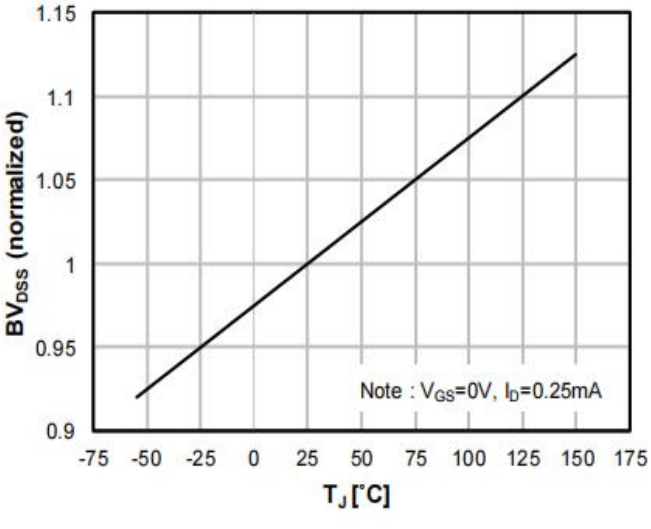












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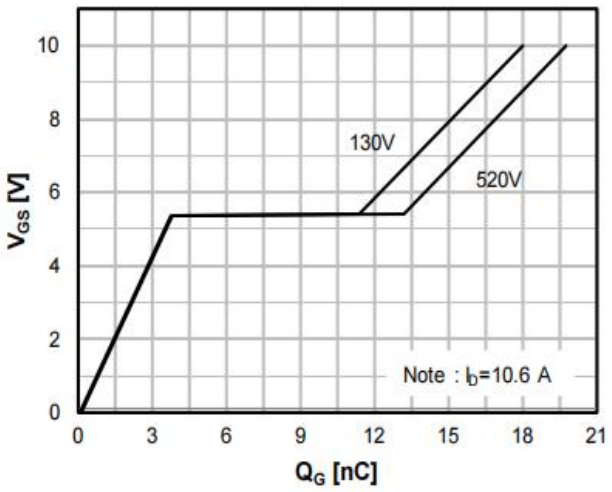

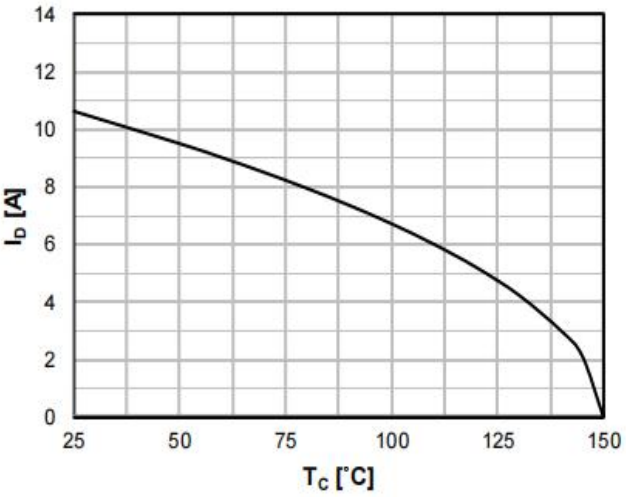

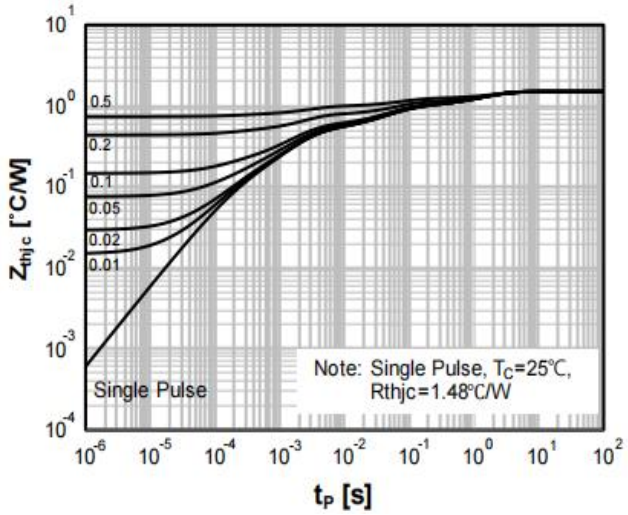

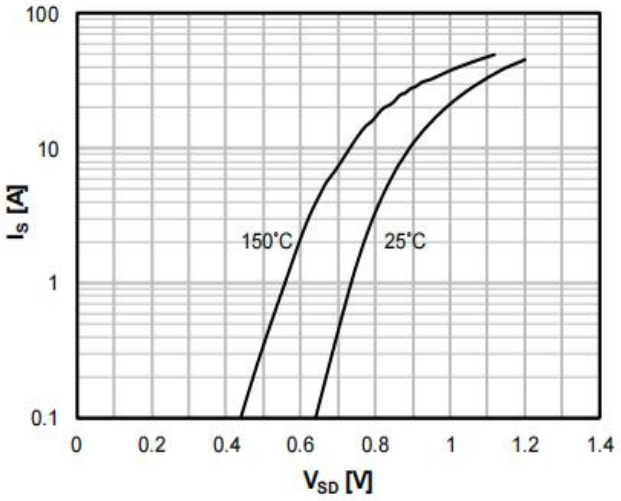

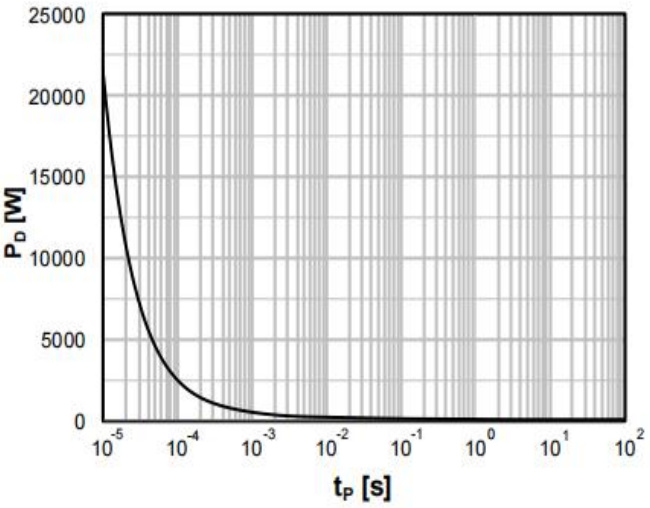

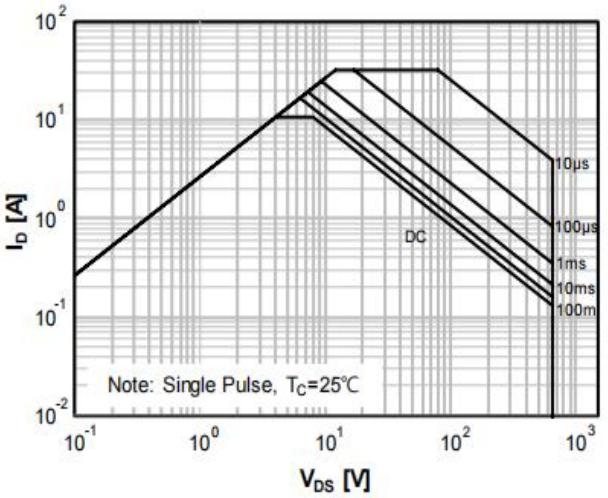

Package Outline Dimensions millimeters

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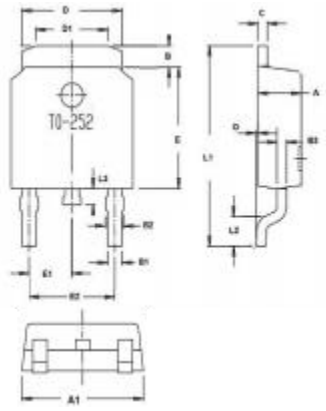

Dim.	Min.	Max.
A	2.1	2.5
A1	6.3	6.9
B	0.95	1.55
B1	0.6	0.8
B2	0.75	0.95
C	Typ0.5	
D	5.3	5.5
D1	3.65	4.05
E	5.8	6.4
E1	Typ2.3	
E2	Typ4.6	
O	0	0.15
L1	9	11
L2	Typ1.5	
L3	0.7	1

All Dimensions in millimeter