



FEATURES

- Fast Switching
- Low ON Resistance
- Low Gate Charge
- 100% Single Pulse avalanche energy Test

APPLICATIONS

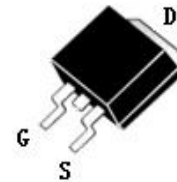
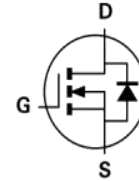
- Power switch circuit of adaptor and charger.

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°C maximum, 10s per JESD 22-B106

MAIN CHARACTERISTICS

I_D	110A
V_{DSS}	55V
$R_{DS(on)-typ}$ (@ $V_{GS}=10V, I_D = 55 A$)	6.5m Ω



TO-263

Product specification classification

Part Number	Package	Mode Name	Pack
LX3205L	TO-263	LX3205L	Tube
LX3205L-R	TO-263	LX3205L	Tape



Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	55	V
Gate-Source Voltage	V _{GS}	±20	V
Continue Drain Current	I _D	110	A
Pulsed Drain Current (Note1)	I _{DM}	390	A
Power Dissipation	P _D	200	W
Single Pulse Avalanche Energy (Note1)	E _{AS}	20	mJ
Operating Temperature Range	T _J	175	°C
Storage Temperature Range	T _{STG}	-55 to +175	°C
Thermal Resistance, Junction to Case	R _{θJC}	0.75	°C/W
Thermal Resistance, Junction to Ambient	R _{θJA}	62	°C/W

Electrical Characteristics at Tc=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}	55	-	-	V
Drain-Source Leakage Current	V _{DS} = 55V, V _{GS} = 0 V	I _{DSS}	-	-	25	uA
Gate Leakage Current	V _{GS} = ± 20 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	V _{GS} = 10 V, I _D = 1 A	R _{DS(on)}	-	6.5	9	mΩ
Drain-Source On-State Resistance	V _{GS} = 10 V, I _D = 30 A	R _{DS(on)}	-	6.8	8	mΩ
Drain-Source On-State Resistance	V _{GS} = 10 V, I _D = 55 A	R _{DS(on)}	-	6.5	7	mΩ
Forward Transconductance	V _{DS} = 50 V, I _D = 35 A	g _{fs}	44	-	-	S
Input Capacitance	V _{GS} = 0 V, V _{DS} = 25 V, f = 1 MHz	C _{iss}	-	3247	-	pF
Output Capacitance		C _{oss}	-	781	-	pF
Reverse Transfer Capacitance		C _{rss}	-	211	-	pF
Turn-on Delay Time(Note2)	I _D = 55 A, V _{DD} = 25 V, R _G = 4.5Ω V _{GS} = 10 V	t _{d(ON)}	-	14	-	ns
Rise Time(Note2)		t _r	-	101	-	ns
Turn-Off Delay Time(Note2)		t _{d(OFF)}	-	50	-	ns
Fall Time(Note2)		t _f	-	65	-	ns
Total Gate Charge(Note2)	I _D = 55 A, V _{DD} = 40 V, V _{GS} = 10 V	Q _G	-	-	146	nC
Gate to Source Charge(Note2)		Q _{GS}	-	-	35	nC
Gate to Drain Charge(Note2)		Q _{GD}	-	-	54	nC

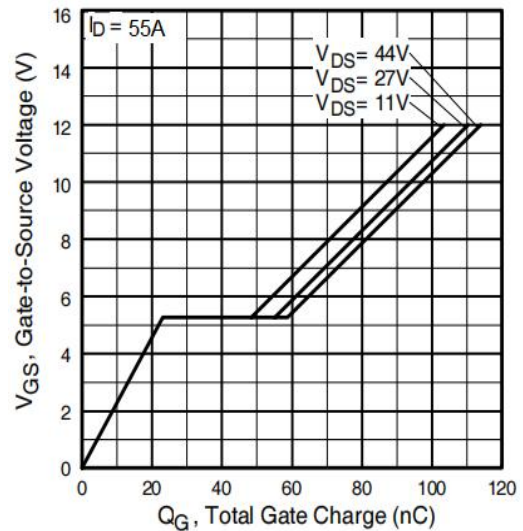
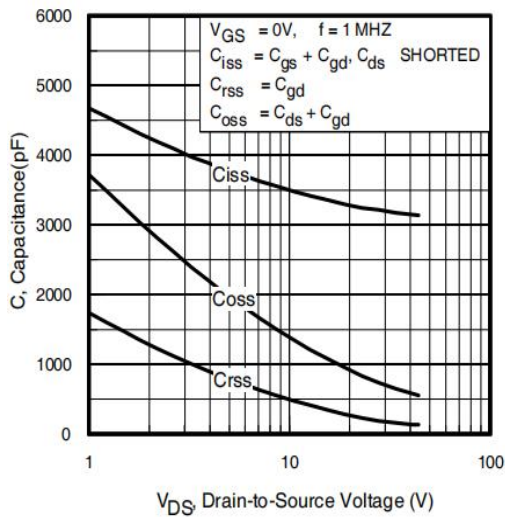
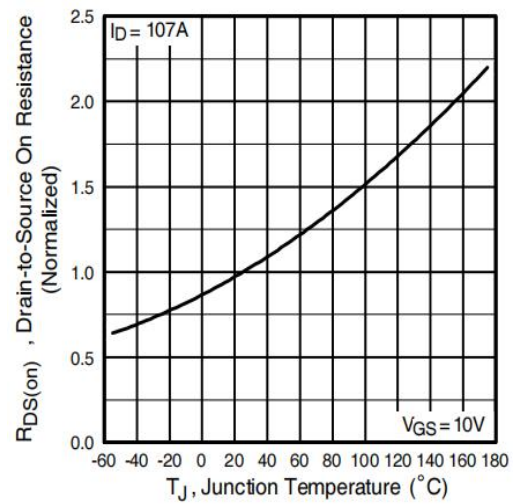
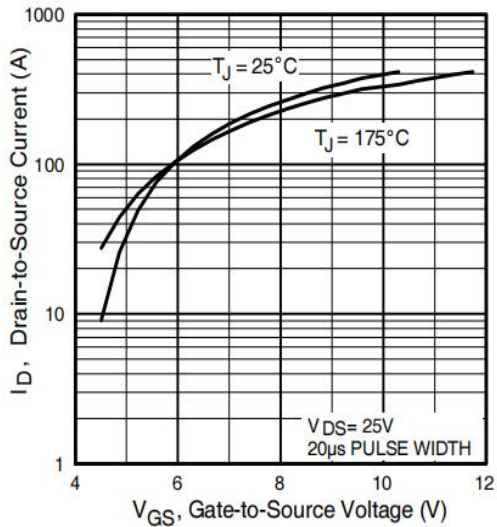
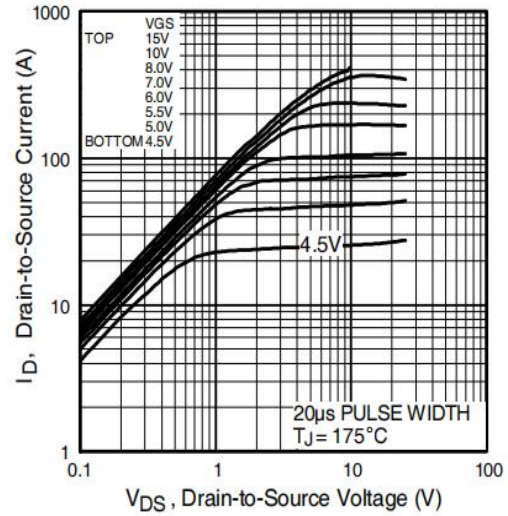
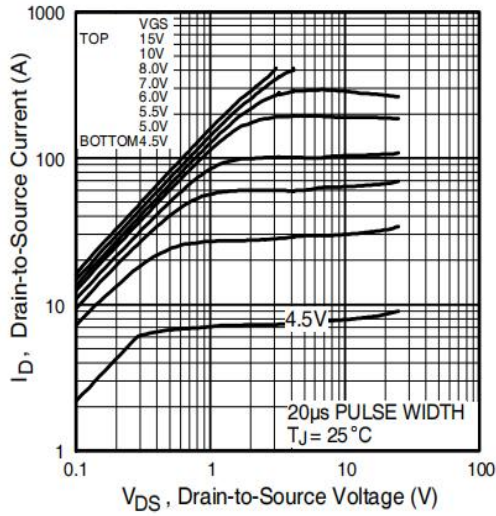
Source-Drain Diode Characteristics at Ta=25°C unless otherwise specified

Characteristics	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Maximun Body-Diode Continuous Current		I _S	-	-	110	A
Maximun Body-Diode Pulsed Current(Note2)		I _{SM}	-	-	390	A
Drain-Source Diode Forward Voltage	I _{SD} = 25A	V _{SD}	-	-	1	V
Reverse Recovery Time(Note2)	I _F = 55A, d I _F / dt = 100 A/μs	t _{rr}	-	-	104	ns
Reverse Recovery Charge(Note2)		Q _{rr}	-	-	215	nC

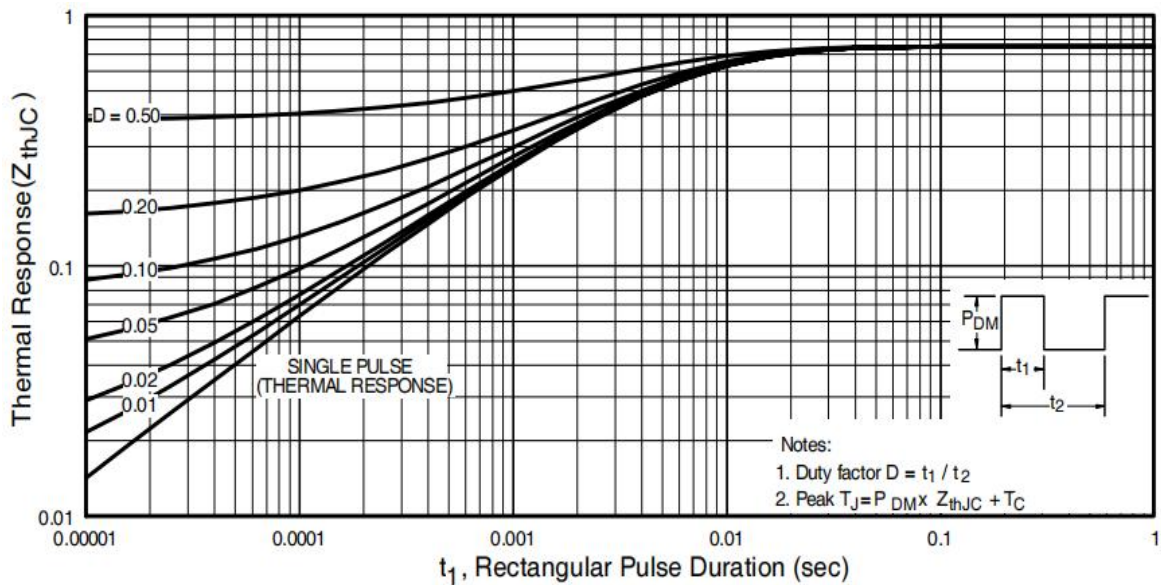
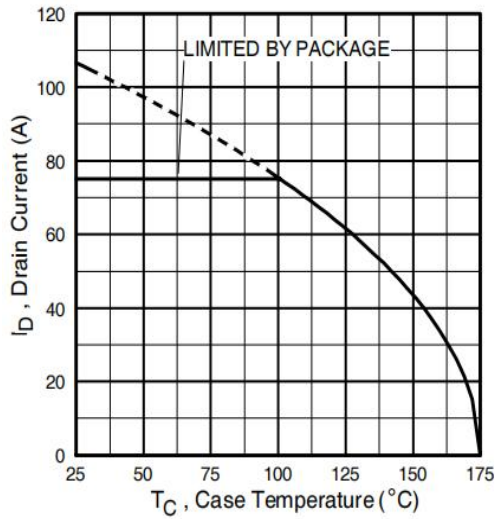
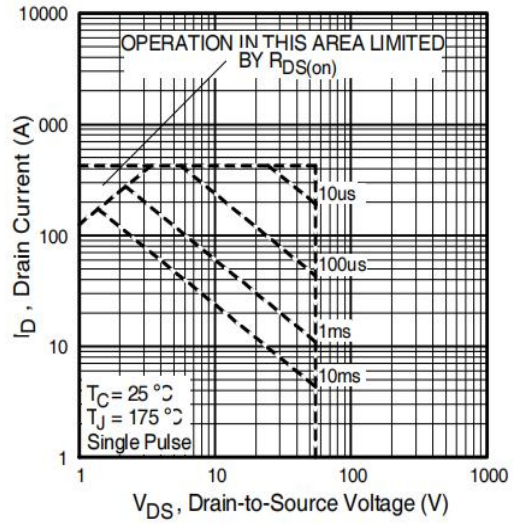
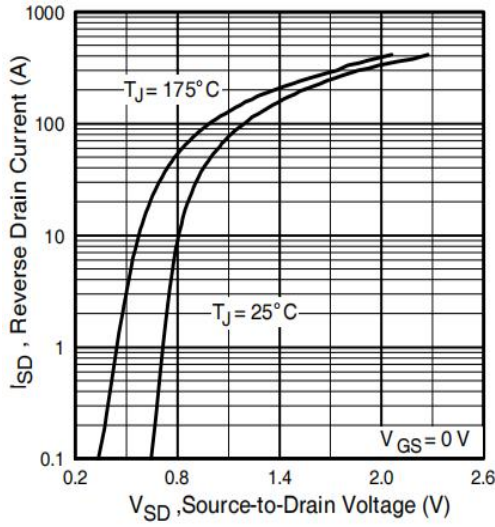
Note1:Pulse test: 300 μs pulse width, 2 % duty cycle

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

RATINGS AND CHARACTERISTIC CURVES



RATINGS AND CHARACTERISTIC CURVES



Package Outline Dimensions millimeters

TO-263

