

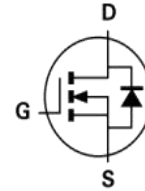


DONGGUAN NANJING ELECTRONICS LTD.,
TO-252 Enhancement Mode Power MOSFET

NJU15N10 N-Channel Enhancement Mode Power MOSFET

MAIN CHARACTERISTICS

I_D	15A
V_{DSS}	100V
$R_{DS(ON)-typ}$ (@ $V_{GS}=10V$)	88m Ω



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

Product specification classification

Part Number	Package	Mode Name	Pack
NJU15N10	TO-252	NJU15N10	Tape

Typical Characteristics

Maximum Ratings at Tc=25°C unless otherwise specified

Characteristics	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	±20	V
Continue Drain Current	I_D	15	A
Pulsed Drain Current (Note1)	I_{DM}	60	A
Power Dissipation	P_D	35	W
Single Pulse Avalanche Energy (Note1)	E_{AS}	8	mJ
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C
Thermal Resistance, Junction to Case	$R_{\theta JC}$	3.5	°C/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	100	°C/W

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

Electrical Characteristics at Tc=25°C unless otherwise specified

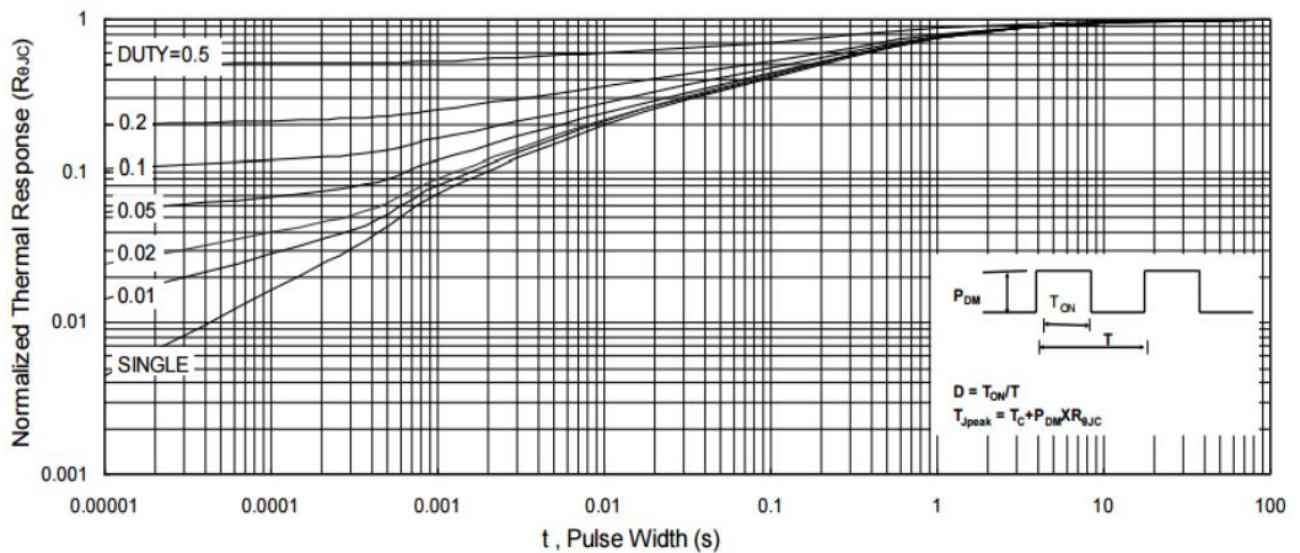
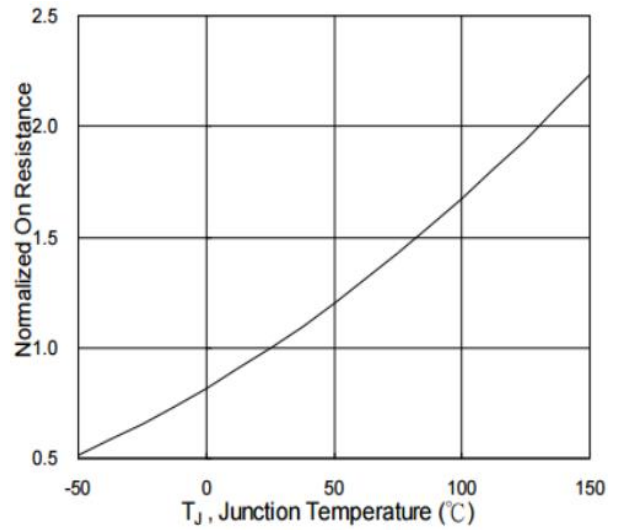
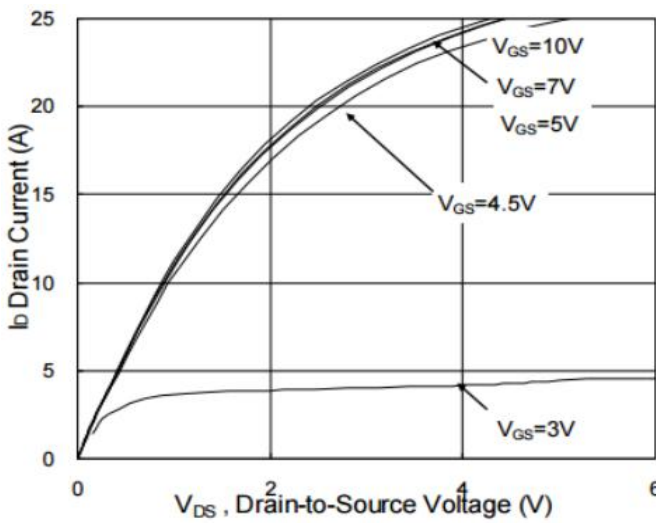
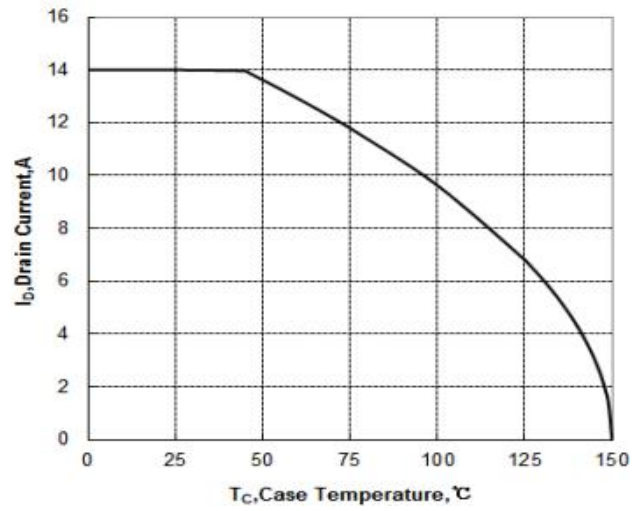
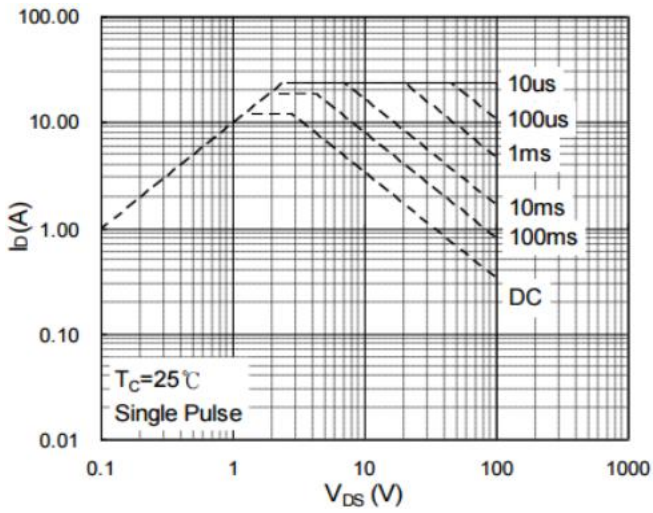
Characteristics	Test Condition	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{GS} = 0 V, I_D = 250 \mu A$	BV_{DSS}	100	-	-	V
Drain-Source Leakage Current	$V_{DS} = 100 V, V_{GS} = 0 V$	I_{DSS}	-	-	1	μA
Gate Leakage Current	$V_{GS} = \pm 30 V, V_{DS} = 0 V$	I_{GSS}	-	-	±100	nA
Gate-Source Threshold Voltage	$V_{DS} = V_{GS}, I_D = 250 \mu A$	$V_{GS(th)}$	1	-	2.5	V
Drain-Source On-State Resistance	$V_{GS} = 10 V, I_D = 7 A$	$R_{DS(on)}$	-	88	110	mΩ
	$V_{GS} = 4.5 V, I_D = 3 A$		-	96	140	mΩ
Forward Transconductance	$V_{DS} = 15 V, I_D = 7 A$	g_{fs}	-	3.5	-	S
Input Capacitance	$V_{GS} = 0 V, V_{DS} = 15 V, f = 1 MHz$	C_{iss}	-	891	-	pF
Output Capacitance		C_{oss}	-	58	-	pF
Reverse Transfer Capacitance		C_{rss}	-	23	-	pF
Turn-on Delay Time(Note2)		$t_{d(ON)}$	-	14	-	ns
Rise Time(Note2)	$I_D = 10 A, V_{DD} = 50 V, R_G = 1 \Omega$	t_r	-	16	-	ns
Turn-Off Delay Time(Note2)		$t_{d(OFF)}$	-	32	-	ns
Fall Time(Note2)		t_f	-	11	-	ns
Total Gate Charge(Note2)	$I_D = 10 A, V_{DD} = 80 V, V_{GS} = 4.5 V$	Q_G	-	13	-	nC
Gate to Source Charge(Note2)		Q_{GS}	-	4.6	-	nC
Gate to Drain Charge(Note2)		Q_{GD}	-	7.6	-	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	-	-	15	A
Maximun Body-Diode Pulsed Current(Note2)		I_{SM}	-	-	60	A
Drain-Source Diode Forward Voltage	$I_{SD} = 14 A$	V_{SD}	-	0.9	1.2	V
Reverse Recovery Time(Note2)	$I_{SD} = 14 A, V_{GS} = 0 V, dI_F / dt = 100 A/\mu s$	t_{rr}	-	250	-	ns
Reverse Recovery Charge(Note2)		Q_{rr}	-	1.2	-	μC

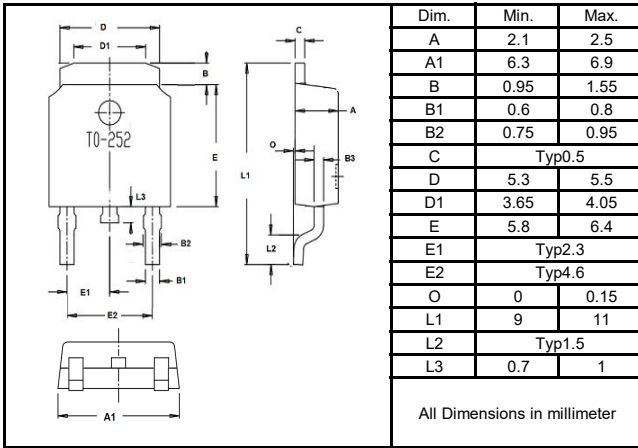
Note2:Pulse test: 300 μs pulse width, 2 % duty cycle

RATINGS AND CHARACTERISTIC CURVES



Package Outline Dimensions millimeters

TO-252



packing instruction

PKG	最小包装	内盒	外箱
TO-252			
	2500pcs/盘	5000pcs/盒	25000pcs/箱