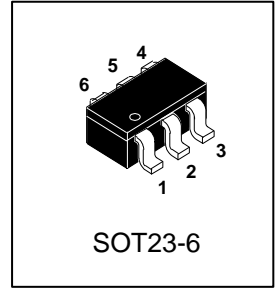


N2610S

60V N-Channel (D-S) MOSFET

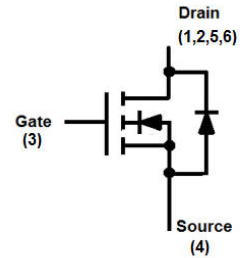
1. FEATURES

- Low RDS(on) trench technology.
- Low thermal impedance.
- Fast switching speed.
- We declare that the material of product are Halogen Free and compliance with RoHS requirements.



2. APPLICATION

- Power Routing
- DC/DC Conversion
- Motor Drives



3. ORDERING INFORMATION

Device	Marking	Shipping
N2610S	NS1	3000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C unless otherwise stated)

Parameter	Symbol	Limits	Unit
Drain-to-Source Voltage	VDSS	60	V
Gate-to-Source Voltage	VGS	±20	V
Continuous Drain Current	ID	TA =25°C	4.4
		TA =70°C	3.8
Pulsed Drain Current (Note 1)	IDM	17	A
Avalanche Current(L=0.1mH)	IAS	8	A
Avalanche Energy(L=0.1mH)	EAS	3.2	mJ
Power Dissipation TA =25°C	PD	1.2	W
Operating Junction and Storage Temperature Range	TJ , TSTG	-55 ~+150	°C

1.Pulse width limited by maximum junction temperature.

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Thermal Resistance,Junction-to-Ambient (Note 2)	RθJA	105	°C/W
Thermal Resistance,Junction-to-Case (Note 2)	RθJC	30	°C/W

2.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.



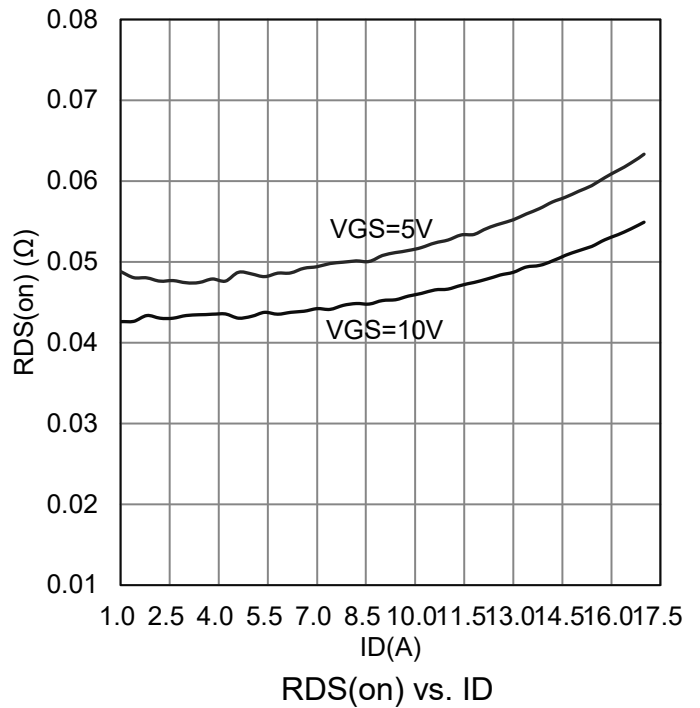
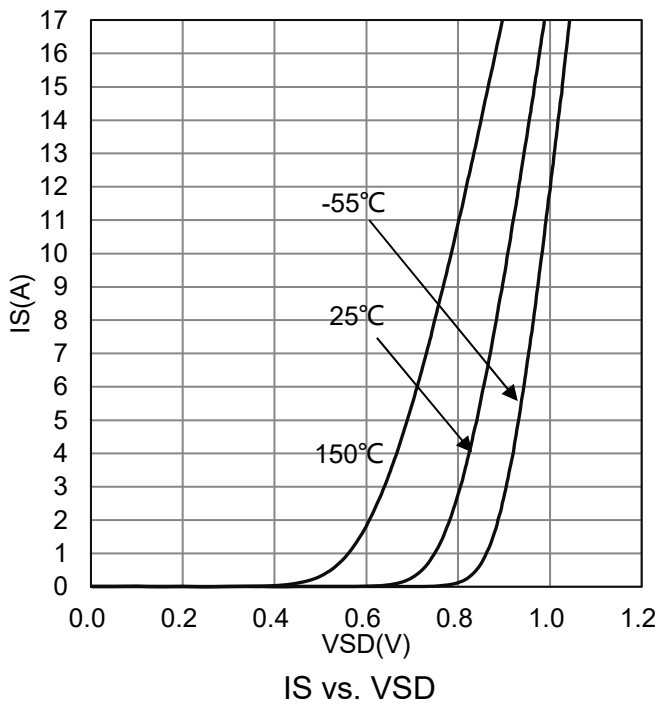
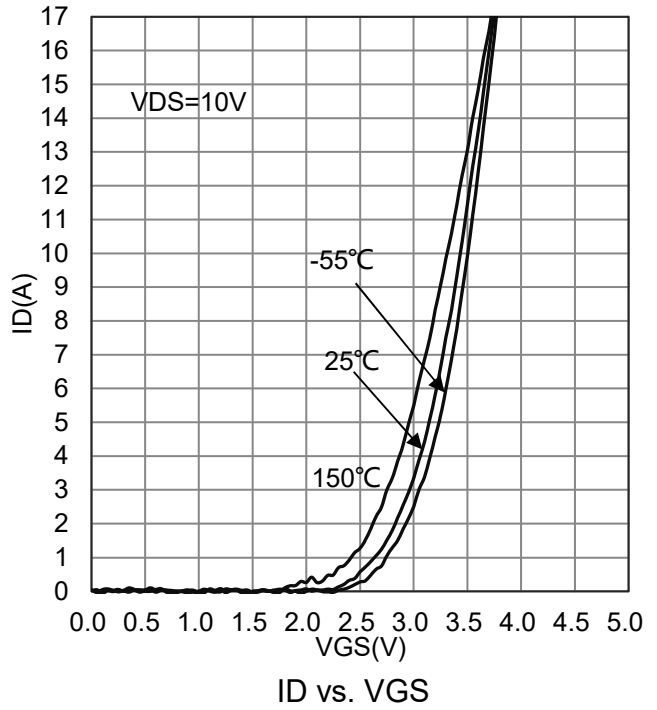
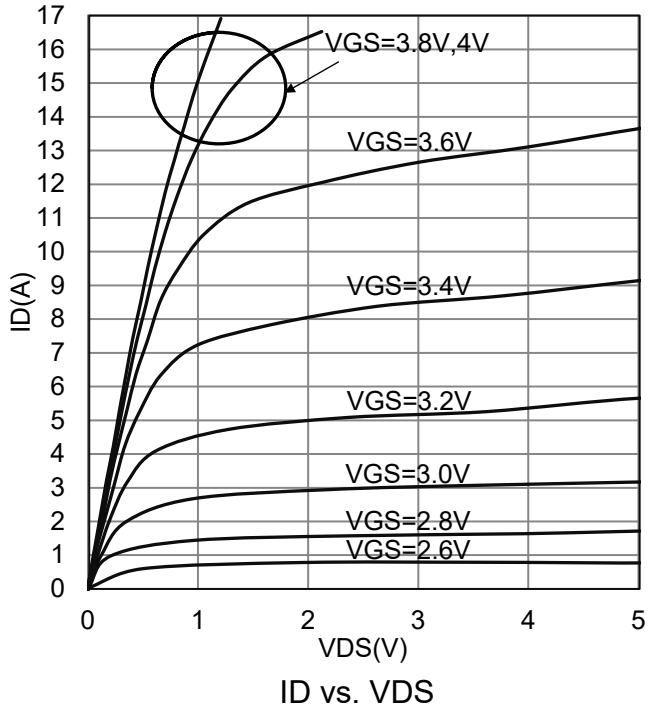
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

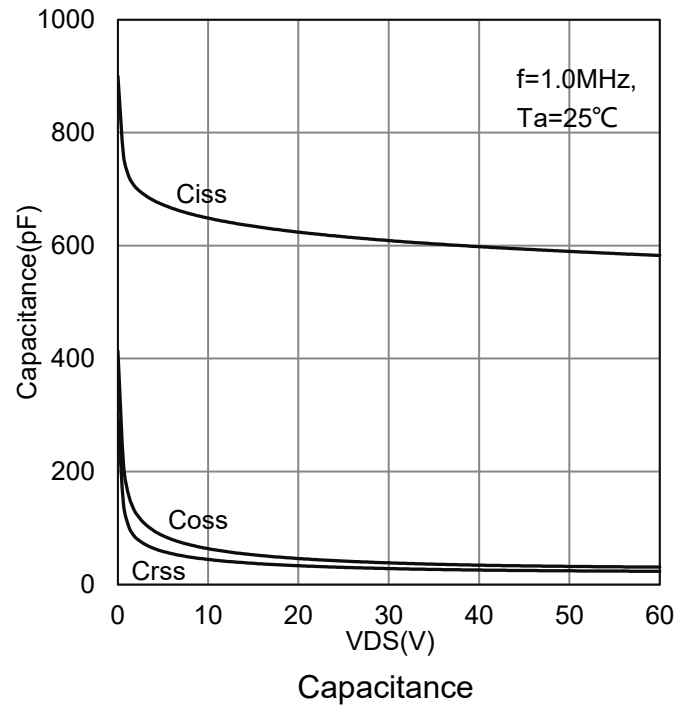
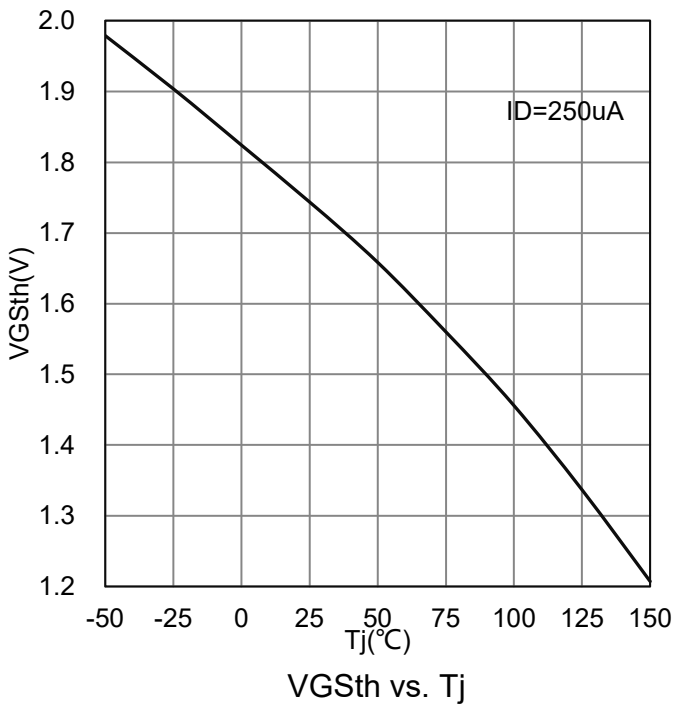
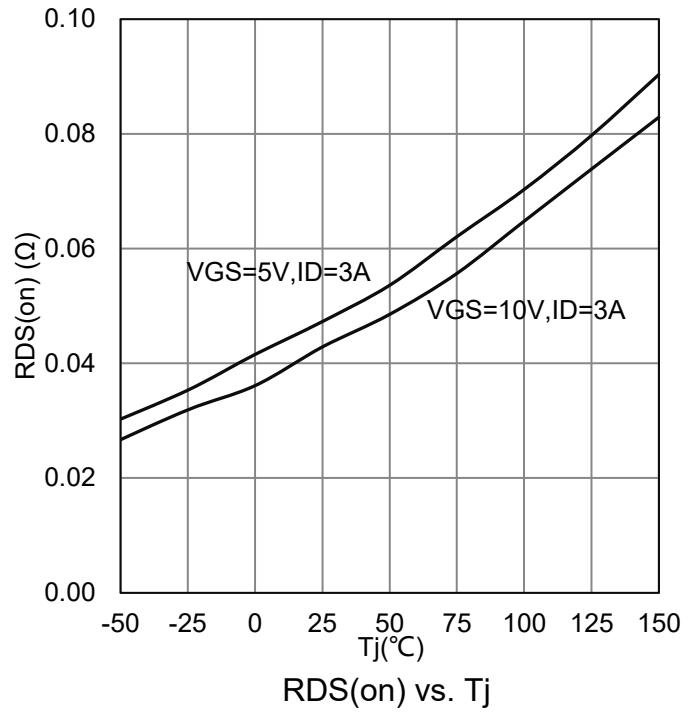
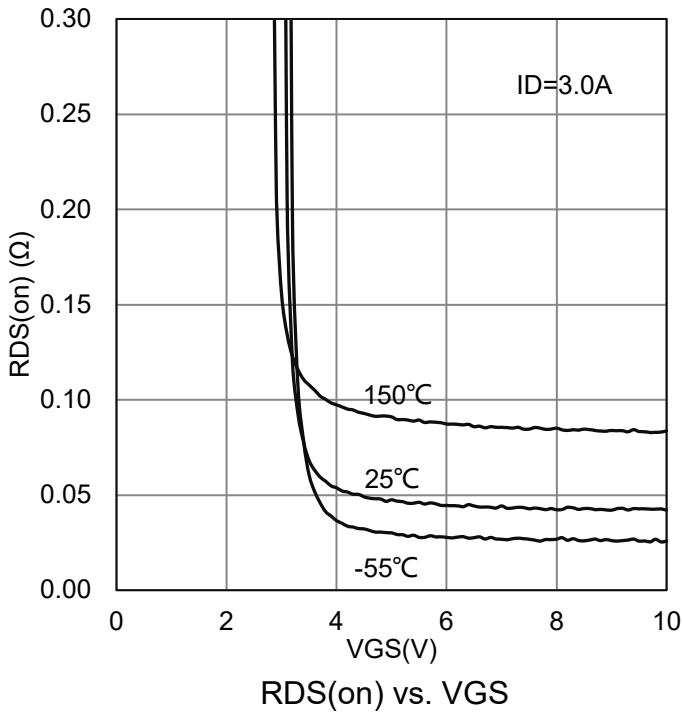
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain to Source Breakdown Voltage (VGS = 0V, ID = 250μA)	V(BR)DSS	60	-	-	V
Gate-Source Threshold Voltage (VDS = VGS, ID = 250 uA)	VGS(th)	1	2	3	V
Gate-Body Leakage (VDS = 0 V, VGS = ±20 V)	IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = 60 V, VGS = 0 V)	IDSS	-	-	1	μA
Drain-Source On-Resistance(Note 3) (VGS = 10 V, ID = 3 A) (VGS = 5 V, ID = 3 A)	RDS(on)	- -	- -	60 75	mΩ
Diode Forward Voltage(Note 3) (VGS=0V, IS=1A)	VSD	-	-	1.2	V
Dynamic					
Total Gate Charge	(VDS = 30 V, VGS = 10 V, ID = 3A)	Qg	-	12	nC
Gate-Source Charge		Qgs	-	1.6	
Gate-Drain Charge		Qgd	-	3	
Turn-On Delay Time	(VDS = 30V, ID=1A, VGS = 10V RG = 6 Ω)	td(on)	-	10	ns
Rise Time		tr	-	12	
Turn-Off Delay Time		td(off)	-	20	
Fall Time		tf	-	15	
Input Capacitance	(VDS = 30 V, VGS = 0 V, f = 1 MHz)	Ciss	-	609	pF
Output Capacitance		Coss	-	38	
Reverse Transfer Capacitance		Crss	-	28	

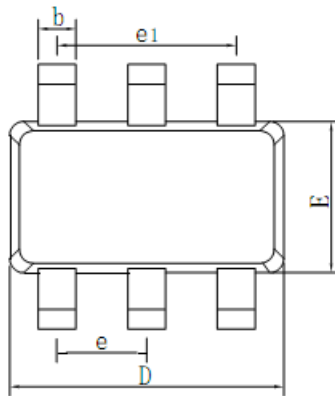
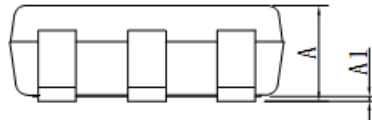
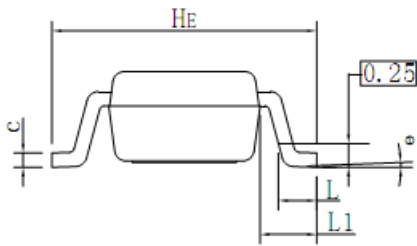
3. Pulse test: PW ≤ 300us duty cycle ≤ 2%.



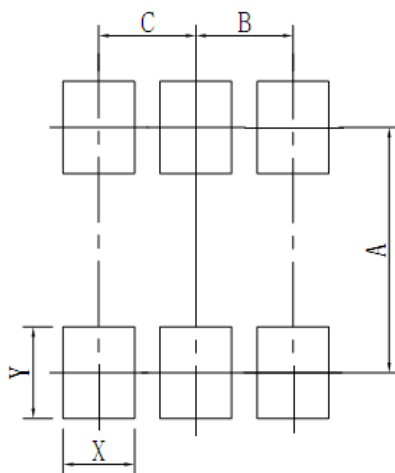
7. ELECTRICAL CHARACTERISTICS CURVES



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)


8. OUTLINE AND DIMENSIONS
SOT23-6


SOT23-6			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.01	0.06	0.10
b	0.25	0.40	0.50
c	0.10	0.17	0.26
D	2.80	2.90	3.10
E	1.30	1.60	1.70
e	0.85	0.95	1.05
e1	1.80	1.90	2.00
L	0.20	0.40	0.60
L1	0.60REF		
HE	2.50	2.80	3.00
θ	0°	-	10°

9. SOLDERING FOOTPRINT


SOT23-6	
DIM	(mm)
X	0.70
Y	0.90
A	2.40
B	0.95
C	0.95

