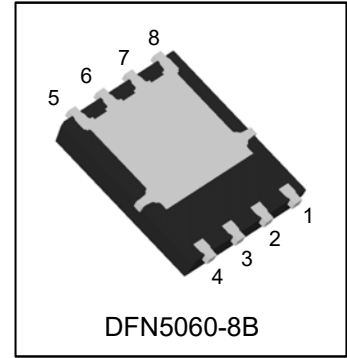


N76082D

100V N-Channel POWER MOSFET



1. FEATURES

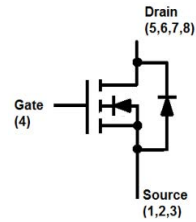
- High Speed Power Switching
- Enhanced Body diode dv/dt capability
- Enhanced Avalanche Ruggedness
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- Synchronous Rectification in SMPS
- Hard Switching and High Speed Circuit
- Power Tools

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
N76082D	LN76082	3000/Tape&Reel



4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	100	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current(Note 1)	TA=25°C	ID	15	A
	TA=75°C		13	
	TC=25°C		78	
	TC=75°C		67	
Pulsed Drain Current (Note 2)		IDM	60	A
Avalanche Current(L=0.1mH)		IAS	36	A
Avalanche Energy(L=0.1mH)		EAS	64.8	mJ
Power Dissipation(Note 1)	TA=25°C	PD	2.5	W
	TC=25°C		62.5	
Operating Junction and Storage Temperature Range		Tj/Tstg	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Thermal Resistance,Junction-to-Ambient(Note 1)	RθJA	50	°C/W
Thermal Resistance,Junction-to-Ambient(Note 3)	RθJA	115	
Thermal Resistance,Junction-to-Case	RθJC	2	

- 1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.
- 2.Pulse width limited by maximum junction temperature
- 3.Surface mounted on FR4 board using the minimum recommended pad size.

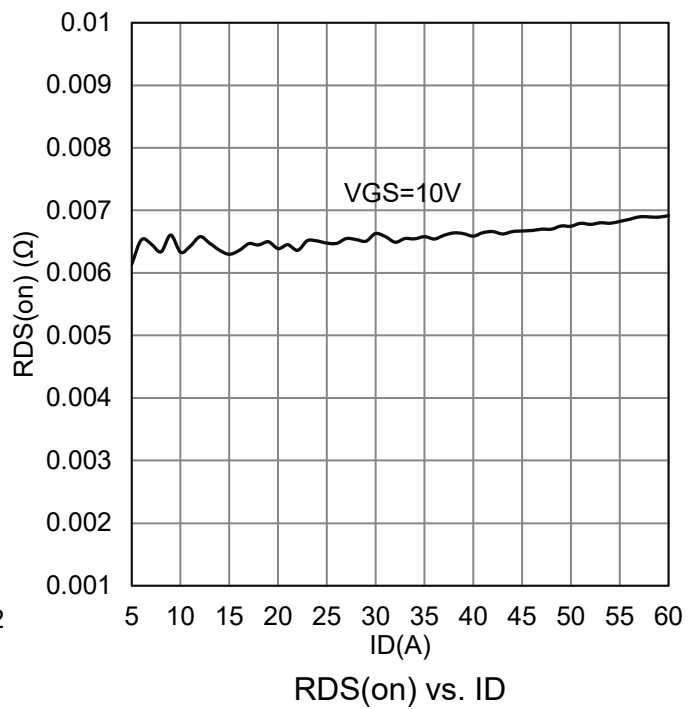
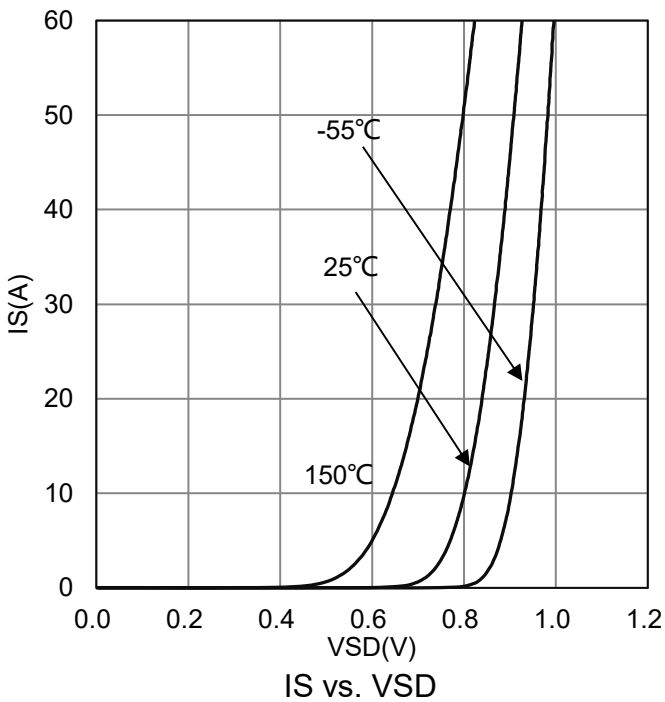
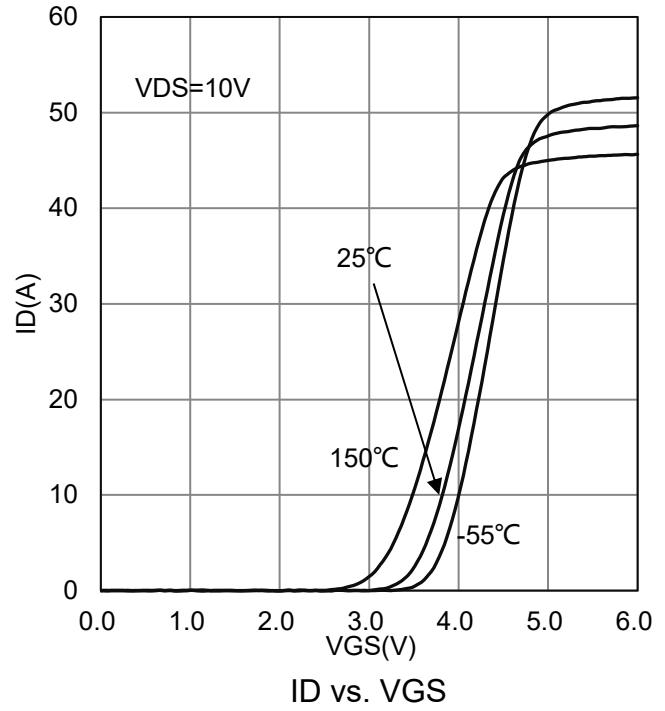
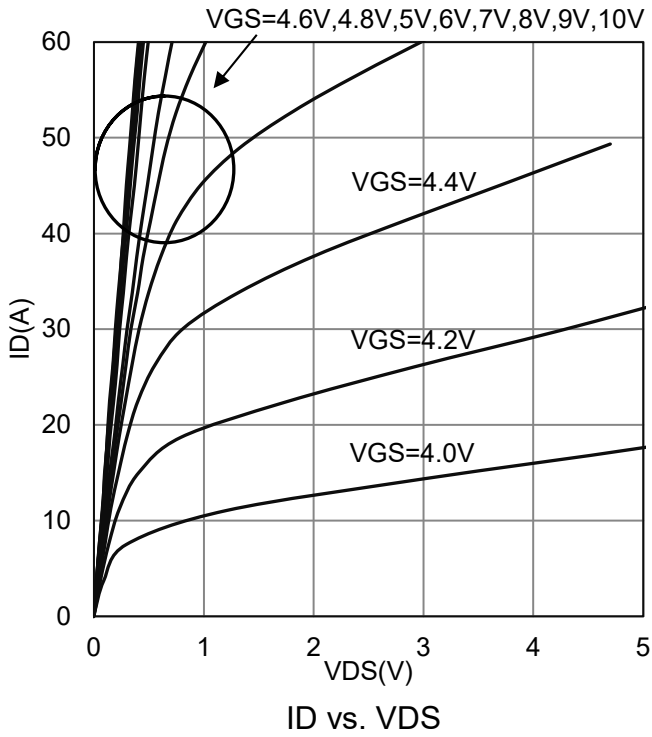


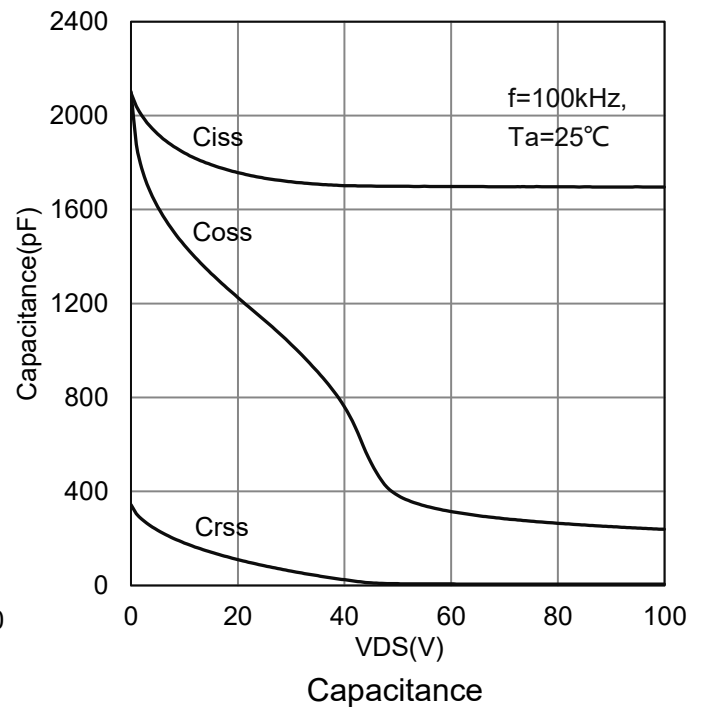
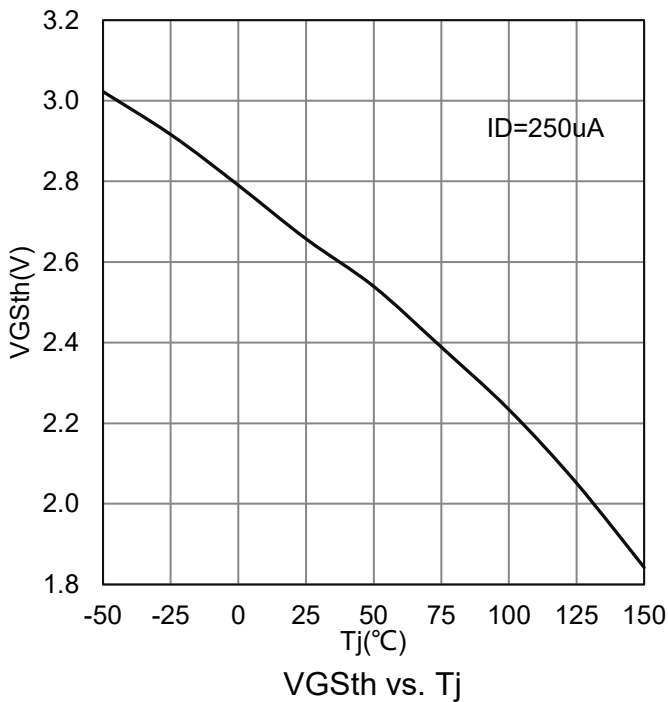
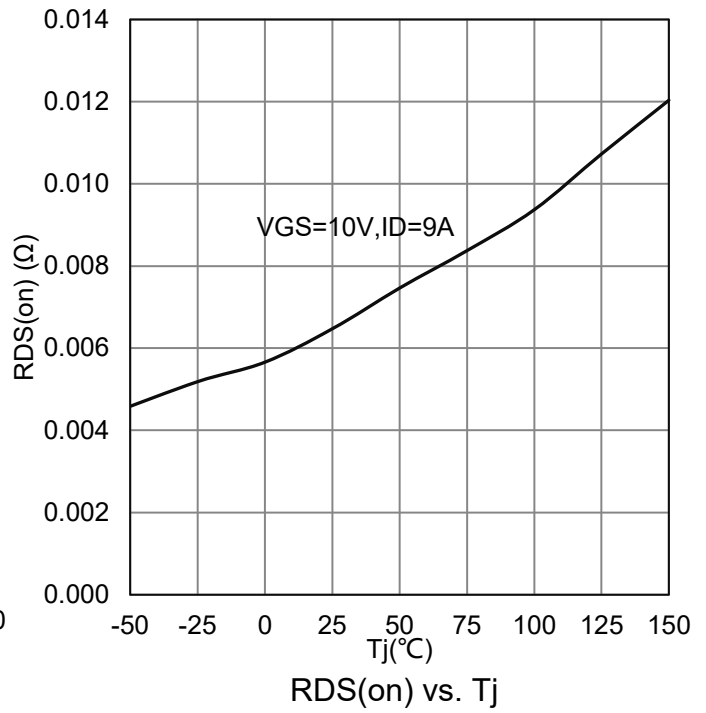
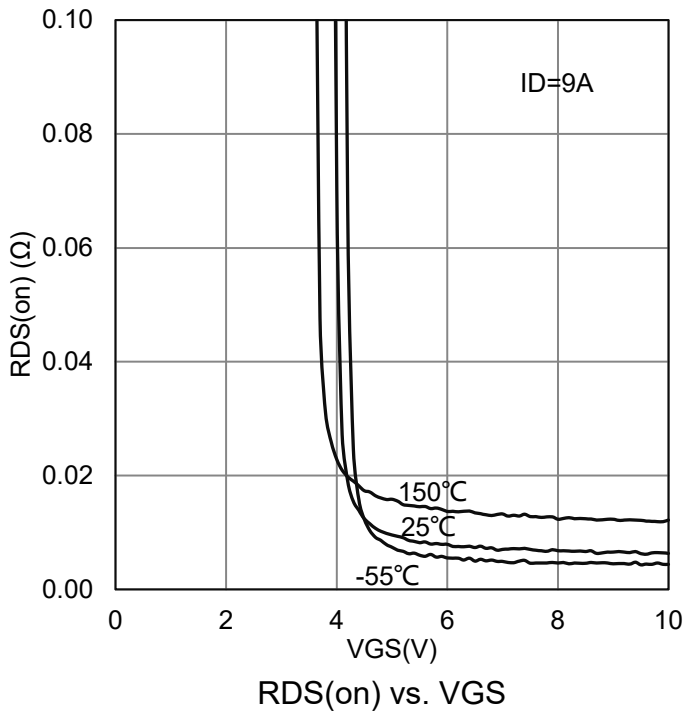
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

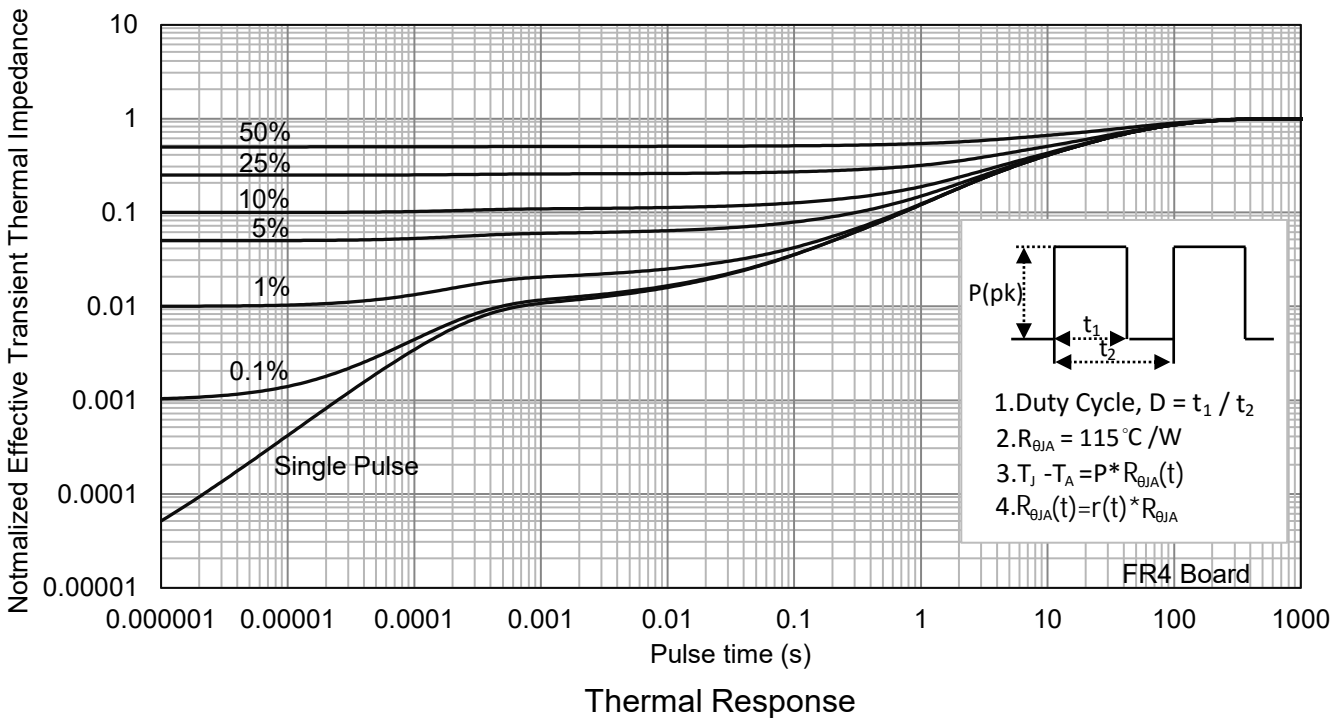
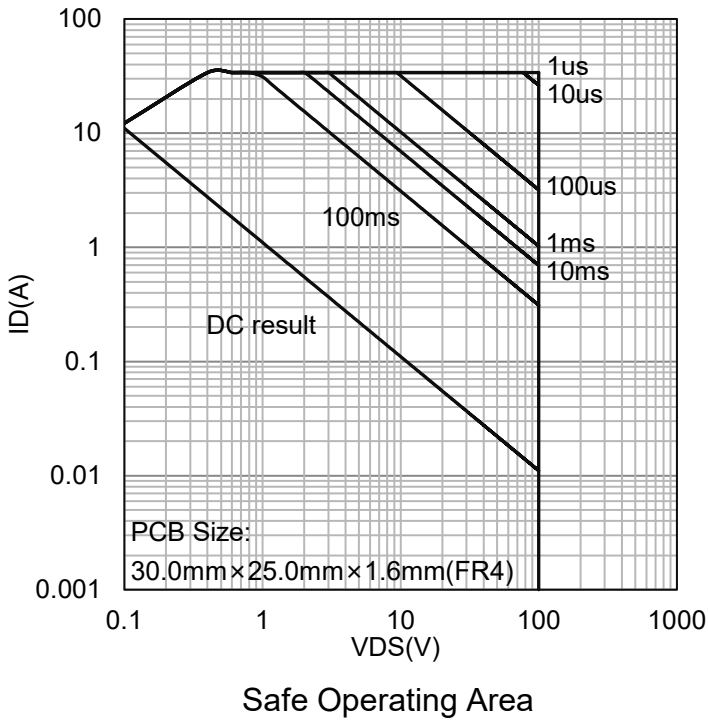
Characteristic	Symbol	Min.	Typ.	Max.	Unit
STATIC					
Drain-Source Breakdown Voltage (VGS =0V, ID =250μA)	BVDSS	100	-	-	V
Gate-Source Threshold Voltage (VDS = VGS , ID = 250μA)	VGS(th)	2	2.8	4	V
Gate-Body leakage current (VDS =0V, VGS = ±20V)	IGSS	-	-	±100	nA
Drain-Source Leakage Current (VGS =0V, VDS =100V, Tj =25°C)	IDSS	-	-	1	μA
Drain-to-Source On-Resistance (VGS =10V, ID =9A)	RDS(ON)	-	6.2	8.2	mΩ
DYNAMIC					
Total Gate Charge	(VDD =50V, ID =9A, VGS=10V)	Qg	-	29	nC
Gate to Source Charge		Qgs	-	5.2	
Gate to Drain Charge		Qgd	-	9	
Input Capacitance	(VGS =0V, VDS =50V, f=100kHz)	Ciss	-	1699	pF
Output Capacitance		Coss	-	383	
Reverse Transfer Capacitance		Crss	-	7	
Turn-on Delay Time	(VDD =50V, ID =2A, VGS =10V, RG =10 Ω)	td(on)	-	16	nS
Rise Time		tr	-	22	
Turn-Off Delay Time		td(off)	-	52	
Fall Time		tf	-	41	
Diode Forward Voltage (IS =1A, VGS =0V)	VSD	-	-	1.2	V

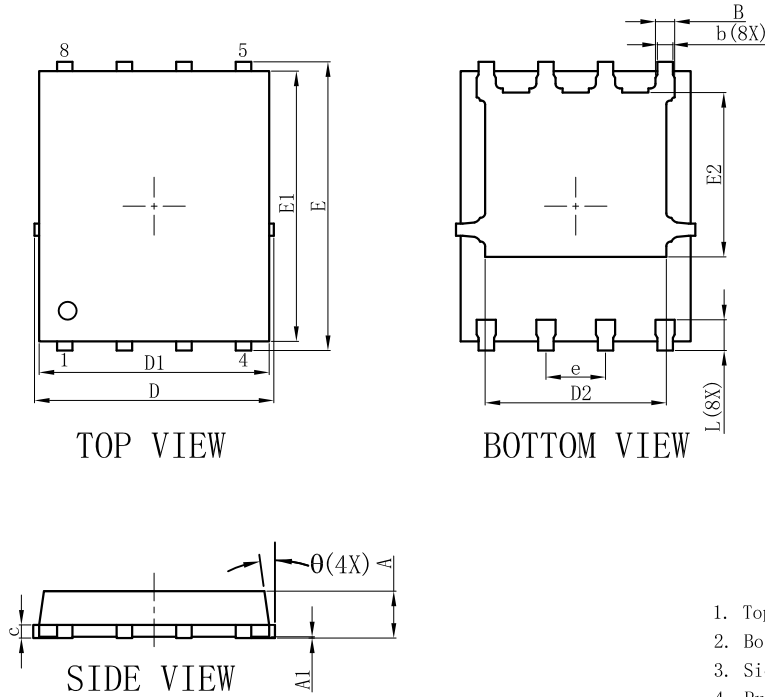


7. ELECTRICAL CHARACTERISTICS CURVES



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)


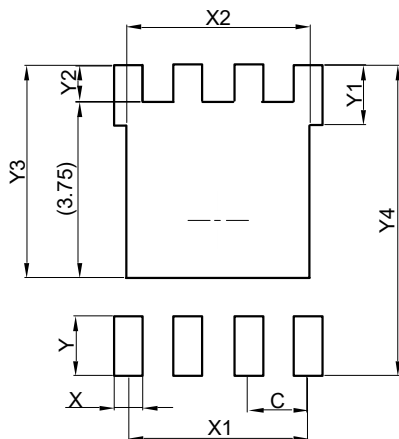
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)


8.OUTLINE AND DIMENSIONS
DFN5060-8B


DFN5060-8B			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.00	0.02	0.05
E	6.00	6.15	6.30
E1	5.66	5.76	5.86
E2	3.40	3.50	3.60
D	4.95	5.10	5.25
D1	4.80	4.90	5.00
D2	3.76	3.86	3.96
b	0.30	0.35	0.40
B	0.36	0.41	0.46
L	0.56	0.66	0.76
e	1.27BSC		
c	0.254REF.		
θ	0°	-	12°
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish Ra0.4±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um
4. Protrusion or Gate Burrs shall not exceed 0.05mm per side.
5. Offcenter Max0.038mm; Mismatch Max 0.038mm.

9.SOLDERING FOOTPRINT


DFN5060-8B	
DIM	(mm)
C	1.27
X	0.61
X1	3.81
X2	3.91
Y	1.27
Y1	1.27
Y2	0.77
Y3	4.52
Y4	6.61

