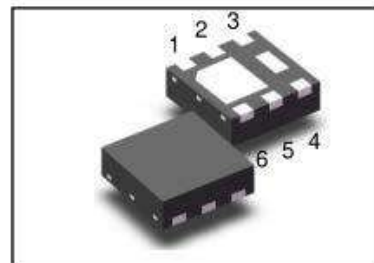


100V P-Channel Enhancement Mode MOSFET

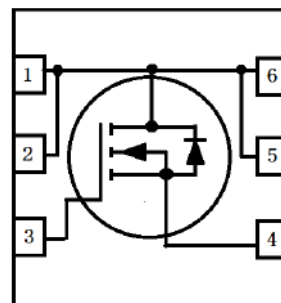
Features:

- VDS= 100V
- RDS(ON) ≤ 140 mΩ @ VGS = 10V, ID = 3A
- RDS(ON) ≤ 220 mΩ @ VGS = 4.5V, ID = 2A
- Super high density cell design for extremely low RDS(ON).
- Exceptional on-resistance and maximum DC current capability.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.



Applications:

- Power Management in Note book
- DC/DC Converter
- Load Switch



DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
KW2D5N10	N4L	4000/Tape&Reel

MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	VDSS	100	V
Gate-to-Source Voltage – Continuous	VGS	±20	V
Drain Current			
– Continuous TA = 25°C	ID	5	A
– Pulsed	IDM	15	
Avalanche Current	IAS	9	A
Avalanche energy (L=0.1mH)	EAS	4	mJ
Power Dissipation (Note 1)	PD	2.7	W
Junction and Storage temperature	TJ, Tstg	–55~+150	°C

THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Maximum Junction-to-Ambient (Note 1)	t ≤ 10S	45	°C/W
	Steady State	95	

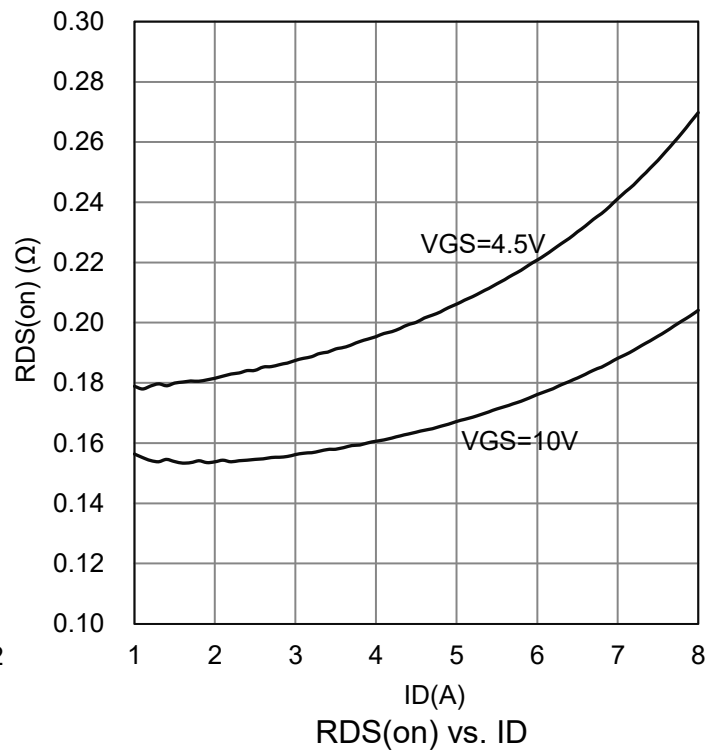
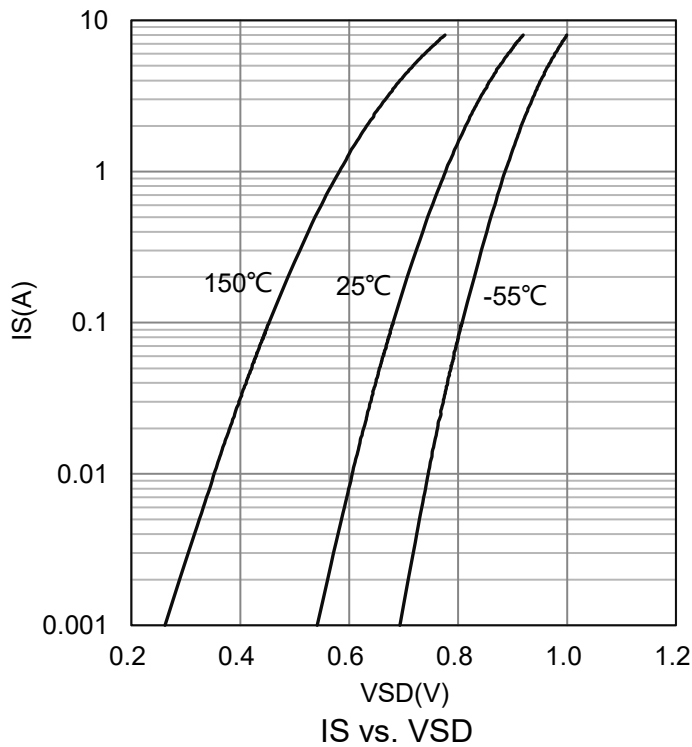
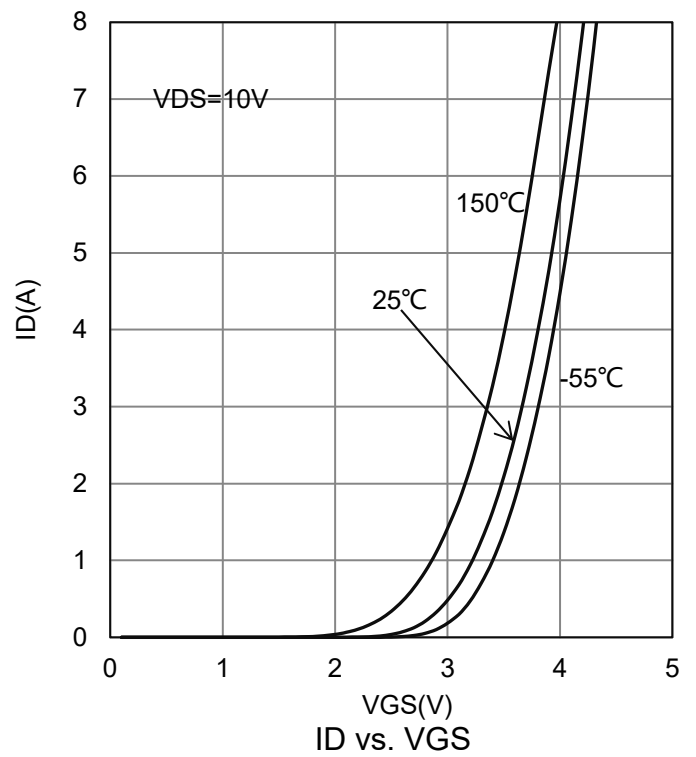
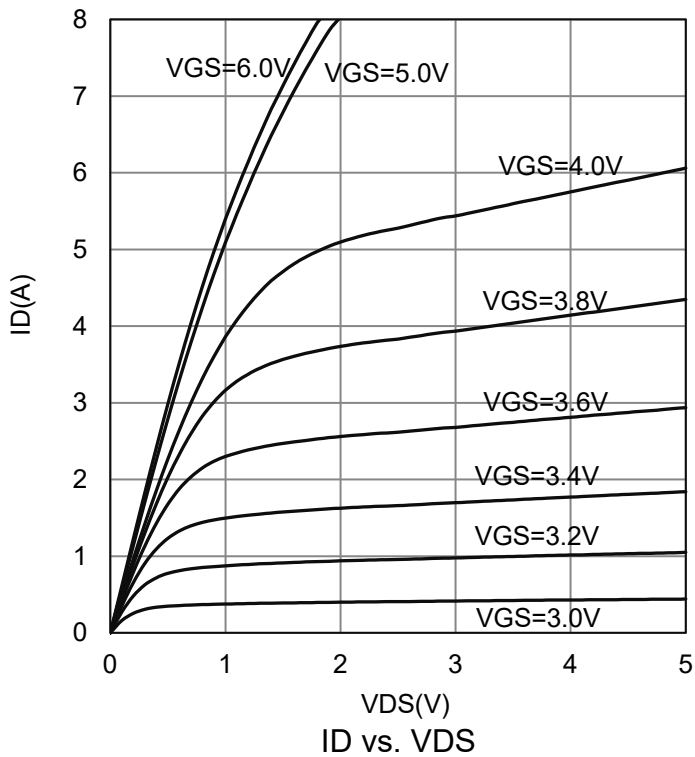
1.Surface Mounted on 1" x 1" FR4 Board.

ELECTRICAL CHARACTERISTICS (Ta= 25°C)

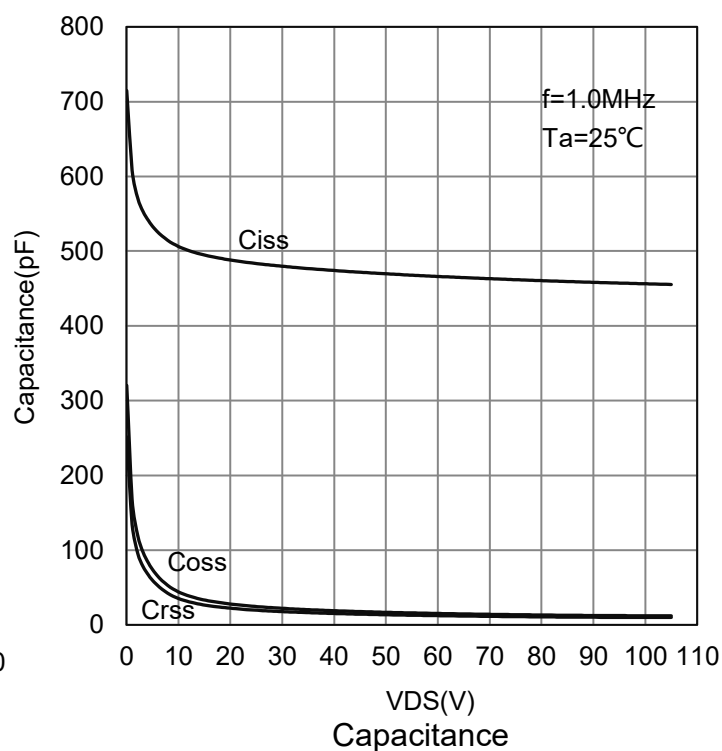
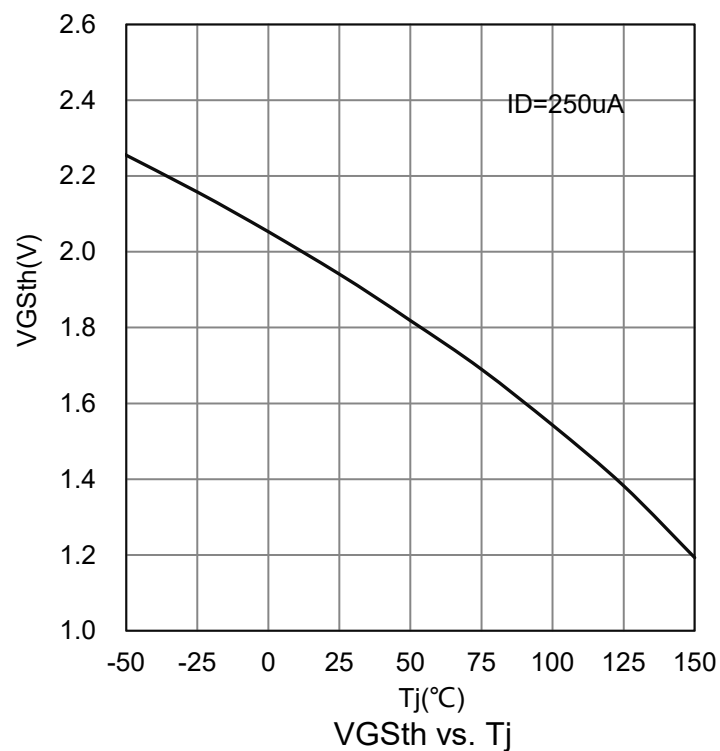
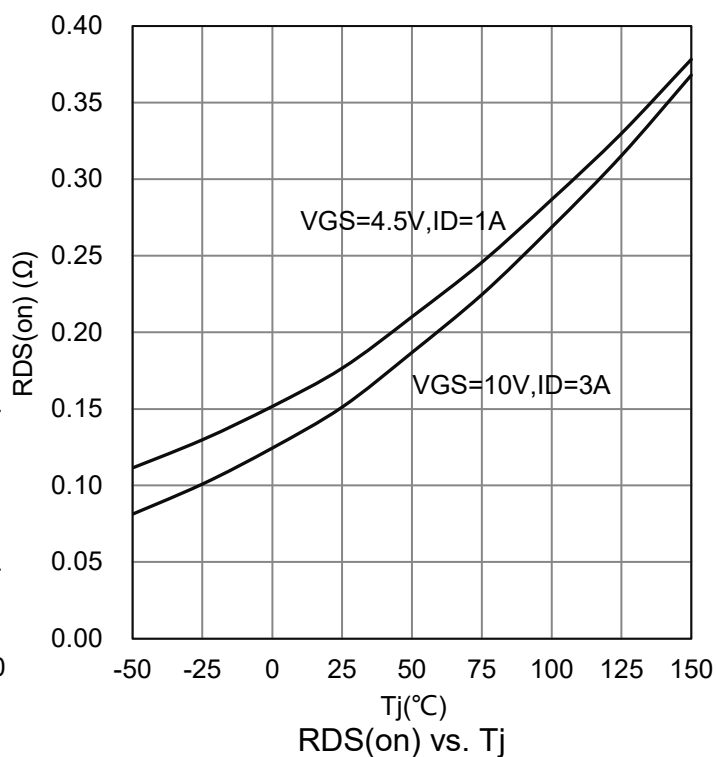
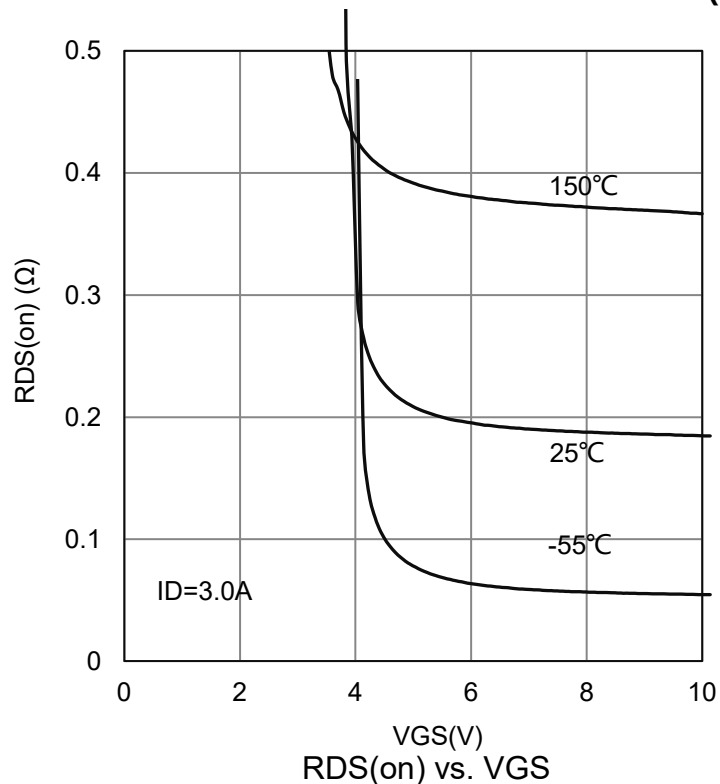
Characteristic		Symbol	Min.	Typ.	Max.	Unit
Drain–Source Breakdown Voltage (VGS = 0V, ID = 250μA)		V(BR)DSS	100	-	-	V
Gate Threshold Voltage (VDS = VGS, ID = 250μA)		VGS(th)	1.0	-	3.0	V
Gate–Body Leakage (VDS = 0 V, VGS = ±20 V)		IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS=105 V, VGS=0 V)		IDSS	-	-	1	μA
Static Drain–Source On–State Resistance (VGS = 10 V, ID = 3 A) (VGS = 4.5 V, ID = 2 A)		RDS(on)	- -	110 160	140 220	mΩ
Forward Voltage (VGS = 0 V, IS = 6.5 A)		VSD	-	0.9	1.3	V
Total Gate Charge	(VDS =50V, VGS =5V, ID =6.5A)	Qg	-	5.8	-	nC
Gate–Source Charge		Qgs	-	1.9	-	
Gate–Drain Charge		Qgd	-	3.1	-	
Input Capacitance	(VDS =25V, VGS =0V, f=1MHz)	Ciss	-	206	-	pF
Output Capacitance		Coss	-	29	-	
Reverse Transfer Capacitance		Crss	-	1.4	-	
Turn-On Delay Time	(VDD =50V, RL =50Ω, VGEN =10V, RG =2.5Ω)	td(on)	-	9.6	-	ns
Rise Time		tr	-	4.2	-	
Turn-Off Delay Time		td(off)	-	25	-	
Fall Time		tf	-	3.2	-	
Gate resistance (VGS =0V, VDS =0V, f=1MHz)		Rg	-	56.5	-	Ω

2:Pulse Test: Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%.

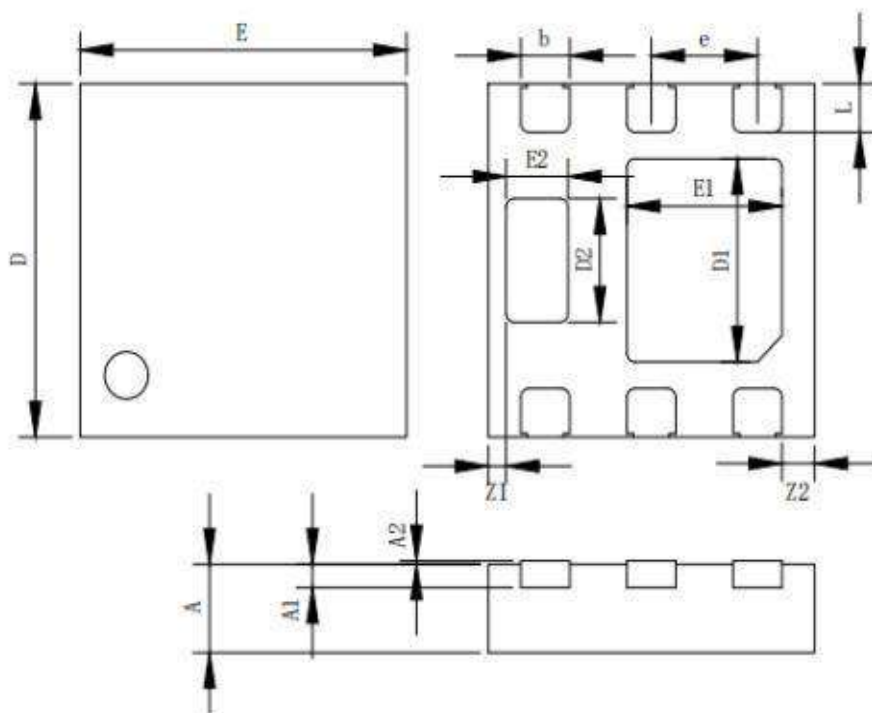
ELECTRICAL CHARACTERISTICS CURVES



ELECTRICAL CHARACTERISTICS CURVES(Con.)



DFN2020-6Package Outline Dimensions



NOTE: ALL DIMENSIONS IN MM

	MIN	NOM	MAX
D	1.95	2.00	2.05
E	1.95	2.00	2.05
D1	1.10	1.15	1.20
E1	0.90	0.95	1.00
D2	0.65	0.70	0.75
E2	0.33	0.38	0.43
L	0.23	0.275	0.33
b	0.25	0.30	0.35
e	0.65BSC		
A	0.45	0.50	0.55
A1	0.150REF		
A2	0.00	-	0.05
Z1	0.06	0.11	0.16
Z2	0.15	0.20	0.25