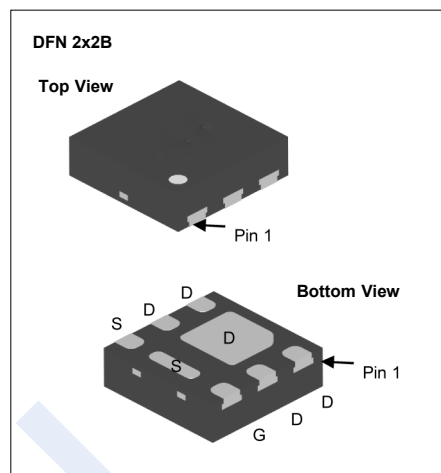
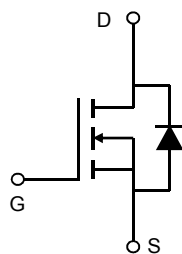


N-Channel MOSFET

AON2240 (KON2240)

■ Features

- $V_{DS} (V) = 40V$
- $I_D = 8 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 21m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 29m\Omega$ ($V_{GS} = 4.5V$)



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	40	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current	$T_A = 25^\circ C$	I_D	8	A
	$T_A = 100^\circ C$		6	
Pulsed Drain Current		I_{DM}	32	
Power Dissipation	$T_A = 25^\circ C$	P_D	2.8	W
	$T_A = 70^\circ C$		1.8	
Thermal Resistance.Junction- to-Ambient	$t \leq 10s$	R_{thJA}	45	$^\circ C/W$
	Steady-State		80	
Junction Temperature		T_J	150	$^\circ C$
Storage Temperature Range		T_{stg}	-55 to 150	

N-Channel MOSFET

AON2240 (KON2240)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	40			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =40V, V _{GS} =0V			1	μA
		V _{DS} =40V, V _{GS} =0V, T _J =55°C			5	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250 μA	1.4		2.4	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} =10V, I _D =8A			21	mΩ
		V _{GS} =10V, I _D =8A, T _J =125°C			31	
		V _{GS} =4.5V, I _D =4A			29	
On State Drain Current	I _{D(ON)}	V _{GS} =10V, V _{DS} =5V	32			A
Forward Transconductance	g _{FS}	V _{DS} =5V, I _D =8A		33		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =20V, f=1MHz		415		pF
Output Capacitance	C _{oss}			112		
Reverse Transfer Capacitance	C _{rss}			11		
Gate Resistance	R _g	V _{GS} =0V, V _{DS} =0V, f=1MHz	1		3.5	Ω
Total Gate Charge (10V)	Q _g	V _{GS} =10V, V _{DS} =20V, I _D =8A		6.5	12	nC
Total Gate Charge (4.5V)				3	6	
Gate Source Charge				1.2		
Gate Drain Charge				1.1		
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =20V, R _L =2.5 Ω, R _{GEN} =3 Ω		4		ns
Turn-On Rise Time	t _r			3		
Turn-Off DelayTime	t _{d(off)}			15		
Turn-Off Fall Time	t _f			2		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 8A, di/dt= 100A/μs		12.5		nC
Body Diode Reverse Recovery Charge	Q _{rr}			3.5		
Maximum Body-Diode Continuous Current	I _S				3.5	A
Diode Forward Voltage	V _{SD}	I _S =1A, V _{GS} =0V			1	V

Note. The static characteristics in Figures 1 to 6 are obtained using <300us pulses, duty cycle 0.5% max.

N-Channel MOSFET

AON2240 (KON2240)

■ Typical Characteristics

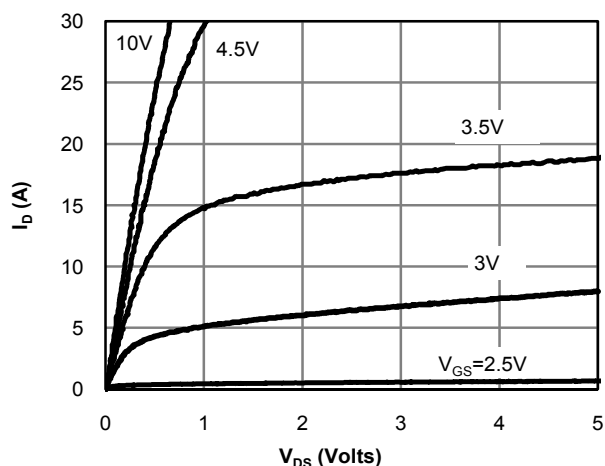


Fig 1: On-Region Characteristics (Note E)

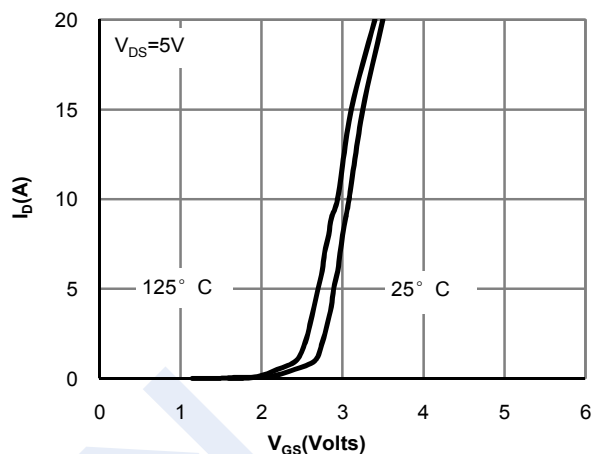


Figure 2: Transfer Characteristics (Note E)

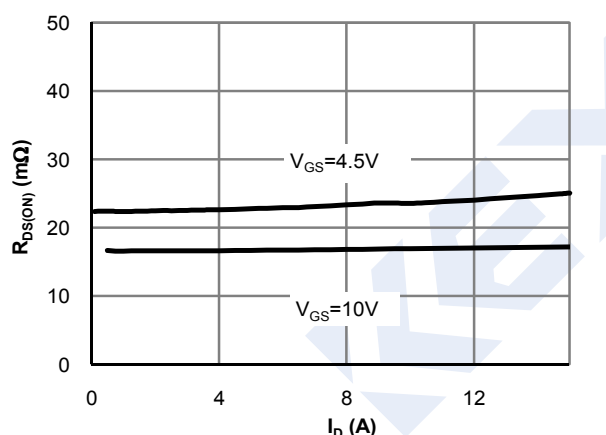


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

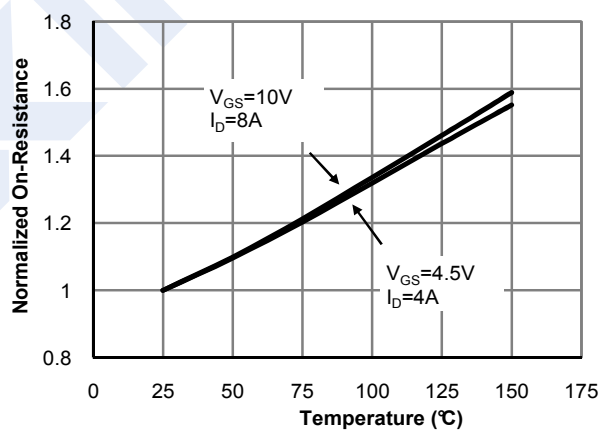


Figure 4: On-Resistance vs. Junction Temperature (Note E)

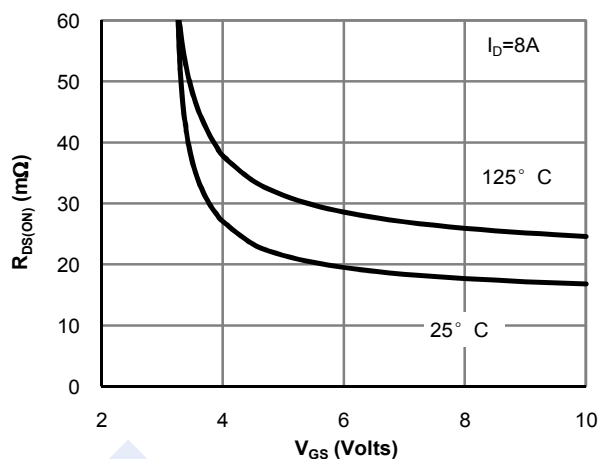


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

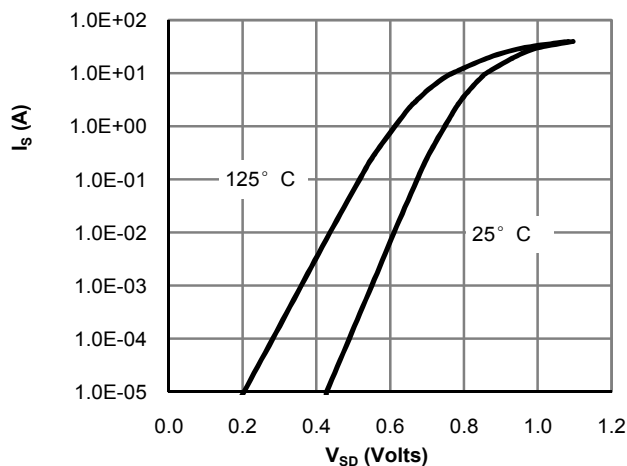


Figure 6: Body-Diode Characteristics (Note E)

N-Channel MOSFET

AON2240 (KON2240)

■ Typical Characteristics

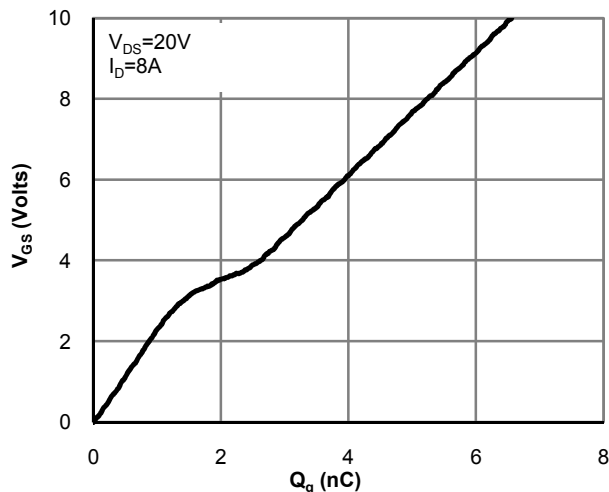


Figure 7: Gate-Charge Characteristics

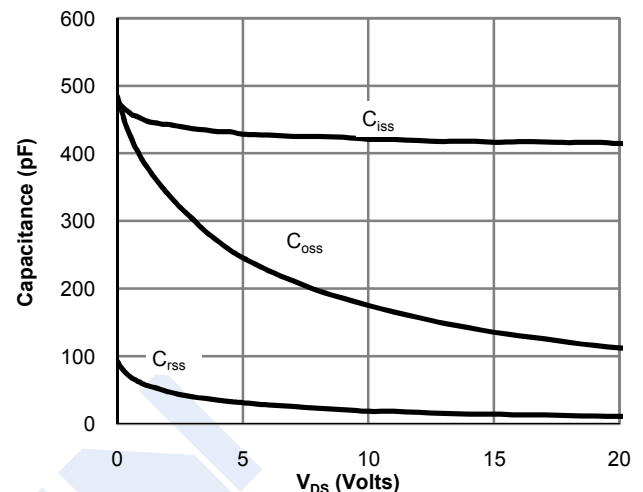


Figure 8: Capacitance Characteristics

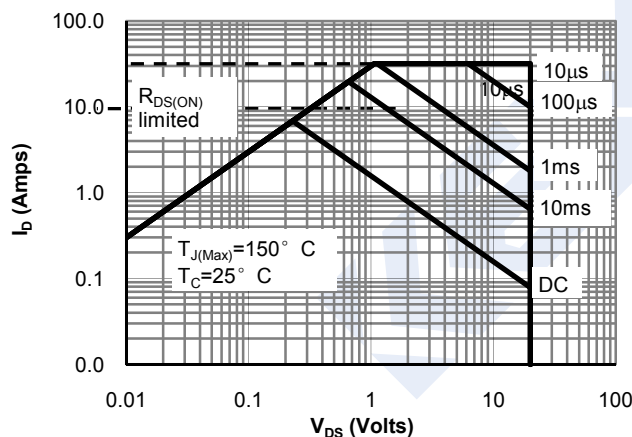


Figure 9: Maximum Forward Biased Safe Operating Area (Note F)

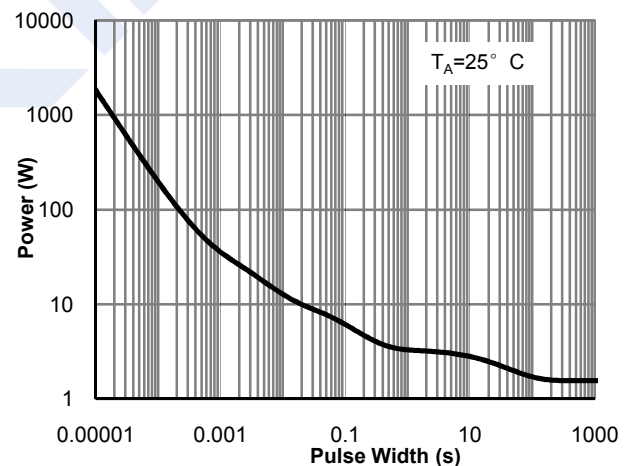


Figure 11: Single Pulse Power Rating Junction-to-Ambient (Note H)

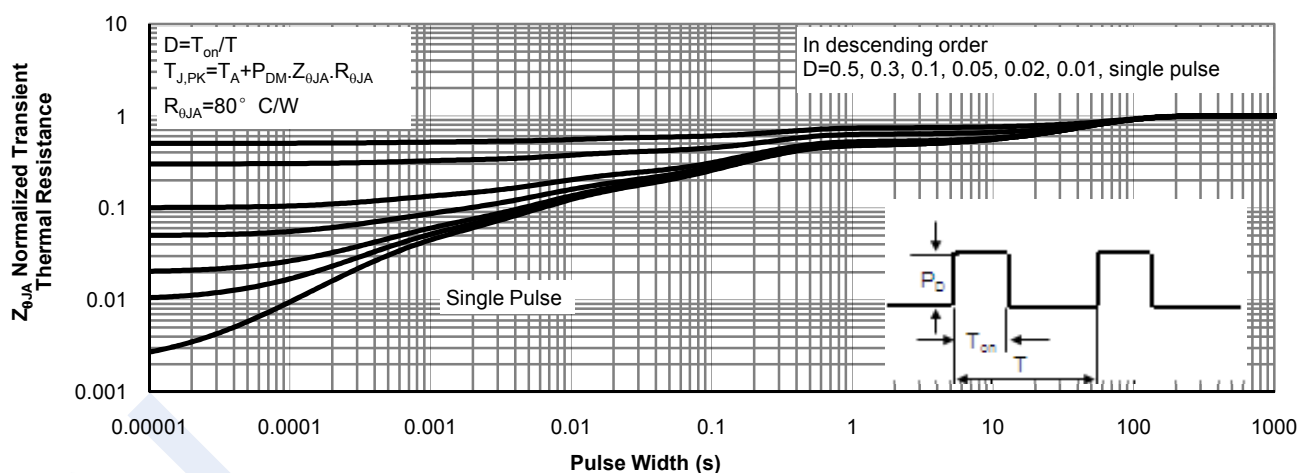
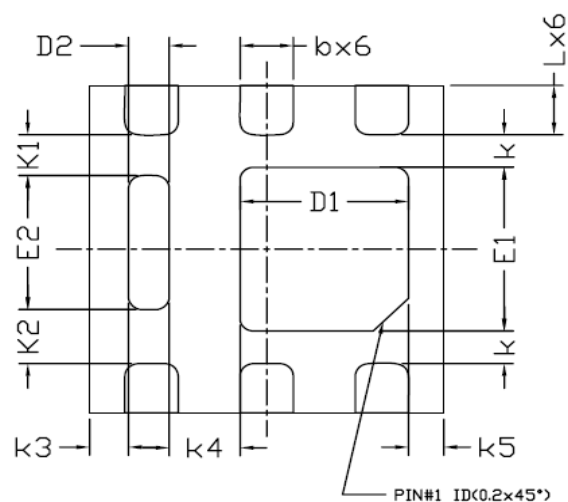
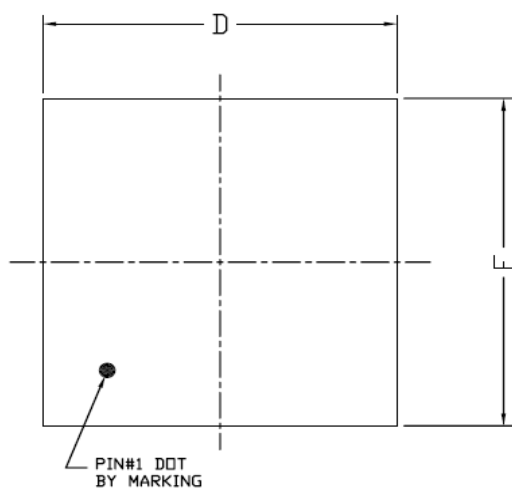
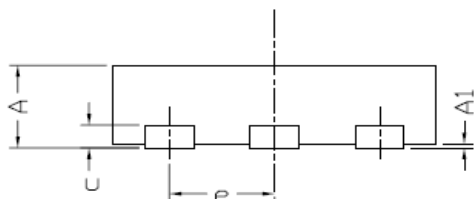


Figure 12: Normalized Maximum Transient Thermal Impedance (Note H)

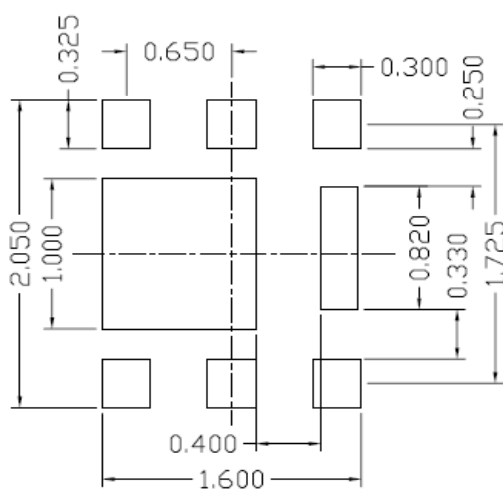
DFN2X2B_6L_EP1_S PACKAGE OUTLINE



BOTTOM VIEW



RECOMMENDED LAND PATTERN



UNIT: mm

NOTE

1. CONTROLLING DIMENSION IS MILLIMETER.
CONVERTED INCH DIMENSIONS ARE NOT NECESSARILY EXACT.

SYMBOLS	DIMENSIONS IN MILLIMETERS			DIMENSIONS IN INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.50	0.55	0.60	0.020	0.022	0.024
A1	0.00	—	0.05	0.000	—	0.002
b	0.25	0.30	0.35	0.010	0.012	0.014
c	0.152 REF			0.006 REF		
D	1.90	2.00	2.10	0.075	0.079	0.083
D1	0.85	0.95	1.05	0.033	0.037	0.041
D2	0.13	0.23	0.33	0.005	0.009	0.013
E	1.90	2.00	2.10	0.075	0.079	0.083
E1	0.90	1.00	1.10	0.035	0.039	0.043
E2	0.72	0.82	0.92	0.028	0.032	0.036
e	0.65 BSC			0.026 BSC		
K	0.20 BSC			0.008 BSC		
K1	0.25 BSC			0.010 BSC		
K2	0.33 BSC			0.013 BSC		
K3	0.22 BSC			0.009 BSC		
K4	0.40 BSC			0.016 BSC		
K5	0.20 BSC			0.008 BSC		
L	0.25	0.30	0.35	0.010	0.012	0.014