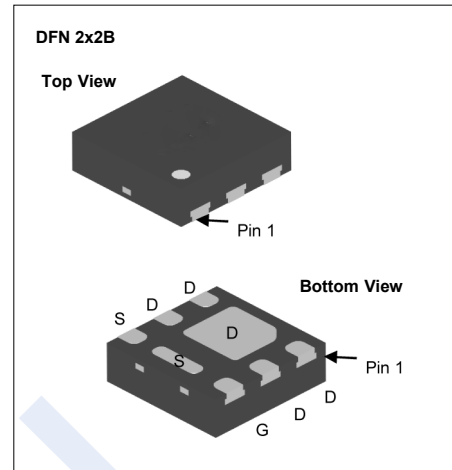
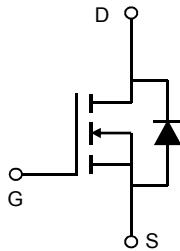


N-Channel MOSFET

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	I_D	$T_A=25^\circ C$	8
		$T_A=100^\circ C$	6
Pulsed Drain Current	I_{DM}	32	A
Power Dissipation	P_D	$T_A=25^\circ C$	2.8
		$T_A=70^\circ C$	1.8
Thermal Resistance.Junction- to-Ambient	R_{thJA}	$t \leq 10s$	45
		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			Q _{gs}		1.2		
Gate Drain Charge			Q _{gd}		1.1		
Turn-On DelayTime	t _{d(on)}	V _{GS} =10V, V _{DS} =20V, R _L =2.5Ω, R _{GEN} =3Ω		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

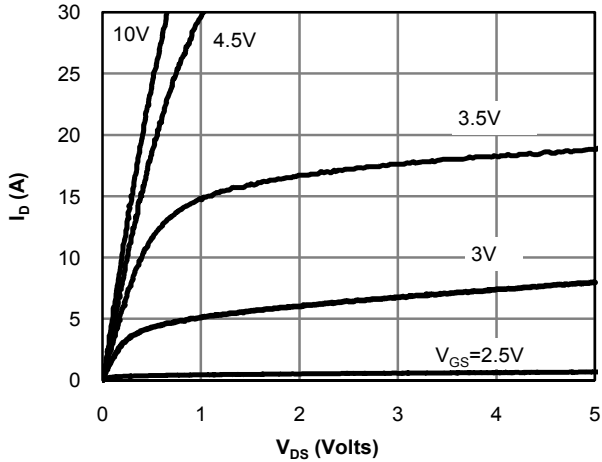


Fig 1: On-Region Characteristics (Note E)

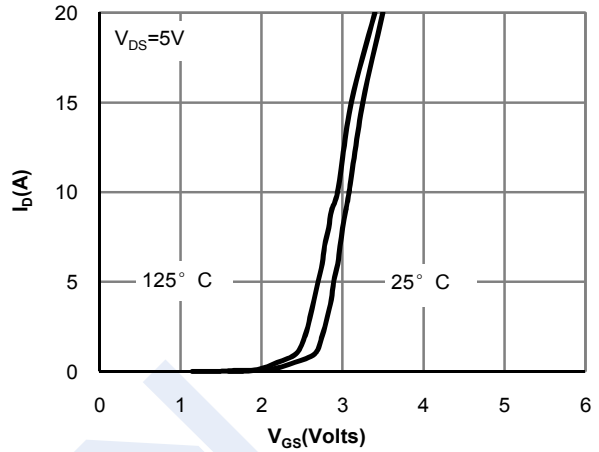


Figure 2: Transfer Characteristics (Note E)

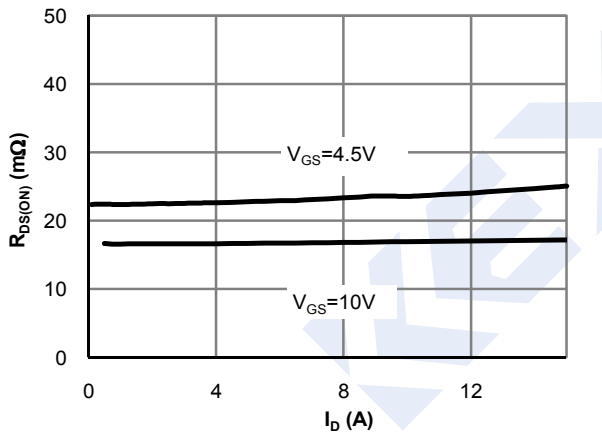


Figure 3: On-Resistance vs. Drain Current and Gate Voltage (Note E)

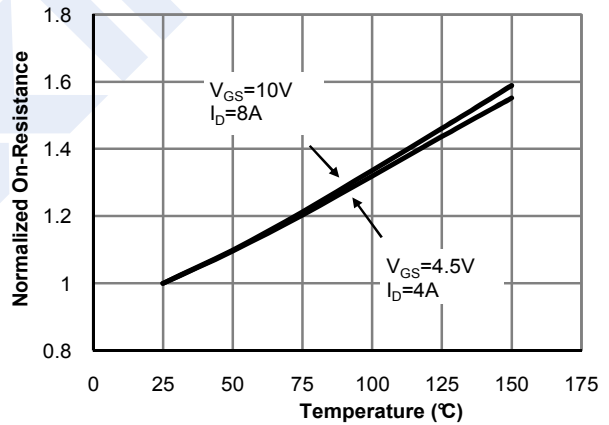


Figure 4: On-Resistance vs. Junction Temperature (Note E)

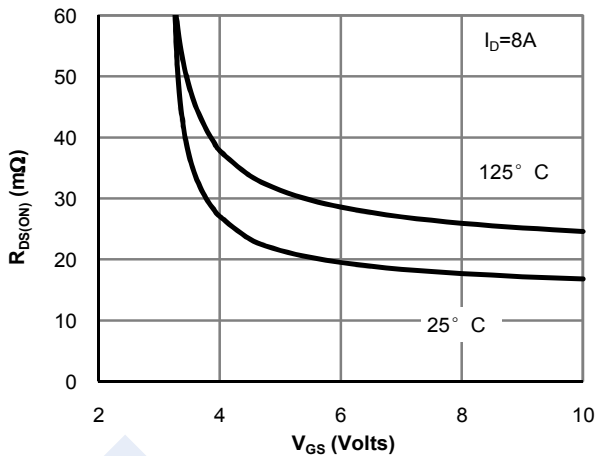


Figure 5: On-Resistance vs. Gate-Source Voltage (Note E)

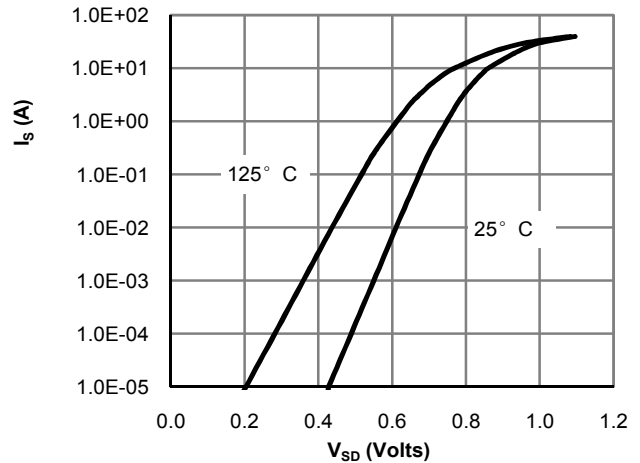


Figure 6: Body-Diode Characteristics (Note E)

N-Channel MOSFET AON2240 (KON2240)

■ Typical Characteristics

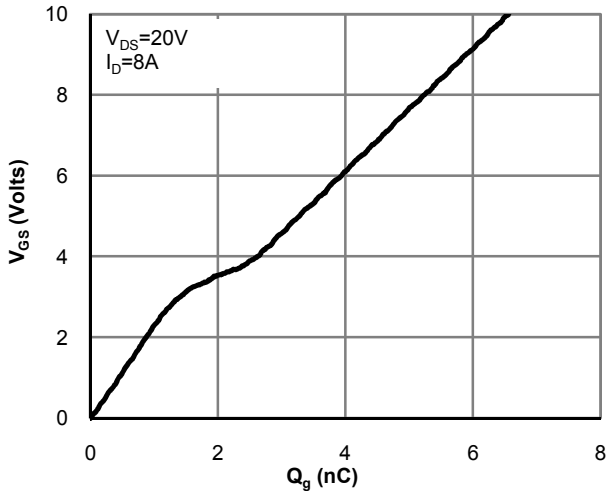


Figure 7: Gate-Charge Characteristics

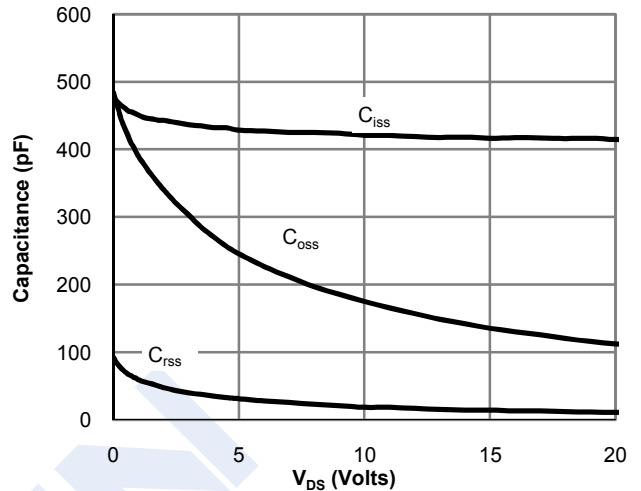


Figure 8: Capacitance Characteristics

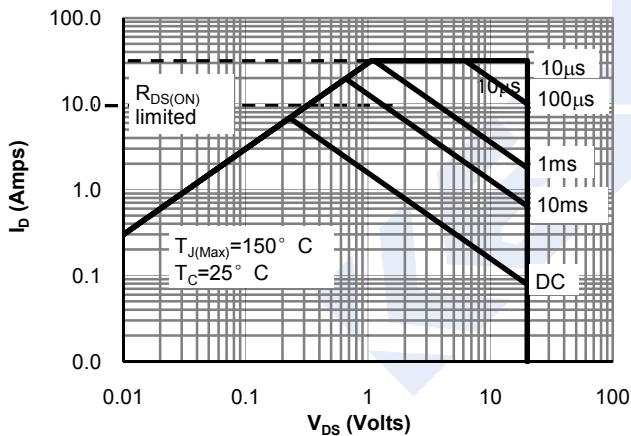


Figure 9: Maximum Forward Biased Safe Operating Area (Note F)

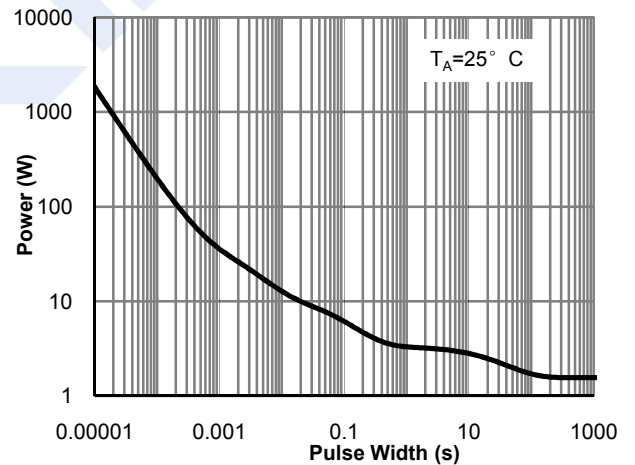


Figure 11: Single Pulse Power Rating Junction-to-Ambient (Note H)

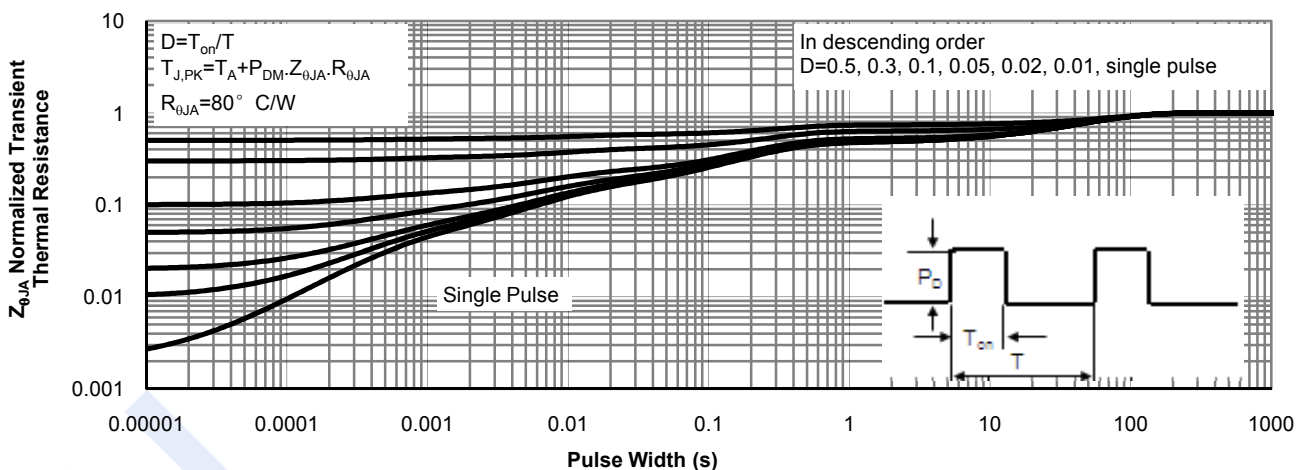
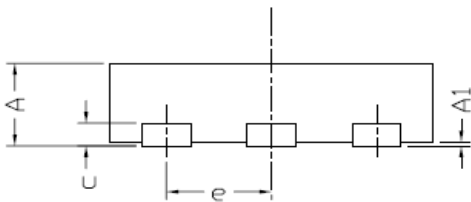
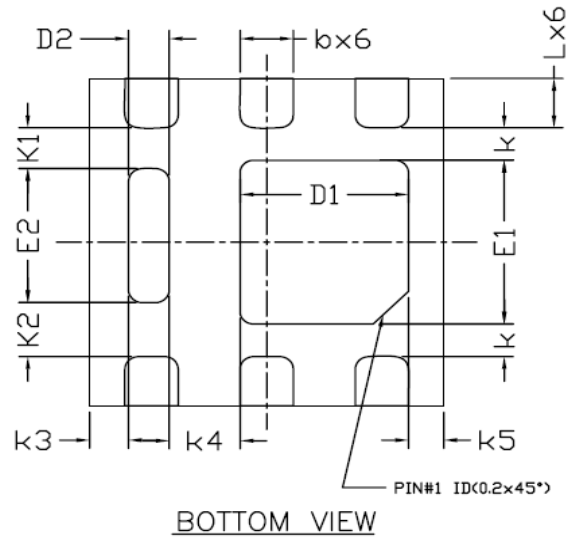
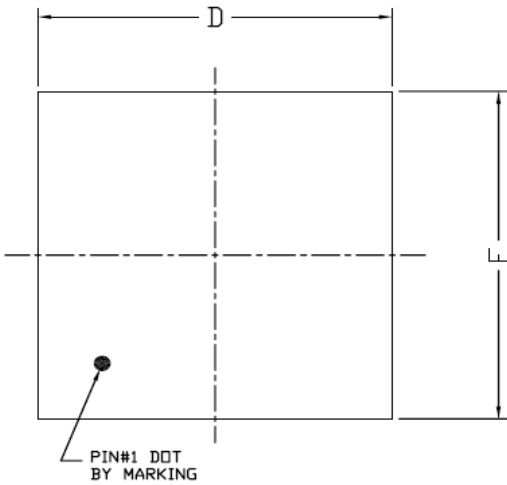
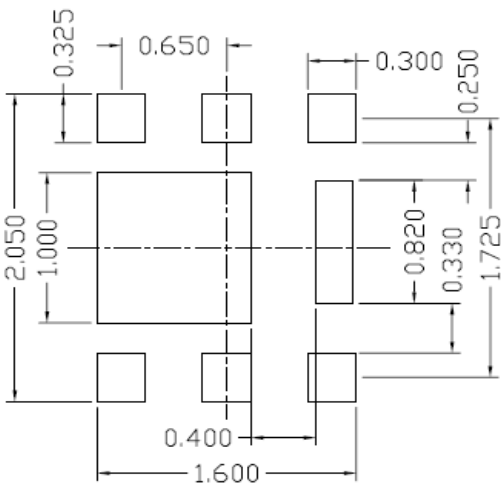


Figure 12: Normalized Maximum Transient Thermal Impedance (Note H)

DFN2X2B_6L_EP1_S PACKAGE OUTLINE



RECOMMENDED LAND PATTERN



UNIT: mm

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
e	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

NOTE

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