

■ PRODUCT CHARACTERISTICS

VDSS	-40V
$R_{DS(on)typ}(@V_{GS}=-10V)$	14mΩ
$R_{DS(on)typ}(@V_{GS}=-4.5V)$	17mΩ
ID	-30A

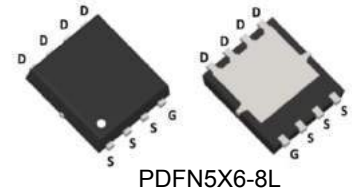
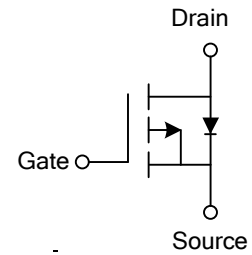
■ FEATURES

Advanced Trench Technology
Excellent $R_{DS(ON)}$ and Low Gate Charge
Lead free product is acquired

■ APPLICATION

PWM Applications
Load Switch
Power Management

Symbol



■ ORDER INFORMATION

Order codes		Package	Packing
Halogen-Free	Halogen		
N/A	MOT4719G	PDFN5X6-8L	5000 pieces /Reel

■ ABSOLUTE MAXIMUM RATINGS (T_C=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DSS}	-40	V
Gate-Source Voltage	V _{GSS}	±20	V
Continuous Drain Current	I _D	T _C = 25°C	-30
		T _C = 100°C	-20
Pulsed Drain Current	I _{DM}	-120	A
Single Pulsed Avalanche Energy	E _{AS}	110	mJ
Power Dissipation	P _D	20	W
Thermal Resistance, Junction to Case	R _{θJC}	6.3	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

■ ELECTRICAL CHARACTERISTICS ($T_J=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Off characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=-250\mu A$	-40	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-40V, V_{GS}=0V$	-	-	-1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$	-	-	± 100	nA
On characteristics						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1.2	-1.4	-2.4	V
Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS}=-10V, I_D=-20A$	-	14	19	m Ω
	$R_{DS(ON)}$	$V_{GS}=-4.5V, I_D=-20A$	-	17	23	m Ω
Forward Transconductance	g_{FS}	$V_{DS}=-10V, I_D=-20A$	-	25	-	S
Dynamic characteristics						
Input Capacitance	C_{ISS}	$V_{DS}=-20V, V_{GS}=0V,$ $F=1.0\text{MHz}$	-	2960	-	PF
Output Capacitance	C_{OSS}		-	370	-	PF
Reverse Transfer Capacitance	C_{RSS}		-	310	-	PF
Switching characteristics						
Turn-on Delay Time	$t_{d(on)}$	$V_{DD}=-20V, I_D=-20A,$ $V_{GS}=-10V, R_{GEN}=3\Omega$	-	10	-	nS
Turn-on Rise Time	t_r		-	18	-	nS
Turn-Off Delay Time	$t_{d(off)}$		-	38	-	nS
Turn-Off Fall Time	t_f		-	24	-	nS
Total Gate Charge	Q_g	$V_{DS}=-20V, I_D=-20A,$ $V_{GS}=-10V$	-	42.2	-	nC
Gate-Source Charge	Q_{gs}		-	6.9	-	nC
Gate-Drain Charge	Q_{gd}		-	9.7	-	nC
Drain-sourcer diode characteristics						
Diode Forward Voltage	V_{SD}	$V, I_S=-20A$	-	-	-1.2	V

■ TYPICAL CHARACTERISTICS

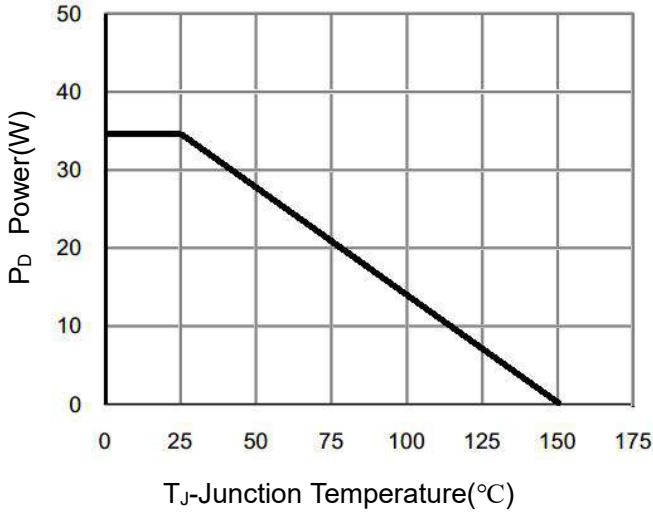


Figure 1 Power dissipation

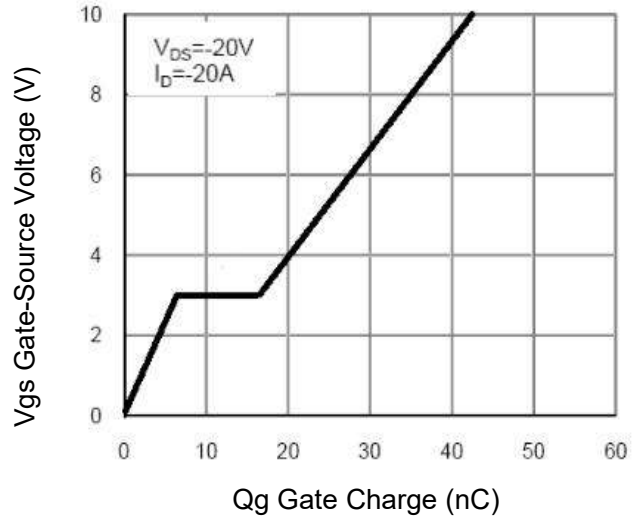


Figure 2 Gate charge

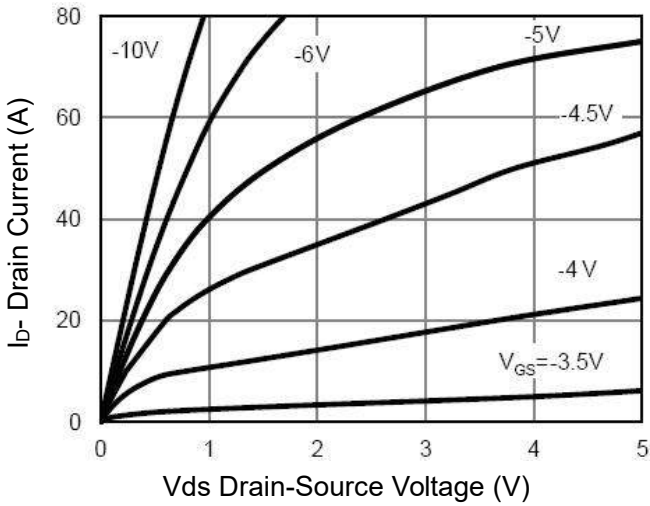


Figure 3 Output characteristics

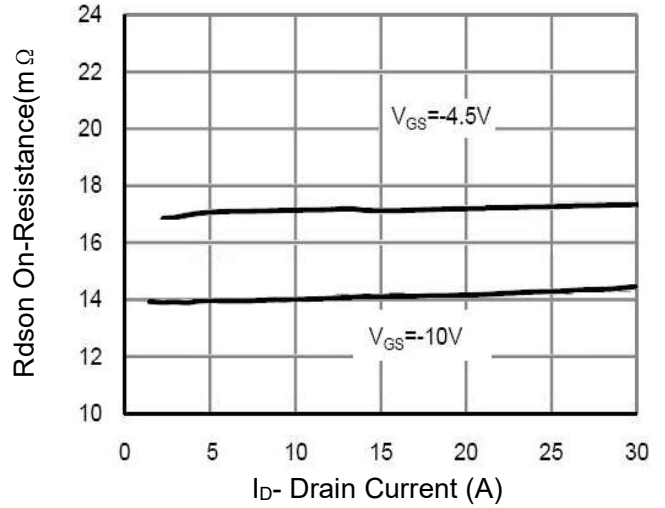


Figure 4 Drain-source on-resistance

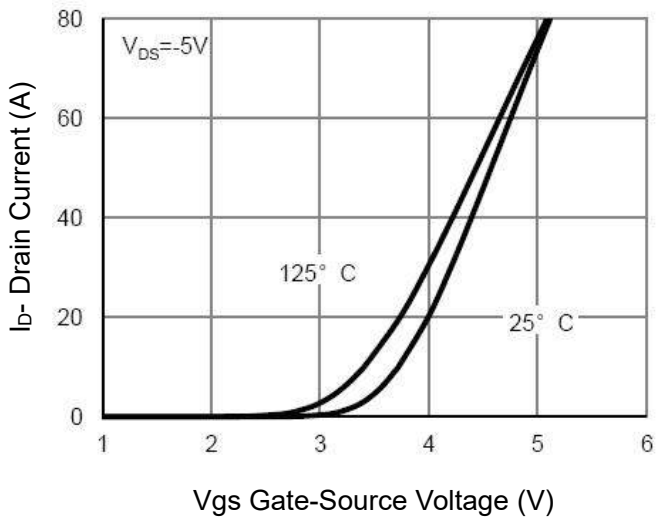


Figure 5 Transfer characteristics

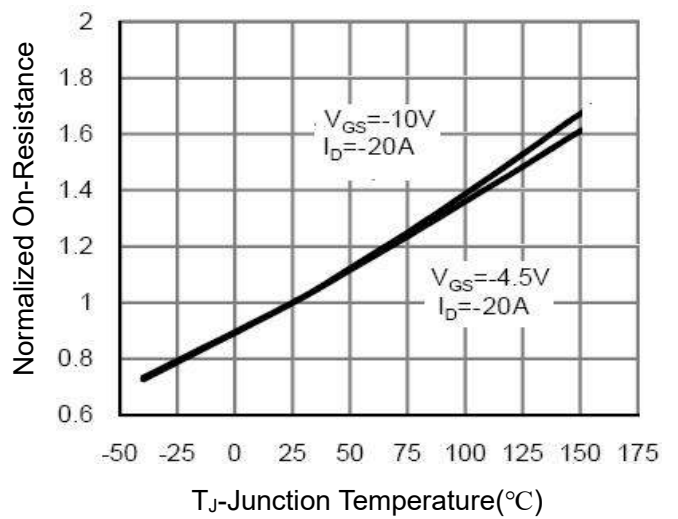


Figure 6 Drain-source on-resistance

■ TYPICAL CHARACTERISTICS(Cont.)

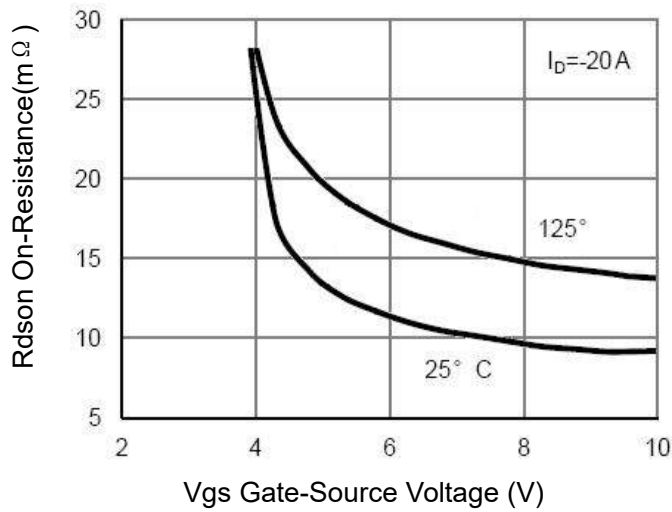


Figure 7 Rdson vs vgs

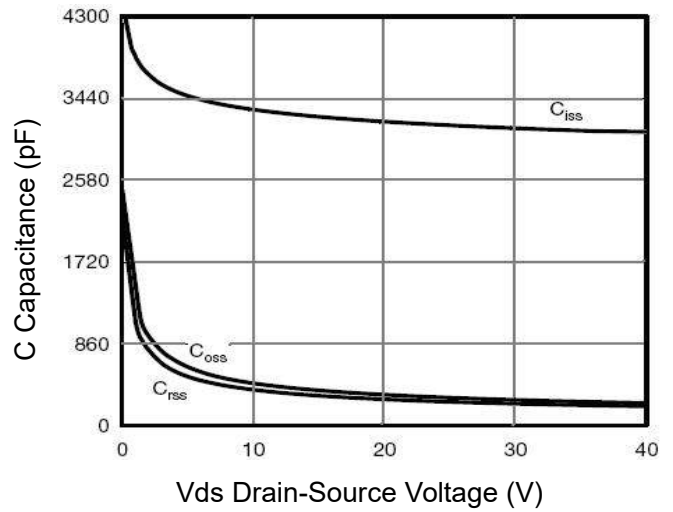


Figure 8 Capacitance vs vgs

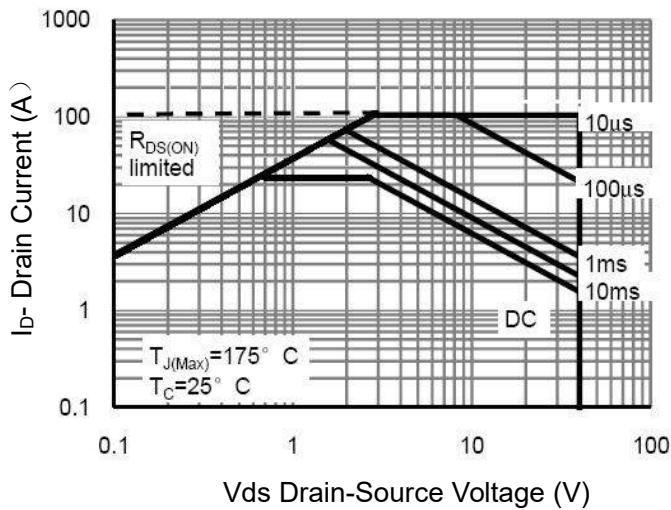


Figure 9 Safe operation area

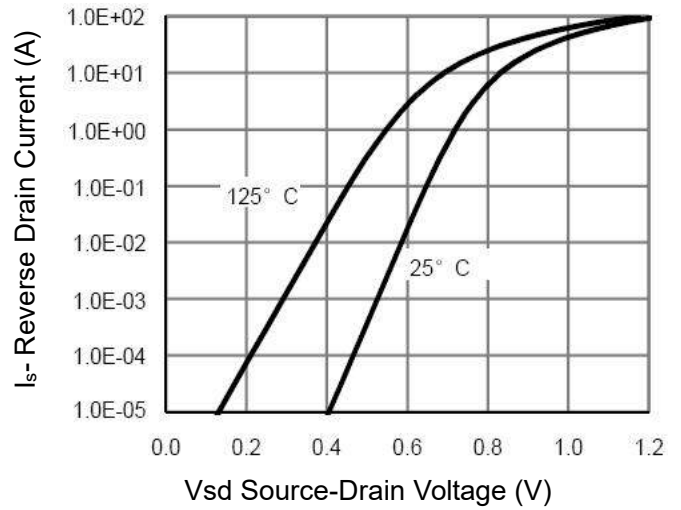


Figure 10 Source-drain diode forward

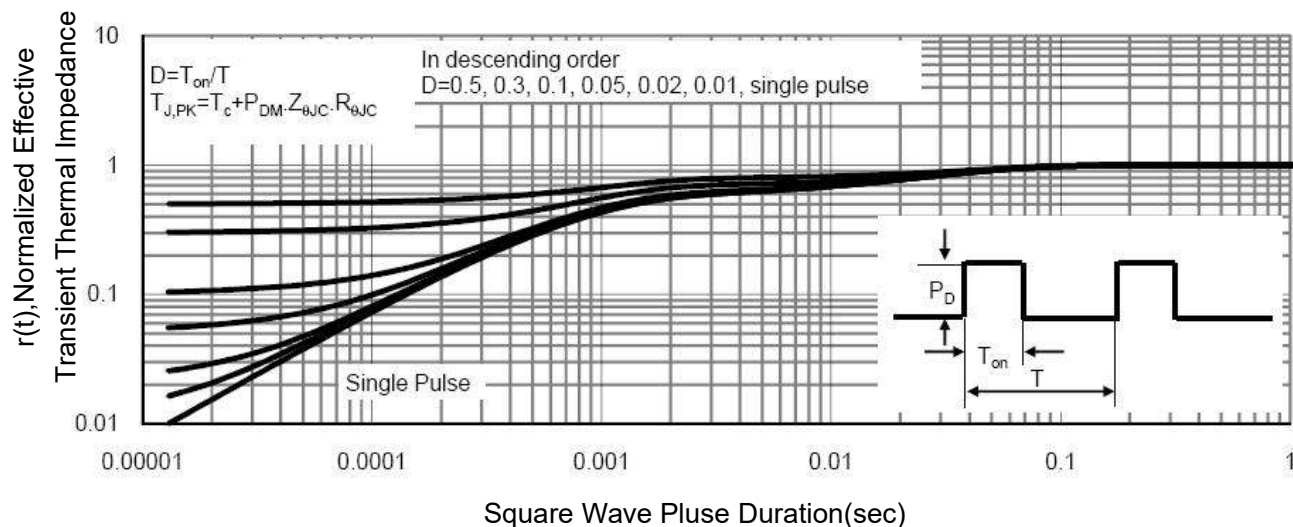
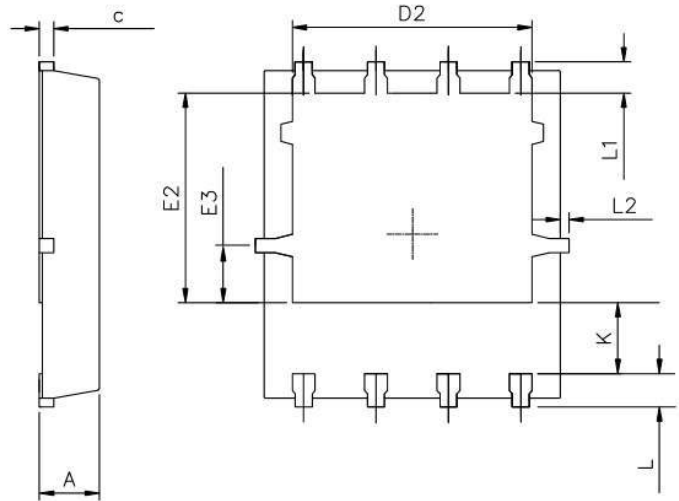
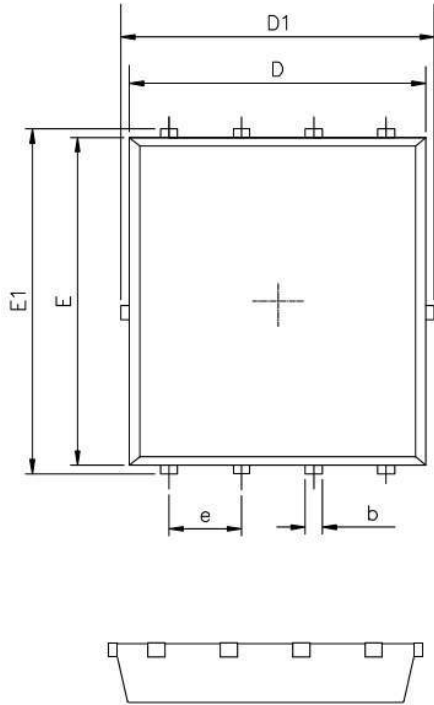
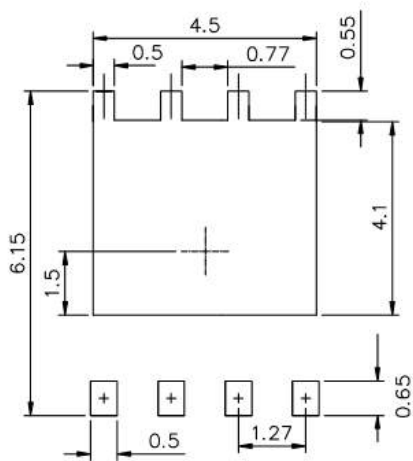


Figure 11 Normalized maximum transient thermal impedance

■ PDFN5X6-8L Package Mechanical Data



RECOMMENDED LAND PATTERN



UNIT:mm

	MIN	NOM	MAX
A	0.90	1.00	1.10
b	0.25	0.35	0.50
c	0.10	0.20	0.30
D	4.80	5.00	5.30
D1	4.90	5.10	5.50
D2	3.92	4.02	4.20
E	5.65	5.75	5.85
E1	5.90	6.05	6.20
E2	3.325	3.525	3.775
E3	0.80	0.90	1.00
e		1.27	
L	0.40	0.55	0.70
L1		0.65	
L2	0.00		0.15
K	1.00	1.30	1.50

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [MOSFET](#) category:

Click to view products by [MOT](#) manufacturer:

Other Similar products are found below :

[IRFD120](#) [JANTX2N5237](#) [BUK455-60A/B](#) [MIC4420CM-TR](#) [VN1206L](#) [NDP4060](#) [SI4482DY](#) [IPS70R2K0CEAKMA1](#) [SQD23N06-31L-GE3](#)
[TK16J60W,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#) [DMN1017UCP3-7](#) [DMN1053UCP4-7](#) [SQJ469EP-T1-GE3](#) [NTE2384](#) [DMC2700UDMQ-7](#)
[DMN2080UCB4-7](#) [DMN61D9UWQ-13](#) [US6M2GTR](#) [DMN31D5UDJ-7](#) [DMP22D4UFO-7B](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#)
[STF5N65M6](#) [IRF40H233XTMA1](#) [STU5N65M6](#) [DMN6022SSD-13](#) [DMN13M9UCA6-7](#) [DMTH10H4M6SPS-13](#) [DMN2990UFB-7B](#)
[IPB80P04P405ATMA2](#) [2N7002W-G](#) [MCAC30N06Y-TP](#) [MCQ7328-TP](#) [BXP7N65D](#) [BXP4N65F](#) [AOL1454G](#) [WMJ80N60C4](#) [BXP2N20L](#)
[BXP2N65D](#) [BXT1150N10J](#) [BXT1700P06M](#) [TSM60NB380CP](#) [ROG](#) [RQ7L055BGTCR](#) [DMNH15H110SK3-13](#) [SLF10N65ABV2](#)
[BSO203SP](#) [BSO211P](#) [IPA60R230P6](#) [IPA60R460CE](#)