Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
30V	28mΩ@10V	7A
	42mΩ@4.5V	
-30V	30mΩ@-10V	-8A
	45mΩ@-4.5V	

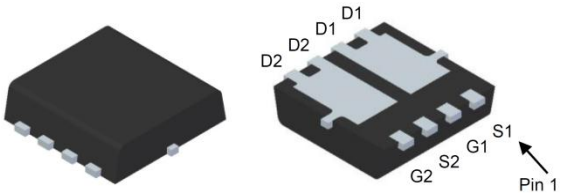
Feature

- High power and current handing capability
- Lead free product is acquired
- Surface mount package

Application

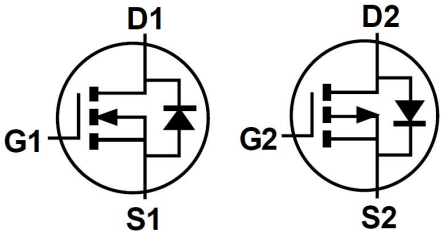
- Motor Control
- DC-DC Converters
- Power Management

Package

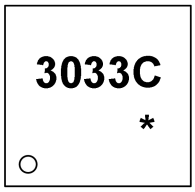


PDFNWB3.3×3.3-8L-B

Circuit diagram



Marking



3033C: Product code
*** : Month code**

Absolute maximum ratings (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value		Unit
		N-Channel	P-Channel	
Drain-Source Voltage	V_{DS}	30	-30	V
Gate-Source Voltage	V_{GS}	±20	±20	V
Continuous Drain Current	I_D	7	-8	A
Maximum Power Dissipation	P_D	1.6		W
Thermal Resistance from Junction to Ambient(t≤10s)	$R_{\theta JA}$	78		℃/W
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 To 150	-55 To 150	℃

N-Channel Electrical characteristics (T_A=25 ºC, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} 24V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±20V, V_{DS} = 0V			±100	nA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	1	1.5	2.2	V
Drain-source on-resistance[1)]	$R_{DS(on)}$	V_{GS} =10V, I_D =3.6A		28	38	mΩ
		V_{GS} =4.5V, I_D =3.0A		42	55	
Dynamic characteristics[2)]						
Total gate charge	Q_g	V_{DS} =15V,V_{GS} =10V,I_D =3.4A		4.5		nC
		V_{DS} =15V,V_{GS} =4.5V,I_D =3.4A		2.1		
Gate-source charge	Q_{gs}			0.85		
Gate-drain charge	Q_{gd}			0.65		
Input Capacitance	C_{iss}	V_{DS} =15V,V_{GS} =0V,f =1MHz		235		pF
Output Capacitance	C_{oss}			45		
Reverse Transfer Capacitance	C_{rss}			17		
Turn-on delay time	$t_{d(on)}$	V_{DD}=15V, R_L=5.6Ω, I_D ≈2.7A, V_{GEN}=4.5V,Rg=1Ω		12		ns
Turn-on rise time	t_r			50		
Turn-off delay time	$t_{d(off)}$			12		
Turn-off fall time	t_f			22		
Source-Drain Diode characteristics						
Body diode voltage	V_{SD}	I_S=1A,V_{GS}=0V			1.2	V

Notes:

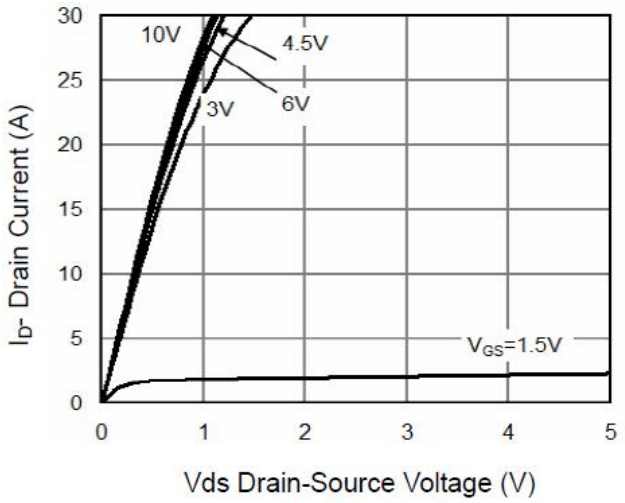
1) Pulse Test: Pulse width≤300μs, duty cycle ≤2%.

2) Guaranteed by design, not subject to production testing.

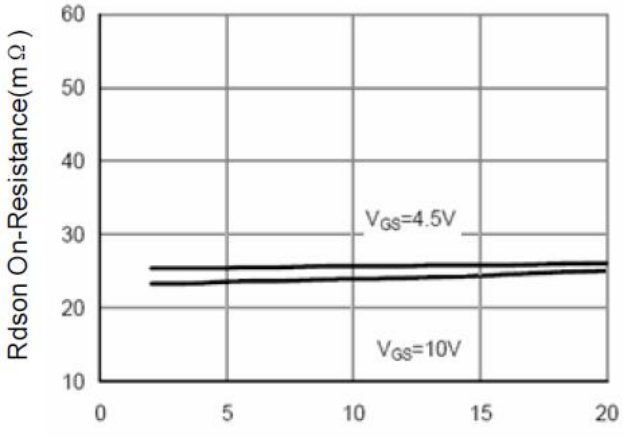
P-Channel Electrical characteristics (T_A=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-24V,V_{GS} = 0V			-1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±20V, V_{DS} = 0V			±100	nA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-1.0	-1.5	-2.5	V
Drain-source on-resistance	$R_{DS(on)}$	V_{GS} =-10V, I_D =-7A		30	40	mΩ
		V_{GS} =-4.5V, I_D =-4A		45	65	
Dynamic characteristics						
Input Capacitance	C_{iss}	V_{DS} =-15V,V_{GS} =0V,f =1MHz		729		pF
Output Capacitance	C_{oss}			112		
Reverse Transfer Capacitance	C_{rss}			107		
Switching Characteristics						
Total Gate Charge	Q_g	VDS=-15V,ID=-6.5A VGS=-10V		16.6		nC
Gate-Source Charge	Q_{gs}			1.8		
Gate-Drain Charge	Q_{gd}			4.2		
Turn-on delay time	$t_{d(on)}$	VDD=-15V, RL=2.3Ω VGS=-10V,RGEN=6Ω		7.5		ns
Turn-on rise time	t_r			5.5		
Turn-off delay time	$t_{d(off)}$			19		
Turn-off fall time	t_f			7		
Drain-Source Diode characteristics						
Diode Forward voltage	V_{SD}	V_{GS} =0V, I_S=-1A			-1.2	V

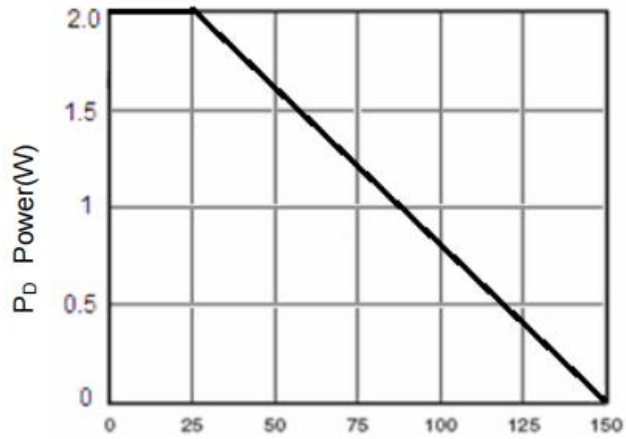
N-Channel Typical Characteristics



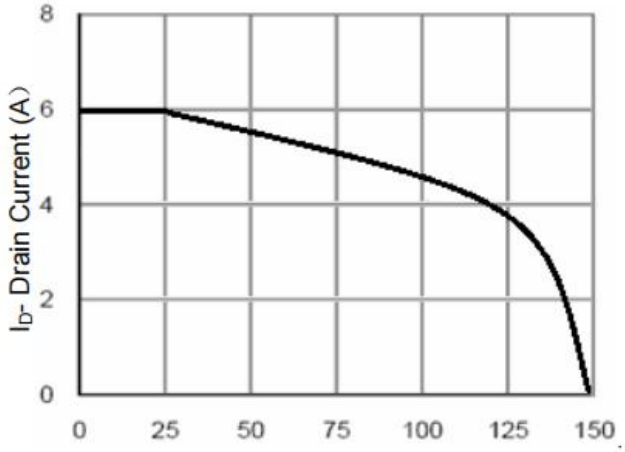
Output Characteristics



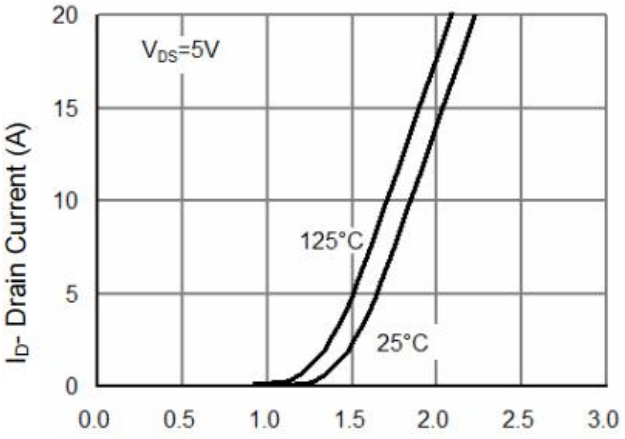
Drain-Source On-Resistance



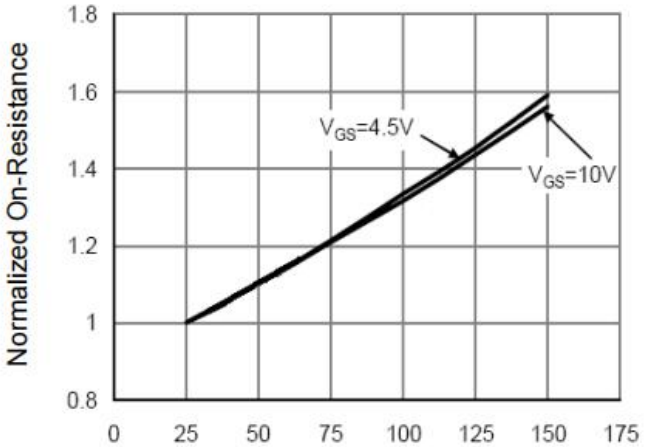
Power Dissipation



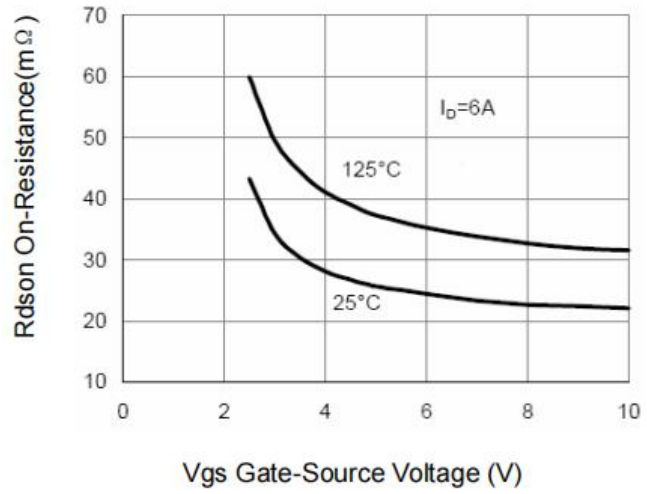
Drain Current



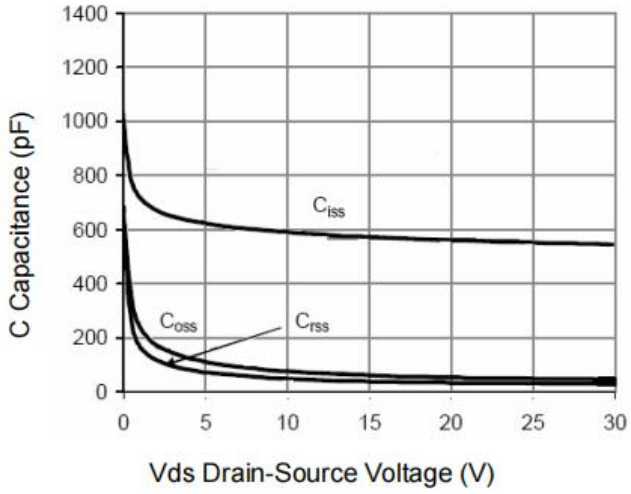
Transfer Characteristics



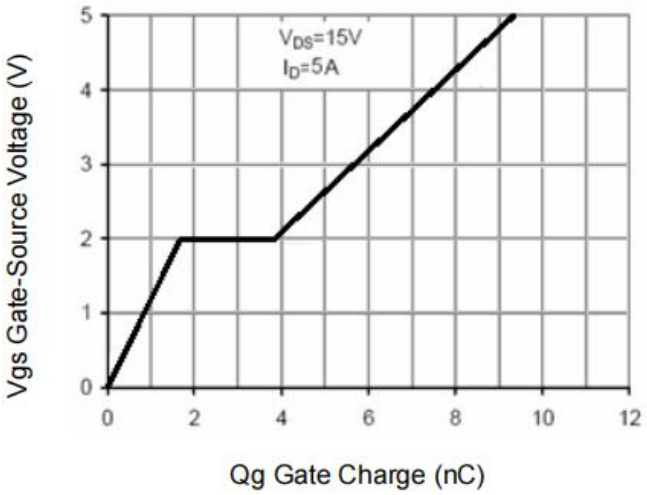
Drain-Source On-Resistance



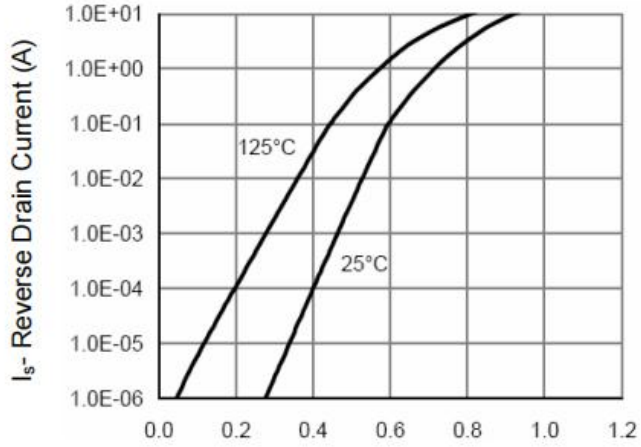
Rdson vs Vgs



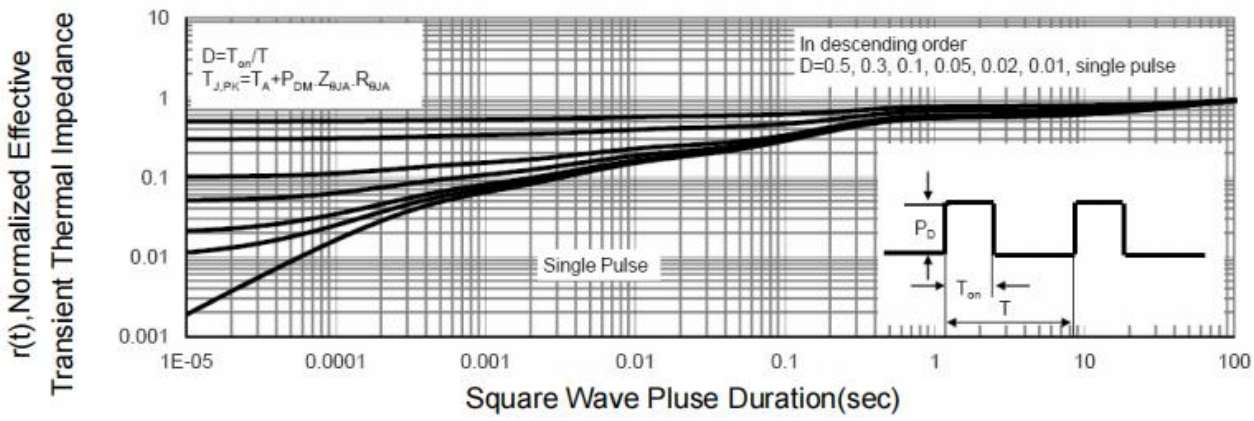
Capacitance vs Vds



Gate Charge

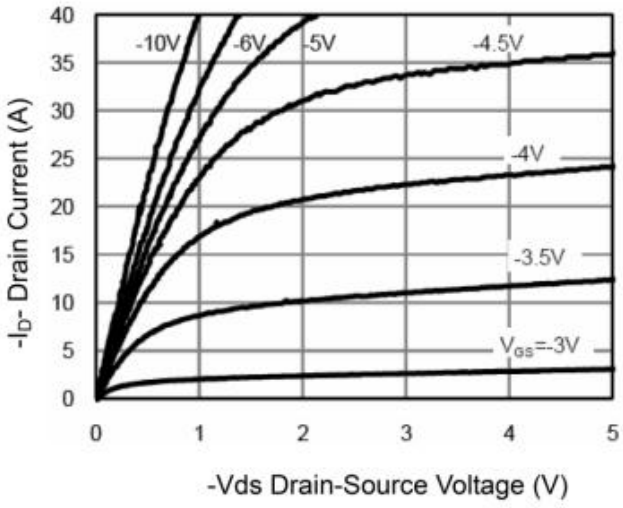


Source- Drain Diode Forward

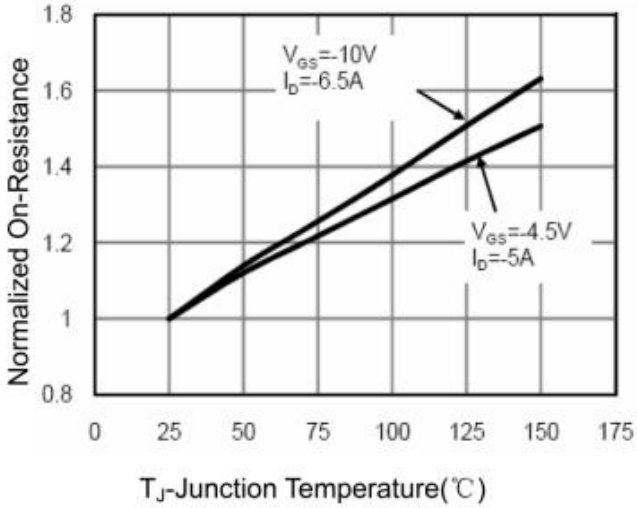


Normalized Maximum Transient Thermal Impedance

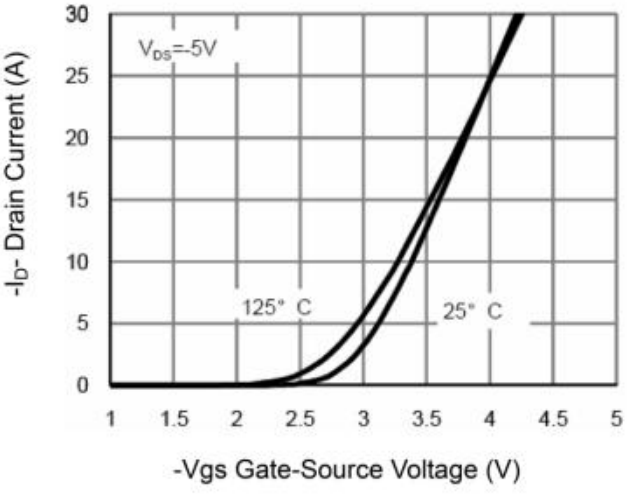
P-Channel Typical Characteristics



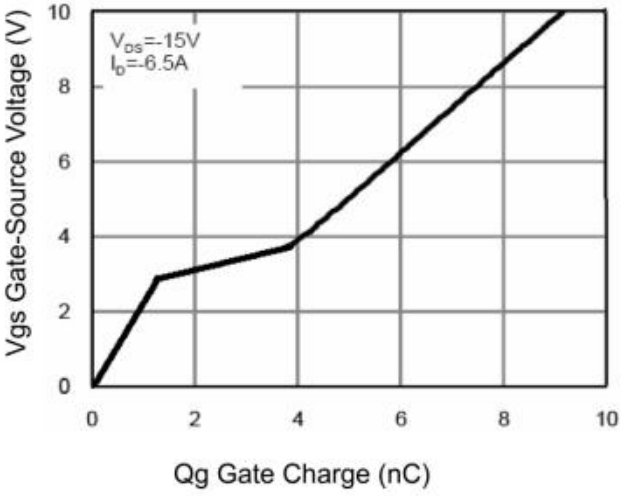
Typical Output Characteristics



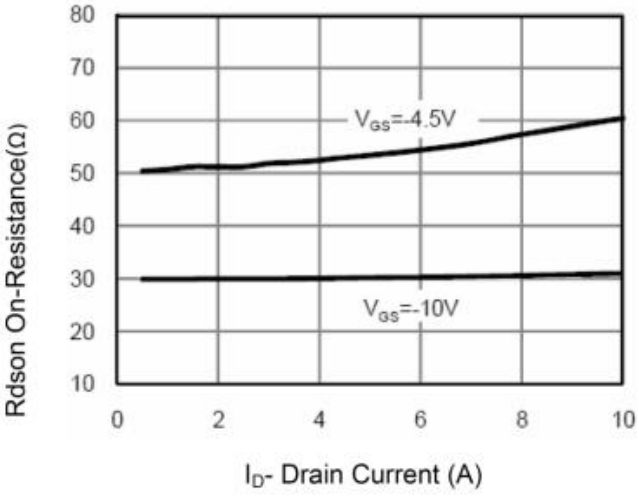
Rdson-Junction Temperature



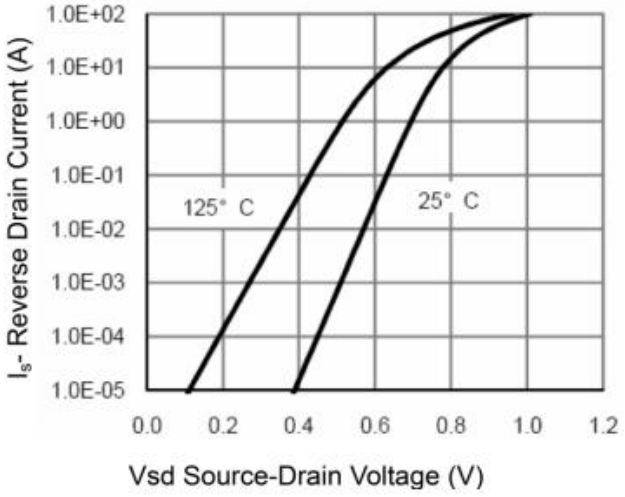
Transfer Characteristics



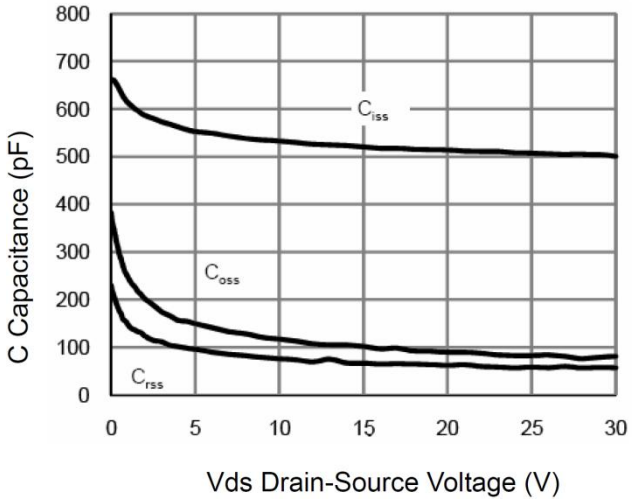
Gate-Charge



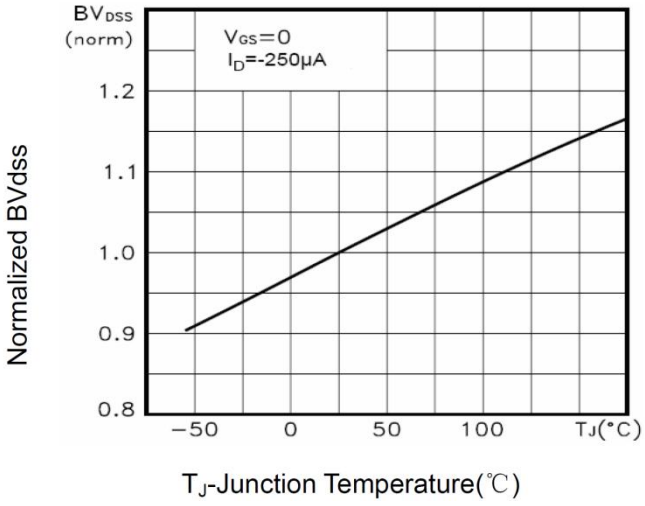
Rdson- Drain Current



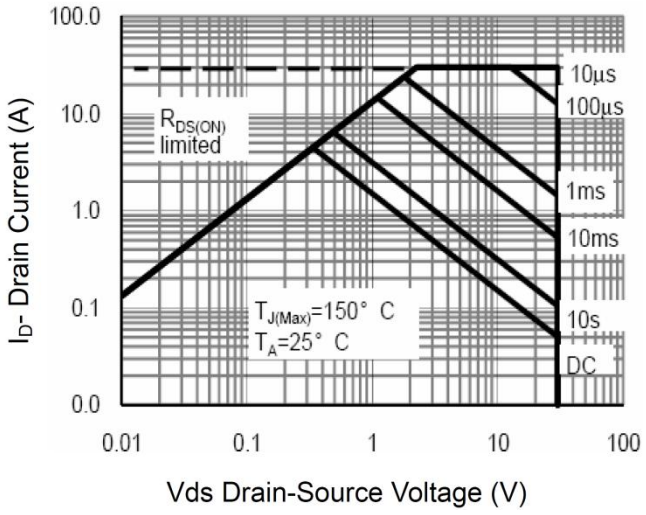
Source- Drain Diode Forward



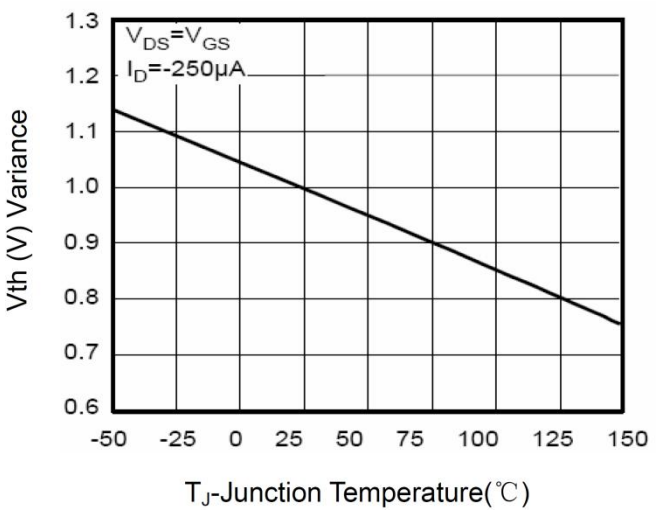
Capacitance vs Vds



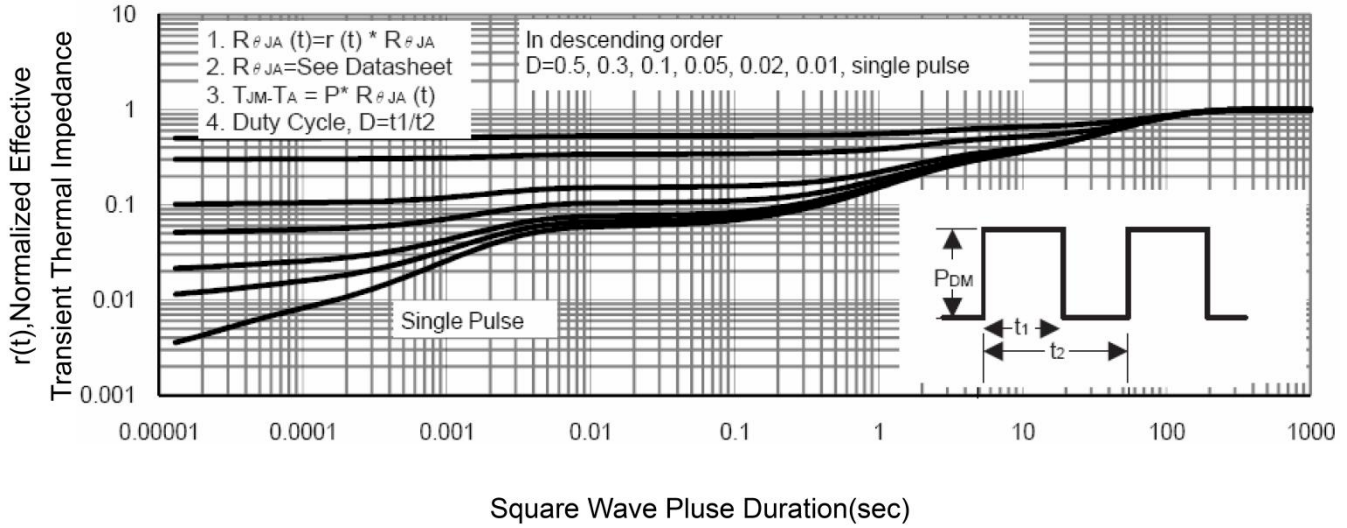
BVDSS vs Junction Temperature



Safe Operation Area

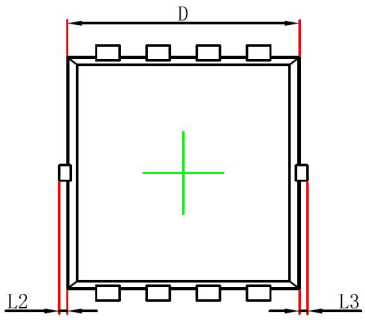


VGS(th) vs Junction Temperature

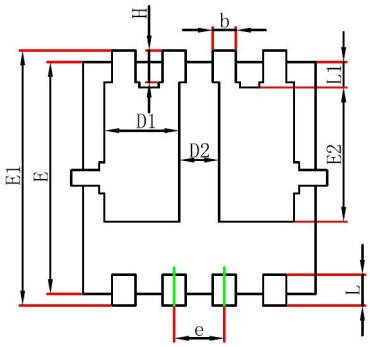


Normalized Maximum Transient Thermal Impedance

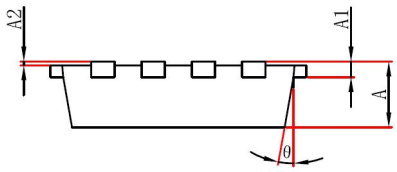
PDFNWB3.3×3.3-8L-B Package Information



Top View
[顶视图]



Bottom View
[背视图]



Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.650	0.850	0.026	0.033
A1	0.152 REF.		0.006 REF.	
A2	0~0.05		0~0.002	
D	2.900	3.100	0.114	0.122
D1	0.935	1.135	0.037	0.045
D2	0.280	0.480	0.011	0.019
E	2.900	3.100	0.114	0.122
E1	3.150	3.450	0.124	0.136
E2	1.535	1.935	0.060	0.076
b	0.200	0.400	0.008	0.016
e	0.550	0.750	0.022	0.030
L	0.300	0.500	0.012	0.020
L1	0.180	0.480	0.007	0.019
L2	0~0.100		0~0.004	
L3	0~0.100		0~0.004	
H	0.315	0.515	0.012	0.020
θ	9°	13°	9°	13°

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for MOSFET ***category:***

Click to view products by Siliup ***manufacturer:***

Other Similar products are found below :

IRFD120 IRFY240C JANTX2N5237 2SK2267(Q) BUK455-60A/B MIC4420CM-TR VN1206L NDP4060 SI4482DY IPS70R2K0CEAKMA1 SQD23N06-31L-GE3 TK16J60W,S1VQ(O 2SK2614(TE16L1,Q) DMN1017UCP3-7 EFC2J004NUZTDG 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 NTMC083NP10M5L NVMFS2D3P04M8LT1G BXP7N65D BXP4N65F AOL1454G WMJ80N60C4 BXP2N20L BXP2N65D BXT1150N10J BXT1700P06M TSM60NB380CP ROG RQ7L055BGTCR DMNH15H110SK3-13