Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
40V	2.9mΩ@10V	75A
	3.7mΩ@4.5V	

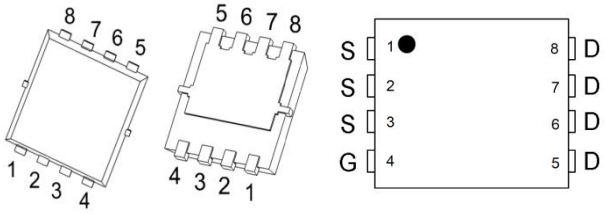
Feature

- Fast Switching
- Low Gate Charge and Rdson
- Low Reverse transfer capacitances
- 100% Single Pulse avalanche energy Test

Applications

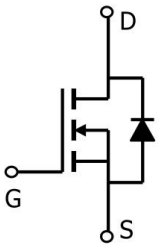
- Power switching application
- Hard switched and high frequency circuits
- Uninterruptible power supply

Package

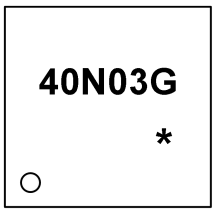


PDFNWB3.3×3.3-8L

Circuit diagram



Marking



40N03G =Device Code
*** =Month Code**

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

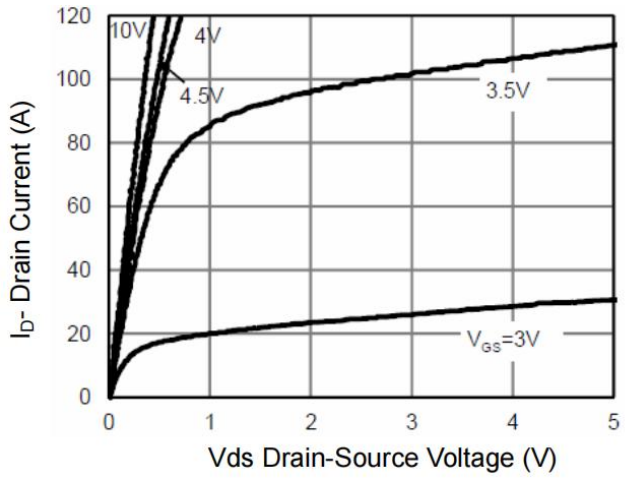
Parameter	Symbol	Rating	Units
Drain-Source Voltage	V_{DS}	40	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current1(Tc=25℃)	I_D	55	A
Pulsed Drain Current[2]	I_{DM}	220	A
Single Pulse Avalanche Energy[3]	E_{AS}	256	mJ
Avalanche Current	I_{AS}	32	A
Total Power Dissipation[4]	P_D@TC=25℃	65	W
Thermal Resistance Junction-Case[1]	$R_{\theta JC}$	1.92	℃/W
Storage Temperature Range	T_{STG}	-55 to 150	℃
Operating Junction Temperature Range	T_J	-55 to 150	℃

Electrical characteristics (Ta=25℃, unless otherwise noted)

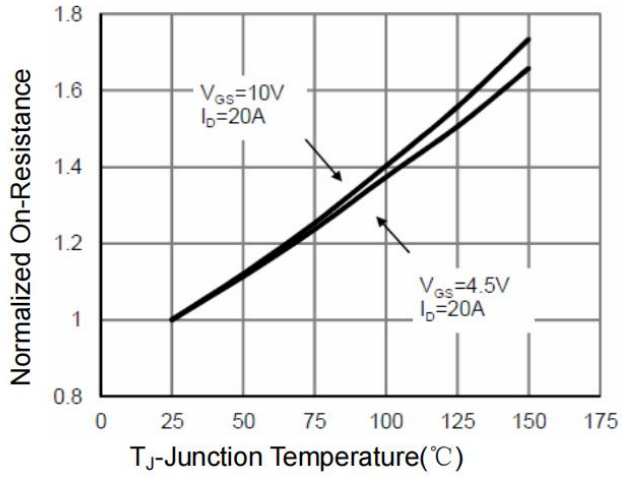
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	VGS=0V , ID=250uA	40	---	---	V
Drain-Source Leakage Current	I_{DSS}	VDS=32V , VGS=0V , TJ=25℃	---	---	1	uA
Gate-Source Leakage Current	I_{GSS}	VGS=±20V , VDS=0V	---	---	±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	VGS=VDS , ID =250uA	1	1.5	2.5	V
Static Drain-Source On-Resistance[2]	$R_{DS(ON)}$	VGS=10V , ID=30A	---	2.9	3.7	mΩ
		VGS=4.5V , ID=20A	---	4.2	5.6	
Dynamic characteristics						
Total Gate Charge (4.5V)	Q_g	VDS=20V , VGS=10V , ID=20A	---	35	---	nC
Gate-Source Charge	Q_{gs}		---	5.1	---	
Gate-Drain Charge	Q_{gd}		---	4	---	
Input Capacitance	C_{iss}	VDS=20V , VGS=0V , f=1MHz	---	1687	---	pF
Output Capacitance	C_{oss}		---	641	---	
Reverse Transfer Capacitance	C_{rss}		---	32	---	
Switching Characteristics						
Turn-On Delay Time	$T_{d(on)}$	VDD=20V , VGS=10V , RG=1.6Ω, ID=20A	---	7.8	---	ns
Rise Time	T_r		---	4.2	---	
Turn-Off Delay Time	$T_{d(off)}$		---	28	---	
Fall Time	T_f		---	3.8	---	
Diode Characteristics						
Diode Forward Voltage2	V_{SD}	VGS=0V , IS=1A , TJ=25℃	---	---	1.2	V

Note :
1. The data tested by surface mounted on a 1 inch2 FR-4 board with 2OZ copper.
2. The data tested by pulsed , pulse width ≦ 300us , duty cycle ≦ 2%
3. The EAS data shows Max. rating . The test condition is VDD=20V,VGS=10V,L=0.5mH,RG=25Ω
4. The power dissipation is limited by 150℃ junction temperature

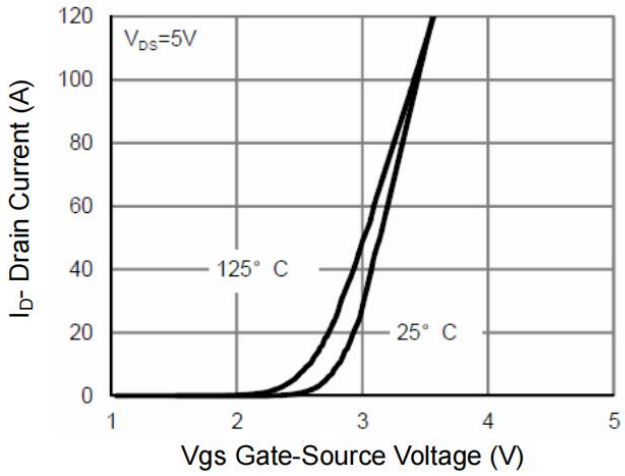
Typical Characteristics



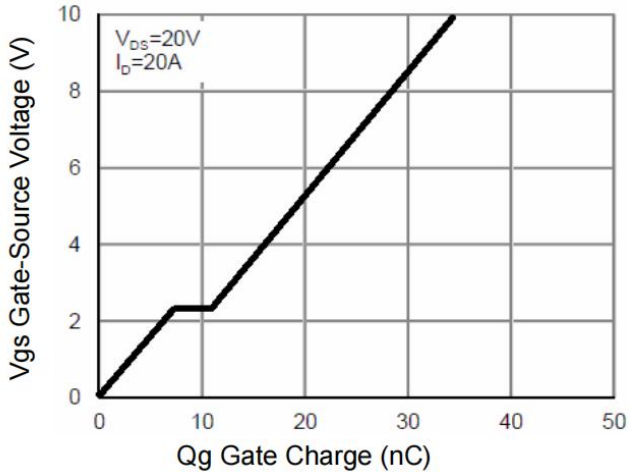
Output Characteristics



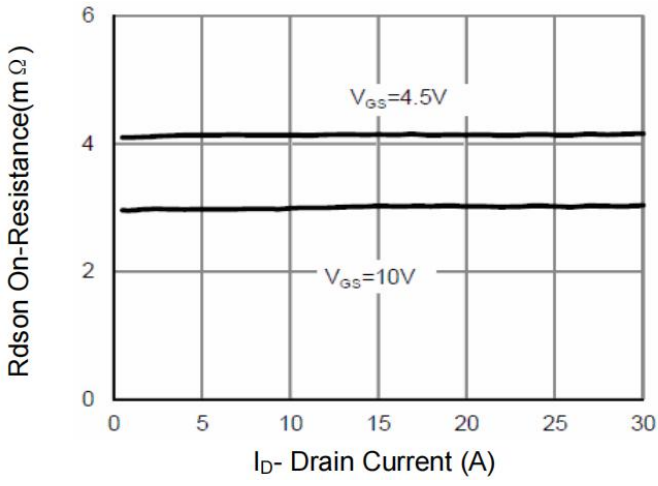
Rdson-Junction Temperature



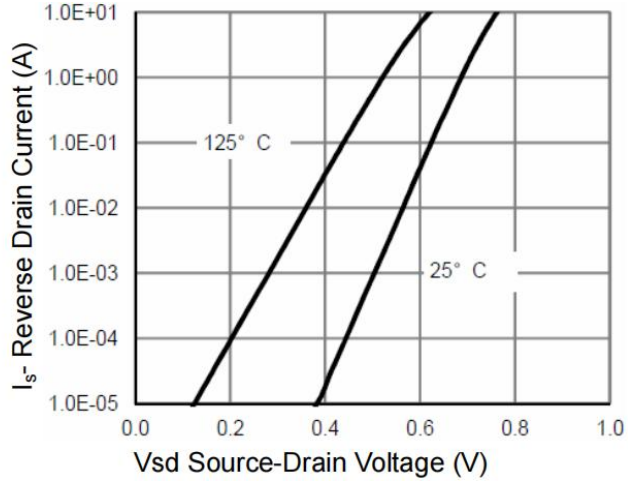
Transfer Characteristics



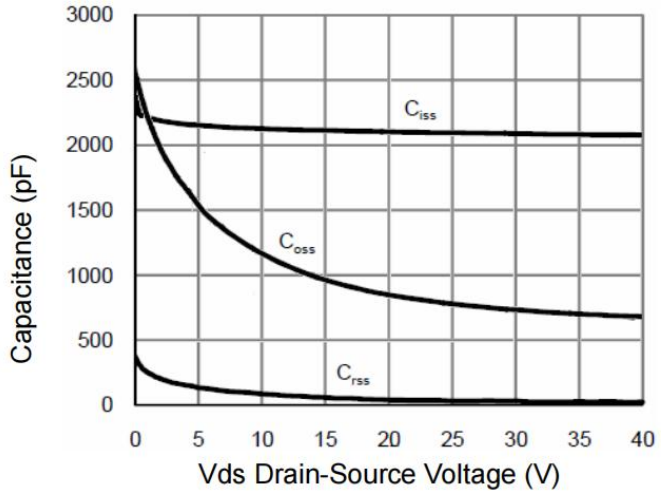
Gate Charge



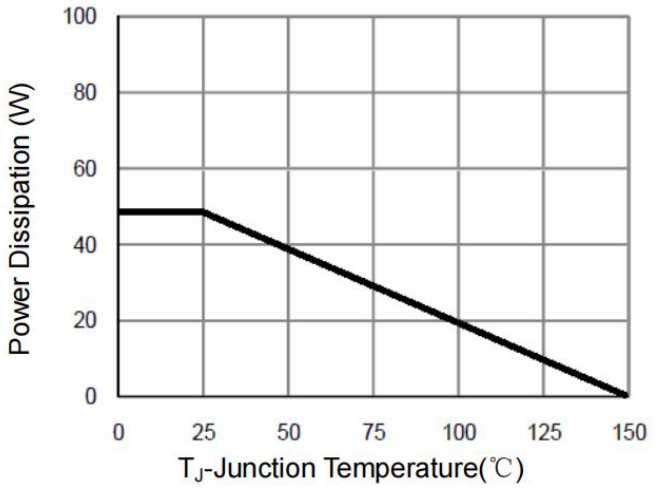
Rdson- Drain Current



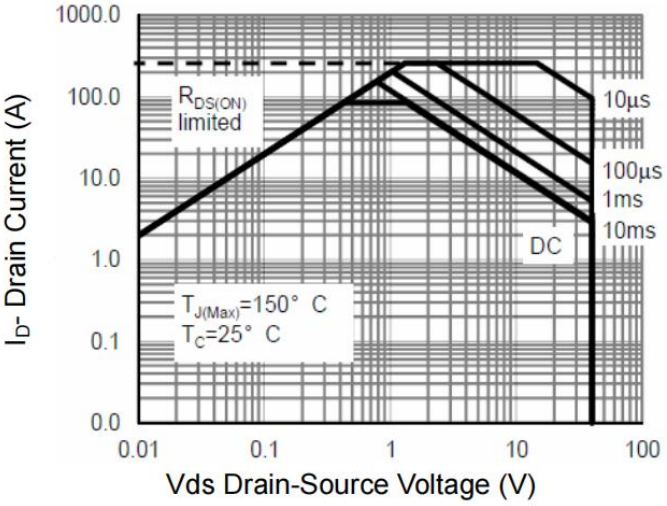
Source- Drain Diode Forward



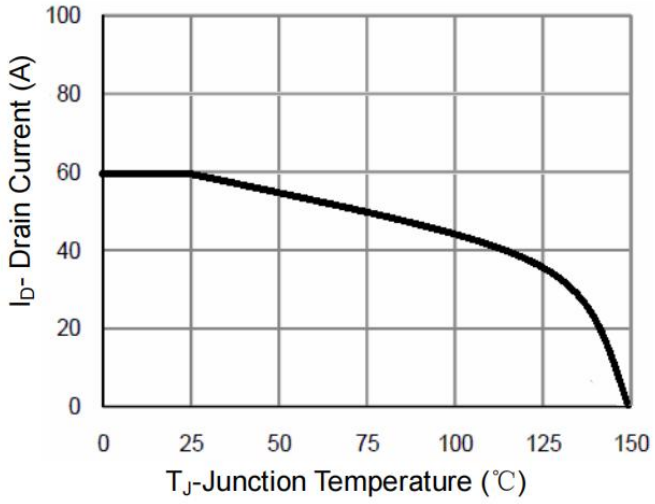
Capacitance vs Vds



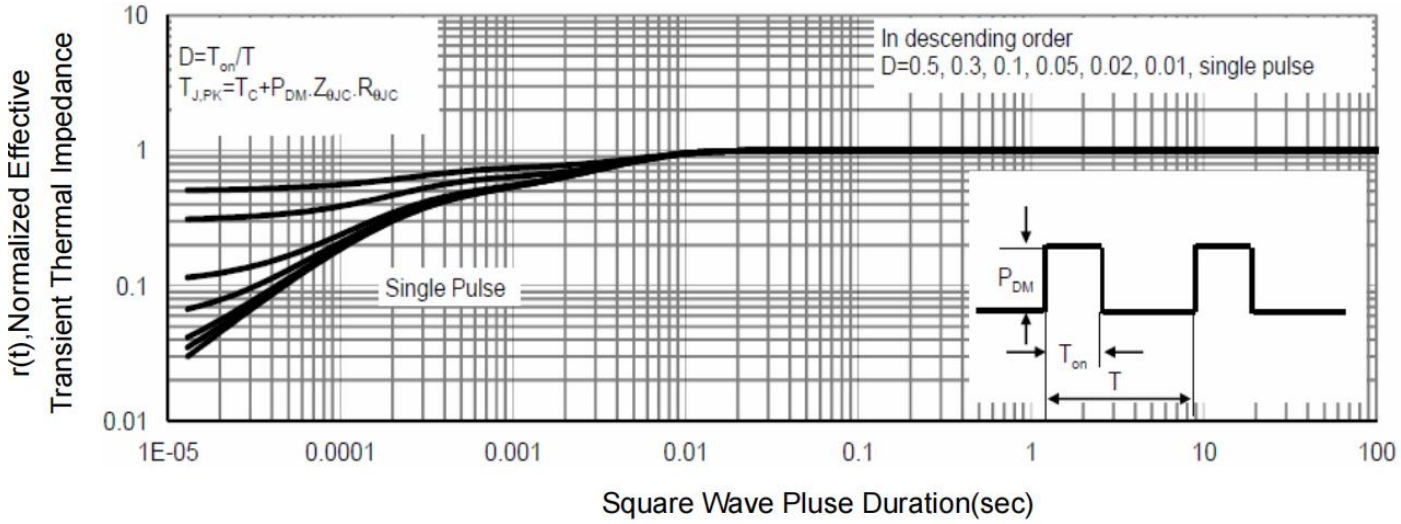
Power De-rating



Safe Operation Area

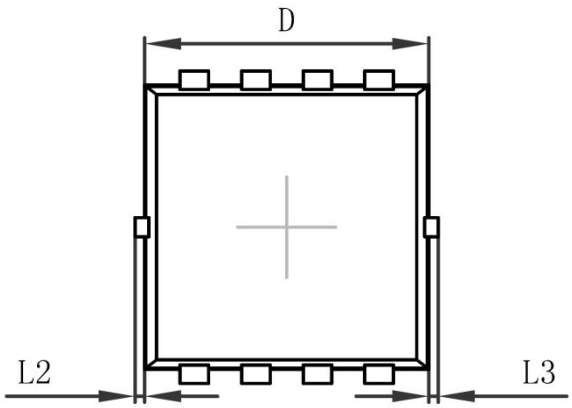


Current De-rating

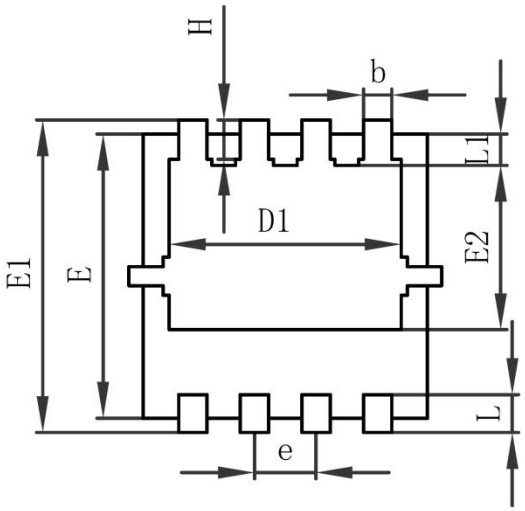


Normalized Maximum Transient Thermal Impedance

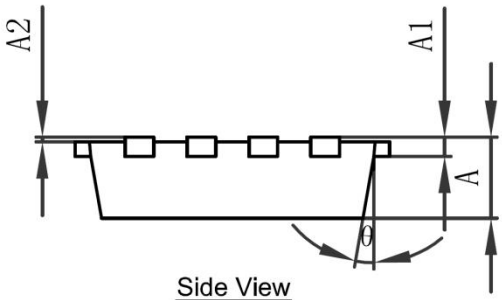
PDFNWB3.3×3.3-8L Package Information



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	2.300	2.600	0.091	0.102
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