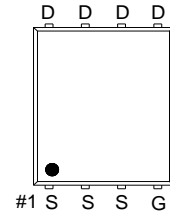
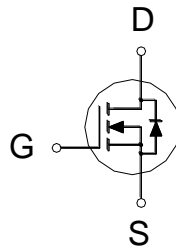




PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
30V	2.4m Ω	114A



G. GATE
D. DRAIN
S. SOURCE

ABSOLUTE MAXIMUM RATINGS ($T_A = 25\text{ }^\circ\text{C}$ Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	30	V
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current ³	$T_C = 25\text{ }^\circ\text{C}$	I_D	114	A
	$T_C = 100\text{ }^\circ\text{C}$		72	
Pulsed Drain Current ¹		I_{DM}	250	
Continuous Drain Current (Steady-State)	$T_A = 25\text{ }^\circ\text{C}$	I_D	23	
	$T_A = 70\text{ }^\circ\text{C}$		18	
Continuous Drain Current ($t \leq 10\text{s}$)	$T_A = 25\text{ }^\circ\text{C}$		32	
	$T_A = 70\text{ }^\circ\text{C}$		26	
Avalanche Current		I_{AS}	48	
Avalanche Energy	$L = 0.1\text{mH}$	E_{AS}	115	mJ
Power Dissipation	$T_C = 25\text{ }^\circ\text{C}$	P_D	59	W
	$T_C = 100\text{ }^\circ\text{C}$		23	
Power Dissipation (Steady-State)	$T_A = 25\text{ }^\circ\text{C}$	P_D	2.4	W
	$T_A = 70\text{ }^\circ\text{C}$		1.5	
Power Dissipation ($t \leq 10\text{s}$)	$T_A = 25\text{ }^\circ\text{C}$		4.8	
	$T_A = 70\text{ }^\circ\text{C}$		3	
Operating Junction & Storage Temperature Range		T_j, T_{stg}	-55 to 150	$^\circ\text{C}$

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE		SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient ²	$t \leq 10\text{s}$	$R_{\theta JA}$		26	$^\circ\text{C} / \text{W}$
Junction-to-Ambient ²	Steady-State	$R_{\theta JA}$		51	
Junction-to-Case	Steady-State	$R_{\theta JC}$		2.1	

¹Pulse width limited by maximum junction temperature.

²The value of $R_{\theta JA}$ is measured with the device mounted on 1in² FR-4 board with 2oz. Copper, in a still air environment with $T_A = 25^\circ\text{C}$.

³Package limitation current is 51A.

ELECTRICAL CHARACTERISTICS (T_J = 25 °C, Unless Otherwise Noted)

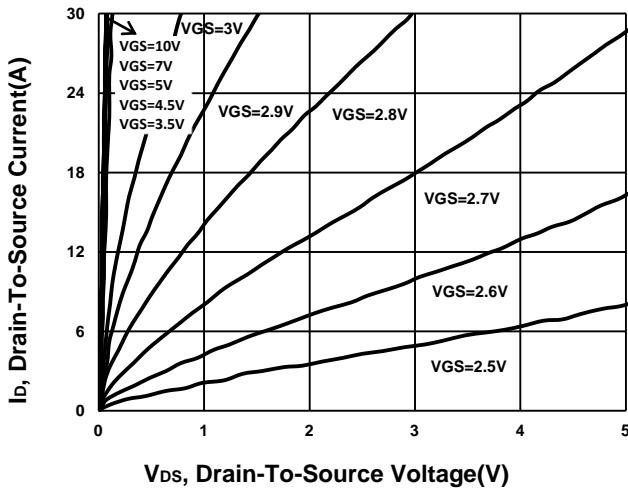
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	30			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1.3	1.75	2.3	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 24V, V _{GS} = 0V			1	μA
		V _{DS} = 20V, V _{GS} = 0V, T _J = 55 °C			10	
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 4.5V, I _D = 20A		2.2	3	mΩ
		V _{GS} = 10V, I _D = 20A		1.7	2.4	
Forward Transconductance ¹	g _{fs}	V _{DS} = 5V, I _D = 20A		62		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 15V, f = 1MHz		2809		pF
Output Capacitance	C _{oss}			490		
Reverse Transfer Capacitance	C _{rss}			324		
Gate Resistance	R _g	V _{GS} = 0V, V _{DS} = 0V, f = 1MHz		1		Ω
Total Gate Charge ²	Q _g	V _{GS} = 10V	V _{DS} = 15V, V _{GS} = 10V, I _D = 20A	57.3		nC
		V _{GS} = 4.5V		29.3		
Gate-Source Charge ²	Q _{gs}	9				
Gate-Drain Charge ²	Q _{gd}	14				
Turn-On Delay Time ²	t _{d(on)}	V _{DS} = 15V, I _D ≅ 20A, V _{GS} = 10V, R _{GEN} = 6Ω		26		nS
Rise Time ²	t _r			15		
Turn-Off Delay Time ²	t _{d(off)}			56		
Fall Time ²	t _f		23			
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T_J = 25 °C)						
Continuous Current ³	I _S				59	A
Forward Voltage ¹	V _{SD}	I _F = 20A, V _{GS} = 0V			1	V
Reverse Recovery Time	t _{rr}	I _F = 20A, di _F /dt = 100A / μS		40		nS
Reverse Recovery Charge	Q _{rr}			40		nC

¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

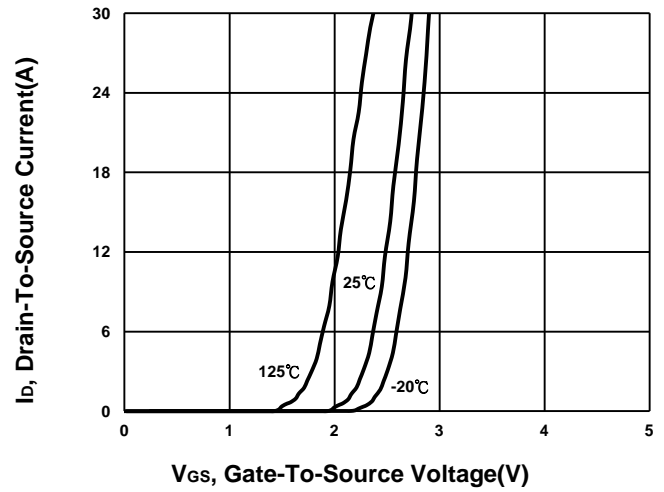
²Independent of operating temperature.

³Package limitation current is 51A.

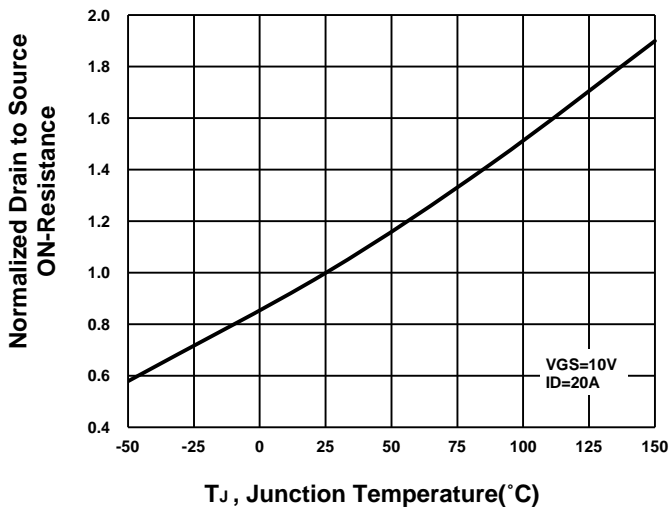
Output Characteristics



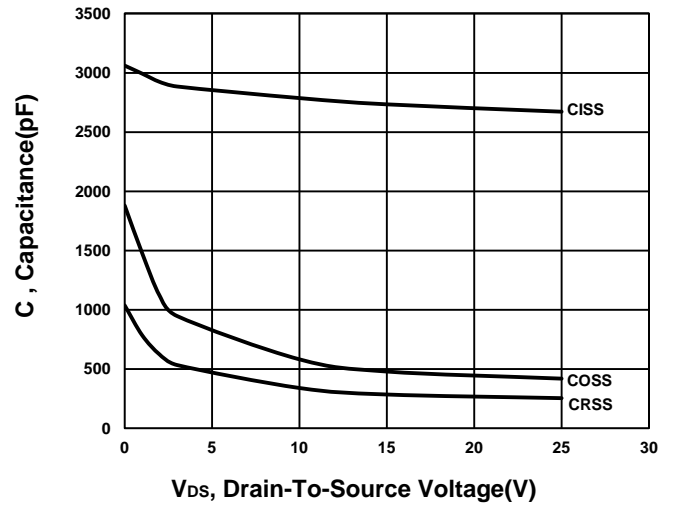
Transfer Characteristics



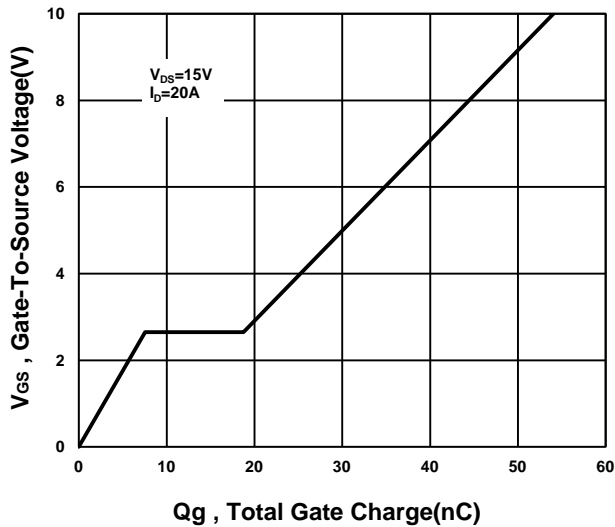
On-Resistance VS Temperature



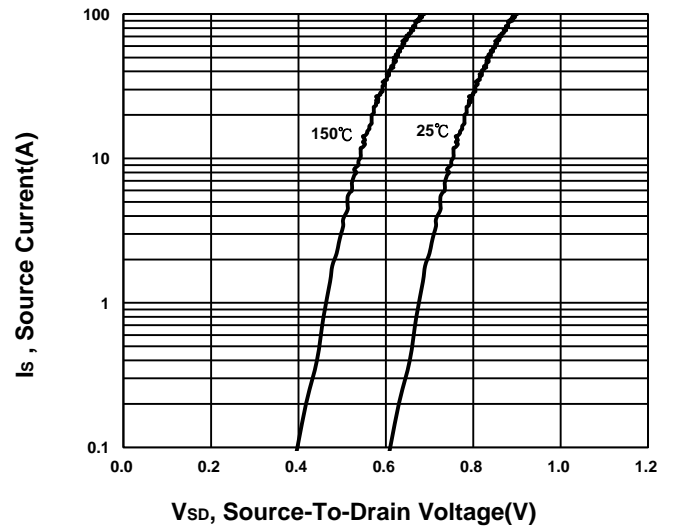
Capacitance Characteristic



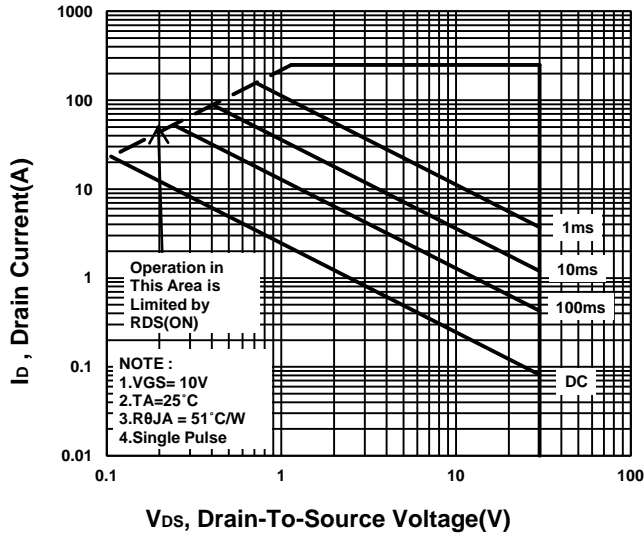
Gate charge Characteristics



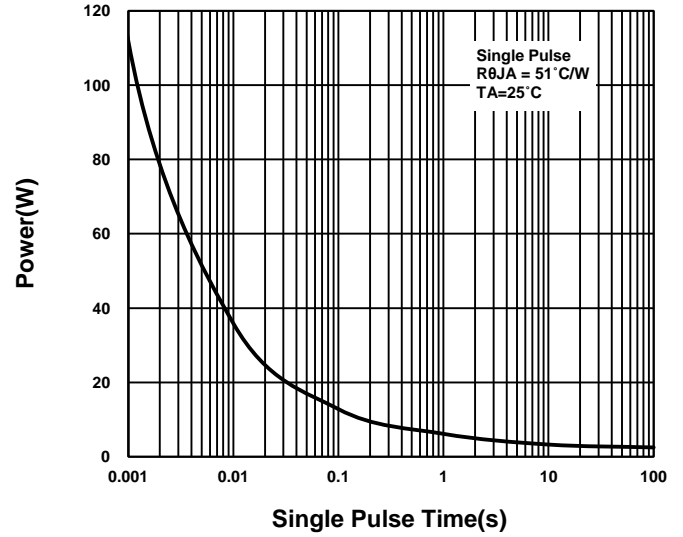
Source-Drain Diode Forward Voltage



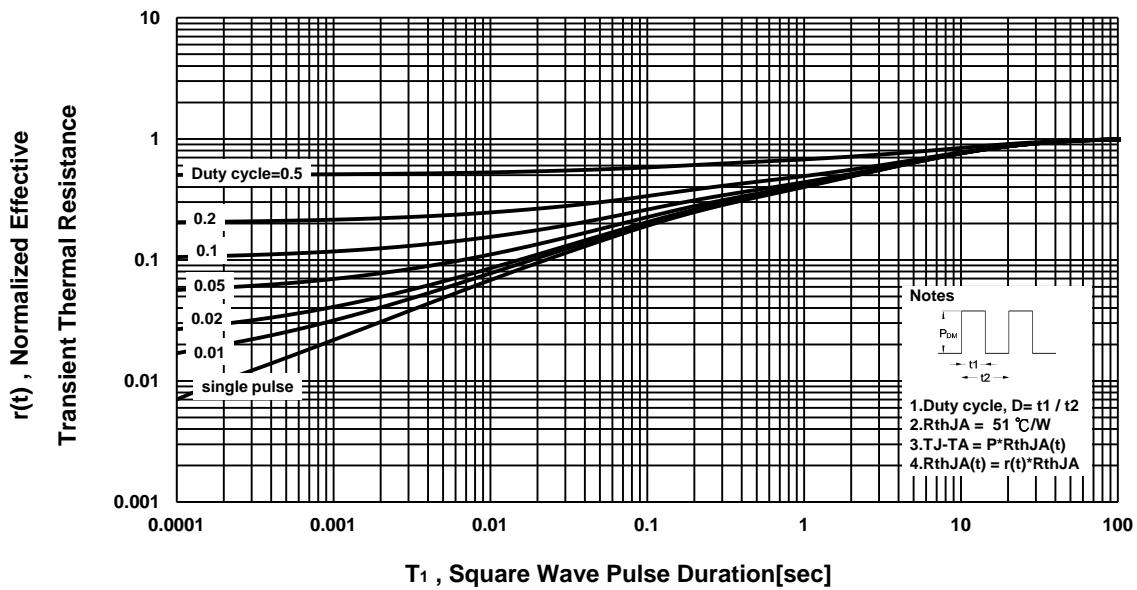
Safe Operating Area



Single Pulse Maximum Power Dissipation



Transient Thermal Response Curve



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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

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

Other Similar products are found below :

[614233C](#) [648584F](#) [MCH3443-TL-E](#) [MCH6422-TL-E](#) [FDPF9N50NZ](#) [FW216A-TL-2W](#) [FW231A-TL-E](#) [APT5010JVR](#) [NTNS3A92PZT5G](#)
[IRF100S201](#) [JANTX2N5237](#) [2SK2464-TL-E](#) [2SK3818-DL-E](#) [FCA20N60_F109](#) [FDZ595PZ](#) [STD6600NT4G](#) [FSS804-TL-E](#) [2SJ277-DL-E](#)
[2SK1691-DL-E](#) [2SK2545\(Q,T\)](#) [D2294UK](#) [405094E](#) [423220D](#) [MCH6646-TL-E](#) [TPCC8103,L1Q\(CM](#) [367-8430-0972-503](#) [VN1206L](#)
[424134F](#) [026935X](#) [051075F](#) [SBVS138LT1G](#) [614234A](#) [715780A](#) [NTNS3166NZT5G](#) [751625C](#) [873612G](#) [IRF7380TRHR](#)
[IPS70R2K0CEAKMA1](#) [RJK60S3DPP-E0#T2](#) [RJK60S5DPK-M0#T0](#) [APT5010JVFR](#) [APT12031JFLL](#) [APT12040JVR](#) [DMN3404LQ-7](#)
[NTE6400](#) [JANTX2N6796U](#) [JANTX2N6784U](#) [JANTXV2N5416U4](#) [SQM110N05-06L-GE3](#) [SIHF35N60E-GE3](#)