NIKO-SEM

N-Channel Logic Level Enhancement Mode Field Effect Transistor

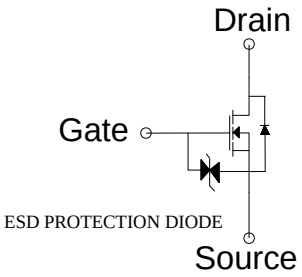
PZ2N7002M

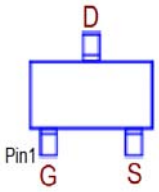
SOT-23(S)

Halogen-Free & Lead-Free

PRODUCT SUMMARY

$V_{(BR)DSS}$	$R_{DS(ON)}$	I_D
60V	2Ω	300mA





G. GATE
D. DRAIN
S. SOURCE

RoHS Compliant

ABSOLUTE MAXIMUM RATINGS (T_A = 25 °C Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNITS
Drain-Source Voltage		V_{DS}	60	V
Gate-Source Voltage		V_{GS}	±25	V
Continuous Drain Current	T_C = 25 ° C	I_D	300	mA
	T_C = 100 ° C		190	
Pulsed Drain Current[1]		I_{DM}	1	A
Power Dissipation	T_C = 25 ° C	P_D	0.35	W
	T_C = 100 ° C		0.14	
Operating Junction & Storage Temperature Range		T_j, T_{stg}	-40 to 150	° C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNITS
Junction-to-Ambient	$R_{\theta JA}$		350	° C / W

[1]Pulse width limited by maximum junction temperature.

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

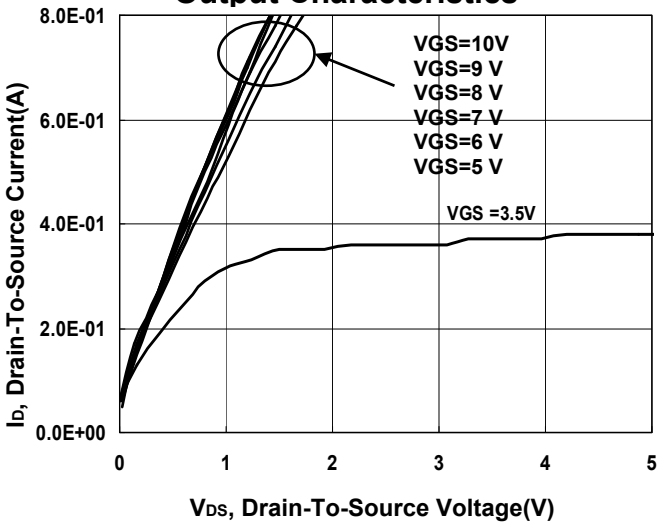
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS MIN	LIMITS TYP	LIMITS MAX	UNIT
STATIC						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D = 100μA	60			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS}, I_D = 100μA	1.0	1.8	2.5	
Gate-Body Leakage	I_{GSS}	V_{DS} = 0V, V_{GS} = ±16V			±30	μA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 48V, V_{GS} = 0V			1	μA
		V_{DS} = 40V, V_{GS} = 0V, T_J = 125 ° C			10	
On-State Drain Current[1]	$I_{D(ON)}$	V_{DS} = 10V, V_{GS} = 10V	1			A
Drain-Source On-State Resistance[1]	$R_{DS(ON)}$	V_{GS} = 3.5V, I_D = 10mA		2.1	5	Ω
		V_{GS} = 4.5V, I_D = 100mA		1.7	3	
		V_{GS} = 10V, I_D = 200mA		1.6	2	
Forward Transconductance[1]	g_{fs}	V_{DS} = 20V, I_D = 200mA		0.18		S

DYNAMIC						
Input Capacitance	C_{iss}	V_{GS} = 0V, V_{DS} = 25V, f = 1MHz		36		pF
Output Capacitance	C_{oss}			10		
Reverse Transfer Capacitance	C_{rss}			6		
Total Gate Charge[2]	Q_g	V_{DS} = 0.5$V_{(BR)DSS}$, V_{GS} = 10V, I_D = 200mA		1.6		nC
Gate-Source Charge[2]	Q_{gs}			0.2		
Gate-Drain Charge[2]	Q_{gd}			1		
Turn-On Delay Time[2]	$t_{d(on)}$	V_{DD} = 30V, I_D =200mA, R_G=10Ω V_{GS} = 10V		30		ns
Turn-Off Delay Time[2]	$t_{d(off)}$			125		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T_J = 25 ° C)						
Continuous Current	I_S	I_F =200mA, V_{GS} = 0V			300	mA
Forward Voltage[1]	V_{SD}				1.2	V

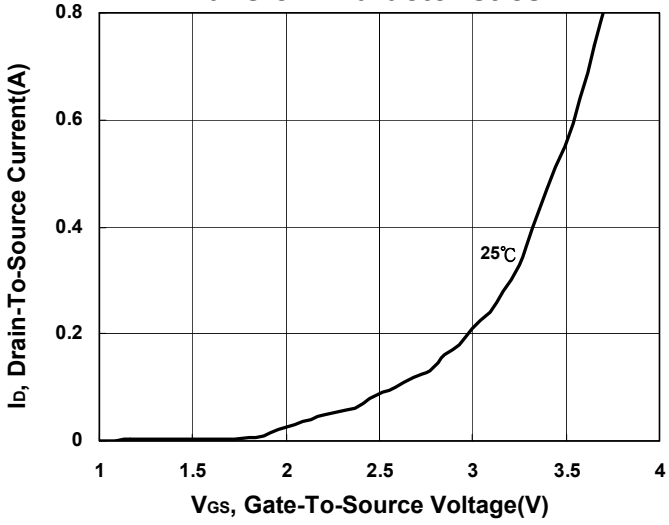
[1]Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.
[2]Independent of operating temperature.
[3]Pulse width limited by maximum junction temperature.

REMARK: ESD Protected Gate, 2KV HBM

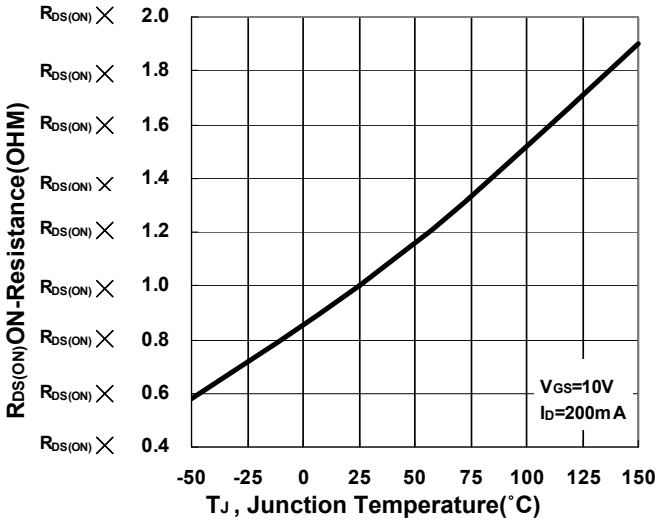
Output Characteristics



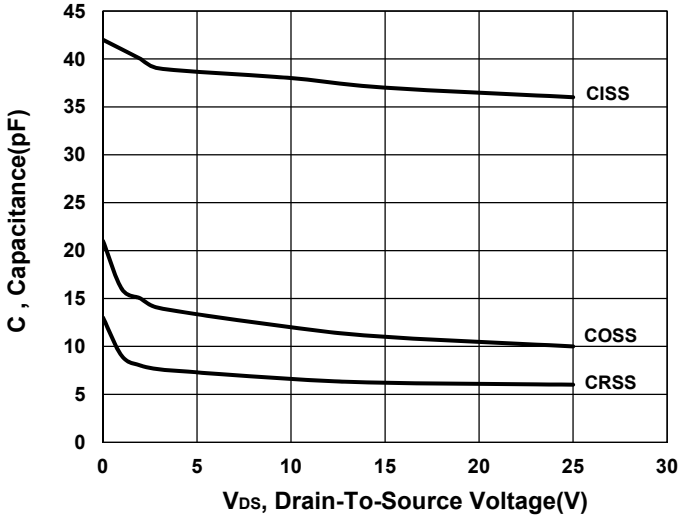
Transfer Characteristics



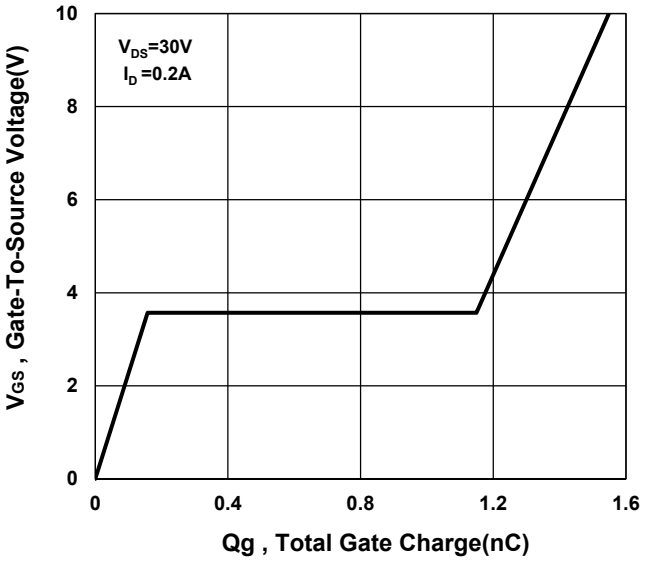
On-Resistance VS Temperature



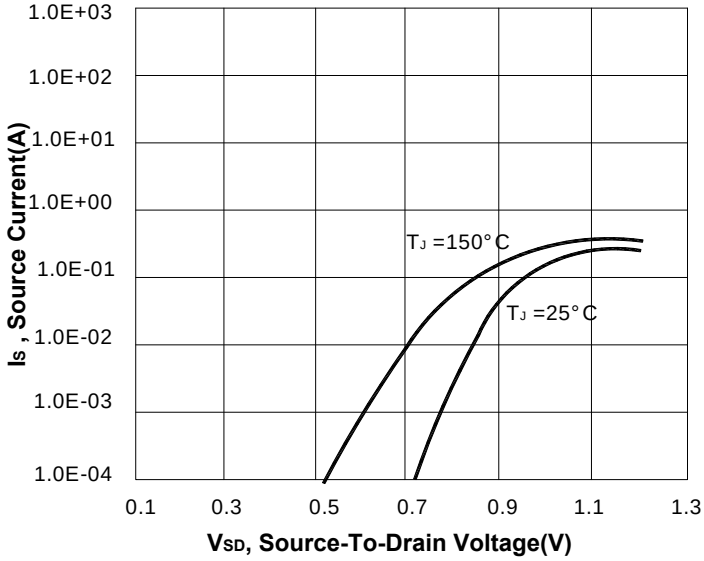
Capacitance Characteristic



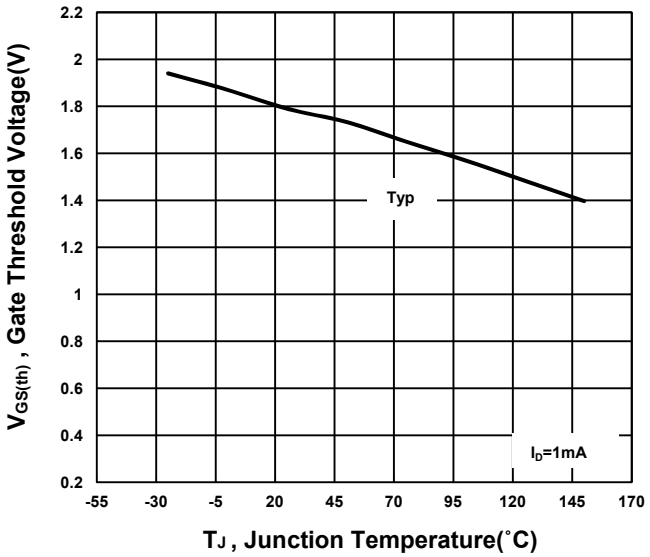
Gate charge Characteristics



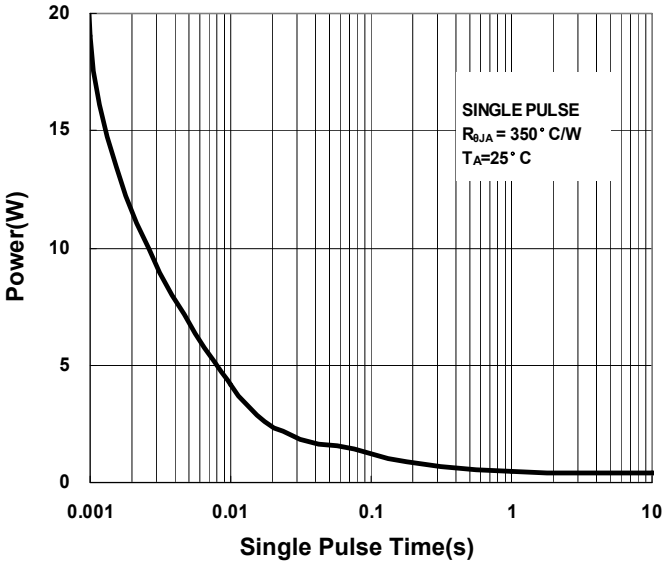
Source-Drain Diode Forward Voltage



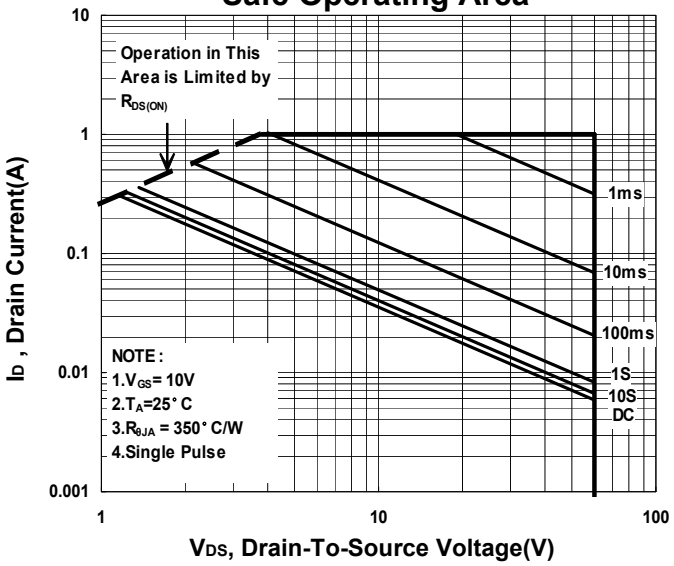
Gate Threshold Voltage VS Temperature



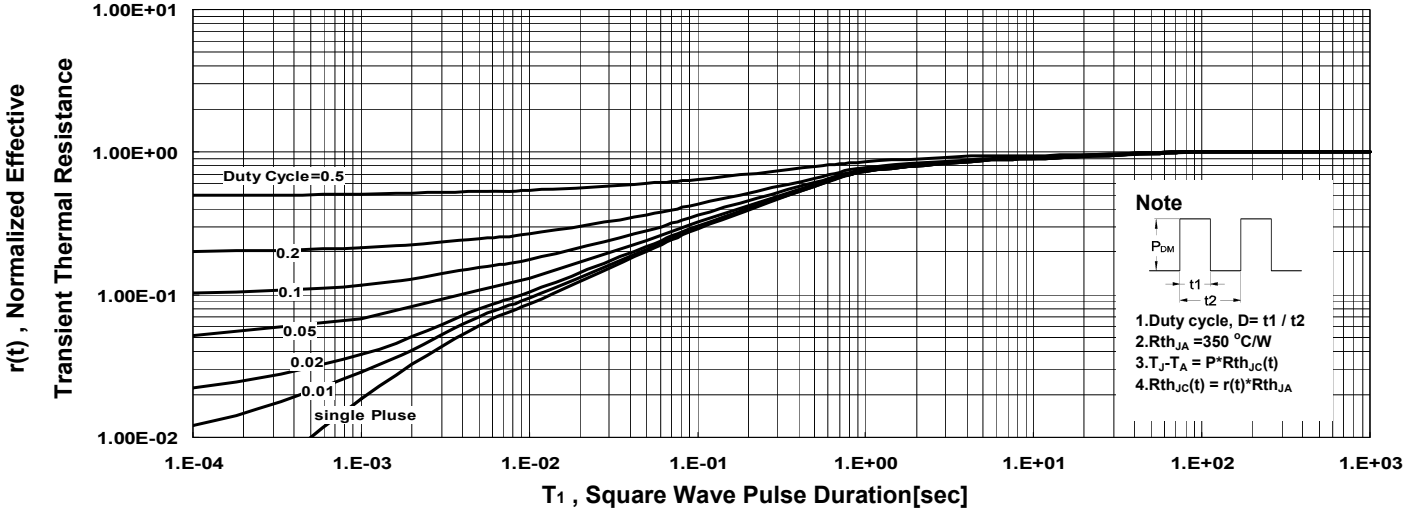
Single Pulse Maximum Power Dissipation



Safe Operating Area



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