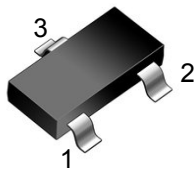
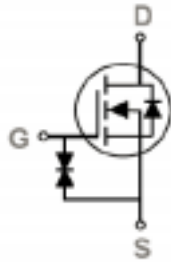



SOT-23

MARKING: KN

Features

Advanced trench process technology
 High density cell design for Ultra Low On-Resistance
 Halogen free and RoHS compliant

Mechanical Data

SOT-23 Small Outline Plastic Package
 Epoxy UL: 94V-0

Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Symbol	Parameter	Rating	Unit	
V _{DS}	Drain-Source Breakdown Voltage	30	V	
V _{GS}	Gate-Source Voltage	±20	V	
T _J	Maximum Junction Temperature	150	°C	
T _{STG}	Storage Temperature Range	-50 to 155	°C	
I _S	Diode Continuous Forward Current	T _c =25°C	0.1	A
I _{DM}	Pulse Drain Current Tested	T _c =25°C	0.5	A
I _D	Continuous Drain Current@GS=10V	T _c =25°C	0.1	A
P _D	Maximum Power Dissipation	T _c =25°C	0.2	W
ESD	Gate-Source ESD Rating (HBM, Method 3015)	2000	V	

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
BV _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250μA	30	--	--	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =30V, V _{GS} =0V	--	--	1	μA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±20V, V _{DS} =0V	--	--	±10	μA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250μA	0.8	1.1	1.5	V
R _{DS(on)}	Drain-Source On-State Resistance	V _{GS} =4V, I _D =10mA	--	--	8	Ω
		V _{GS} =2.5V, I _D =1mA	--	--	13	

Dynamic Electrical Characteristics

C _{ISS}	Input Capacitance	V _{DS} =30V, V _{GS} =0V, f=1MHz	--	22	--	pF
C _{OSS}	Output Capacitance		--	3.5	--	pF
C _{RSS}	Reverse Transfer Capacitance		--	2.9	--	pF

Switching Characteristics

Q _g	Total Gate Charge	V _{DS} =30V, I _D =0.2A, V _{GS} =4.5V	--	1.4	--	nC
Q _{gs}	Gate Source Charge		--	2.1	--	nC
Q _{gd}	Gate Drain Charge		--	0.27	--	nC
t _{d(on)}	Turn-on Delay Time	V _{DD} =30V, I _D =0.2A, V _{GS} =4.5V, R _G =10Ω	--	3.6	--	nS
t _r	Turn-on Rise Time		--	23.2	--	nS
t _{d(off)}	Turn-Off Delay Time		--	5.5	--	nS
t _f	Turn-Off Fall Time		--	23.3	--	nS

Source- Drain Diode Characteristics

V _{SD}	Forward on voltage	T _j =25°C, I _s =0.1A	--	--	1.2	V
-----------------	--------------------	--	----	----	-----	---

Ratings and Characteristic Curves

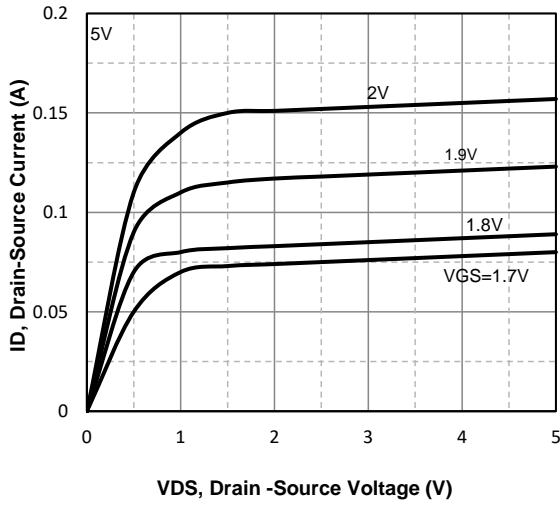


Fig1. Typical Output Characteristics

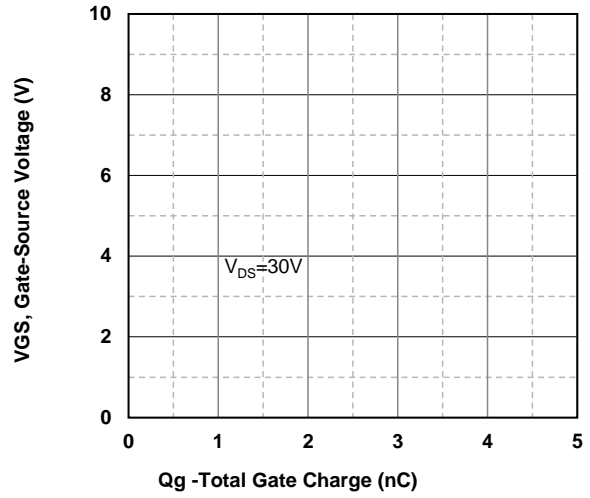


Fig2. Typical Gate Charge Vs. Gate-Source Voltage

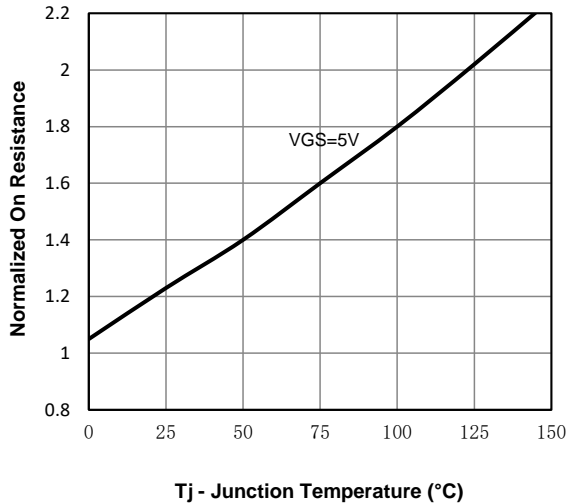


Fig3. Normalized On-Resistance Vs. Temperature

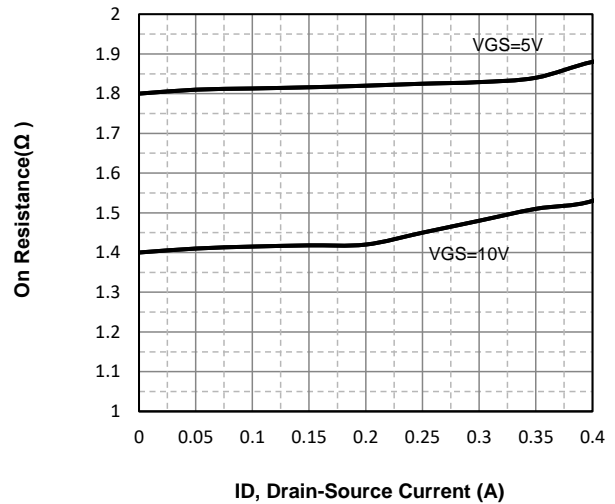


Fig4. On-Resistance Vs. Drain-Source Current

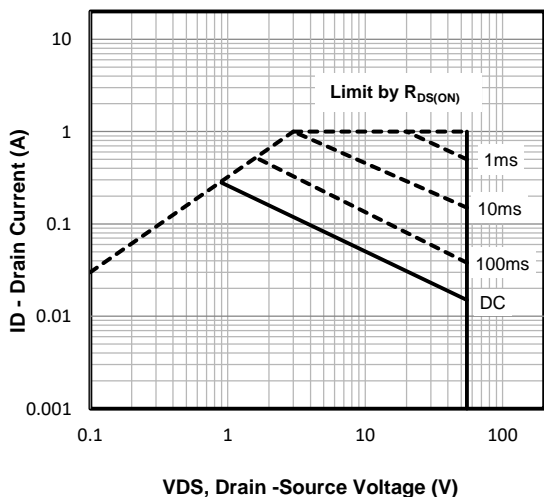


Fig5. Maximum Safe Operating Area

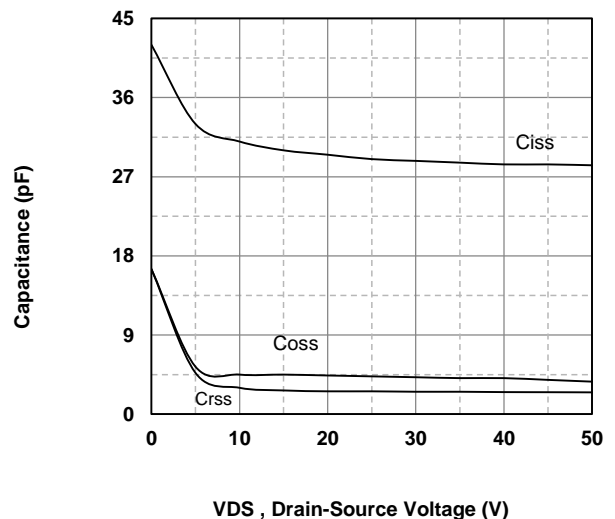
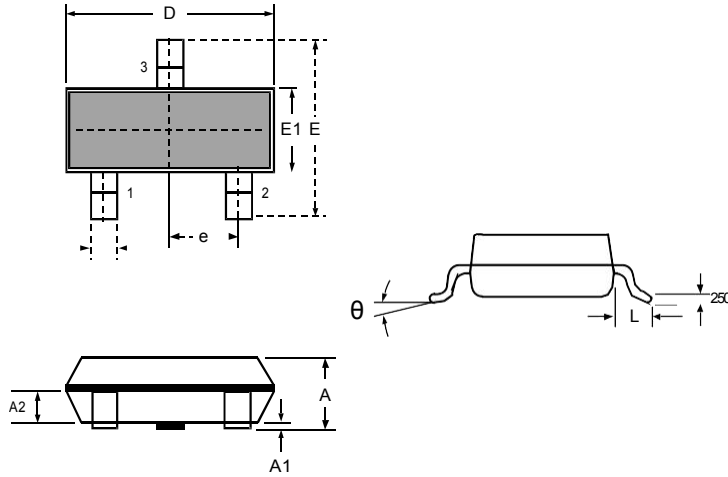


Fig6 Typical Capacitance Vs. Drain-Source

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1

Package Outline Dimensions: SOT-23



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
θ	0	8°	0	8°

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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

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

Other Similar products are found below :

[IRFD120](#) [JANTX2N5237](#) [2SK2267\(Q\)](#) [BUK455-60A/B](#) [TK100A10N1,S4X\(S](#) [MIC4420CM-TR](#) [VN1206L](#) [NDP4060](#) [SI4482DY](#)
[IRS2092STRPBF-EL](#) [IPS70R2K0CEAKMA1](#) [TK31J60W5,S1VQ\(O](#) [TK31J60W,S1VQ\(O](#) [TK16J60W,S1VQ\(O](#) [2SK2614\(TE16L1,Q\)](#)
[DMN1017UCP3-7](#) [EFC2J004NUZTDG](#) [P85W28HP2F-7071](#) [DMN1053UCP4-7](#) [NTE2384](#) [DMC2700UDMQ-7](#) [DMN2080UCB4-7](#)
[DMN61D9UWQ-13](#) [US6M2GTR](#) [DMN31D5UDJ-7](#) [DMP22D4UFO-7B](#) [IPS60R3K4CEAKMA1](#) [DMN1006UCA6-7](#) [DMN16M9UCA6-7](#)
[STF5N65M6](#) [IRF40H233XTMA1](#) [STU5N65M6](#) [DMN6022SSD-13](#) [DMN13M9UCA6-7](#) [DMTH10H4M6SPS-13](#) [IPS60R360PFD7SAKMA1](#)
[DMN2990UFB-7B](#) [SSM3K35CT,L3F](#) [IPLK60R1K0PFD7ATMA1](#) [2N7002W-G](#) [MCAC30N06Y-TP](#) [IPWS65R035CFD7AXKSA1](#)
[MCQ7328-TP](#) [SSM3J143TU,LXHF](#) [DMN12M3UCA6-7](#) [PJMF280N65E1_T0_00201](#) [PJMF380N65E1_T0_00201](#)
[PJMF280N60E1_T0_00201](#) [PJMF600N65E1_T0_00201](#) [PJMF900N65E1_T0_00201](#)