

Description

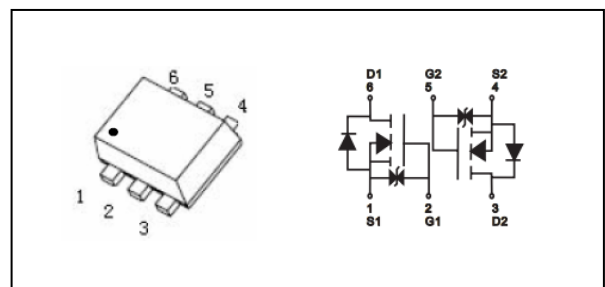
The HSSX2204 is the high cell density trenched N-ch MOSFETs, which provides excellent R_{DS(ON)} and efficiency for most of the small power switching and load switch applications. The HSSX2204 meets the RoHS and Green Product requirement with full function reliability approved.

- Fast Switching Speed
- Super Low Gate Charge
- High-Side Switching
- Low Threshold
- ESD Protected up to 2KV

Product Summary

V _{DS}	20	V
R _{DS(ON),Max}	500	mΩ
I _D	0.6	A

SOT-563 Pin Configuration



Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V _{DS}	Drain-Source Voltage	20	V
V _{GS}	Gate-Source Voltage	±12	V
I _D @T _A =25°C	Continuous Drain Current, V _{GS} @ 4.5V ¹	0.8	A
I _{DM}	Pulsed Drain Current ²	3.2	A
P _D @T _A =25°C	Total Power Dissipation ³	0.15	W
T _{STG}	Storage Temperature Range	-55 to 150	°C
T _J	Operating Junction Temperature Range	-55 to 150	°C

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
R _{θJA}	Thermal Resistance Junction-ambient ¹	---	800	°C/W



Electrical Characteristics (T_J=25 °C, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250uA	20	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance ²	V _{GS} =4.5V, I _D =600mA	---	300	500	mΩ
		V _{GS} =2.5V, I _D =400mA	---	600	800	
V _{GS(th)}	Gate Threshold Voltage	V _{GS} =V _{DS} , I _D =250uA	0.5	0.7	1.0	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =20V, V _{GS} =0V, T _J =25°C	---	---	1	uA
		V _{DS} =20V, V _{GS} =0V, T _J =55°C	---	---	5	
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±8V, V _{DS} =0V	---	---	±10	uA
Q _g	Total Gate Charge (4.5V)	V _{DS} =6V, V _{GS} =4.5V, I _D =0.3A	---	3.6	---	nC
Q _{gs}	Gate-Source Charge		---	2.1	---	
Q _{gd}	Gate-Drain Charge		---	1.5	---	
T _{d(on)}	Turn-On Delay Time	V _{DD} =6V, V _{GS} =4.5V, R _G =6Ω I _D =0.3A	---	5.8	---	ns
T _r	Rise Time		---	15	---	
T _{d(off)}	Turn-Off Delay Time		---	21	---	
T _f	Fall Time		---	7.1	---	
C _{iss}	Input Capacitance	V _{DS} =6V, V _{GS} =0V, f=1MHz	---	42	---	pF
C _{oss}	Output Capacitance		---	25	---	
C _{riss}	Reverse Transfer Capacitance		---	12	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I _S	Continuous Source Current ^{1,4}	V _G =V _D =0V, Force Current	---	---	0.8	A
V _{SD}	Diode Forward Voltage ²	V _{GS} =0V, I _S =0.3A, T _J =25°C	---	---	1.2	V

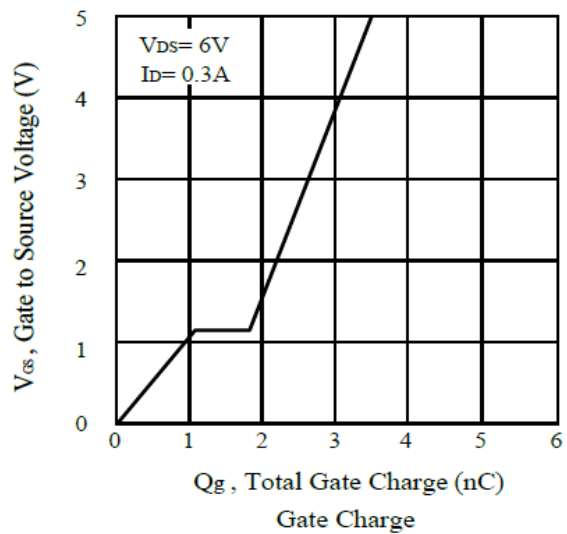
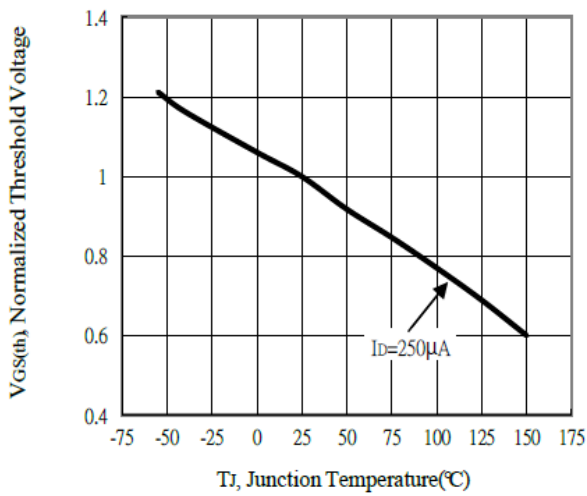
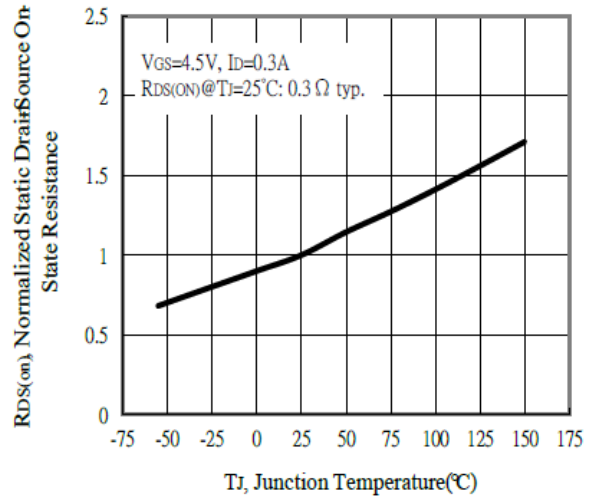
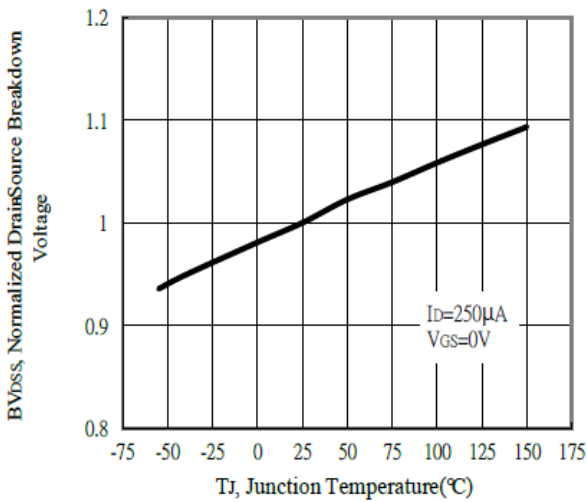
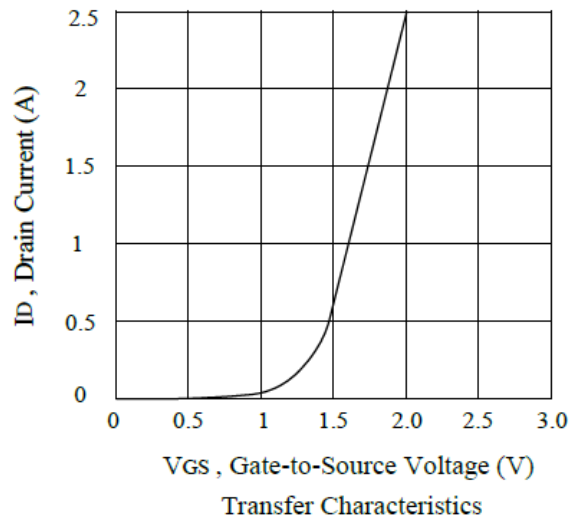
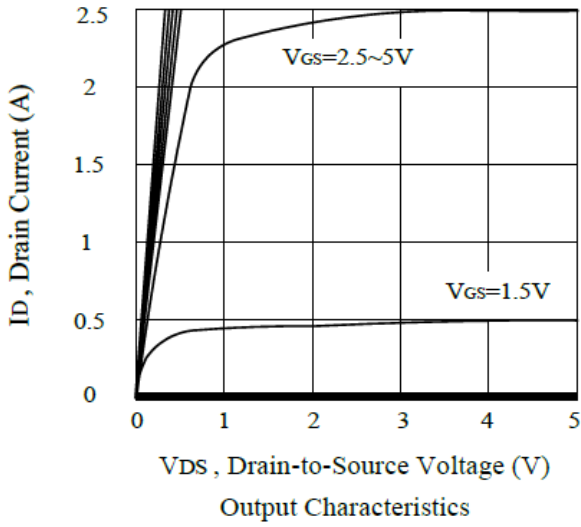
Note :

- 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 power dissipation is limited by 150°C junction temperature
- 4.The data is theoretically the same as I_D and I_{DM}, in real applications, should be limited by total power dissipation.



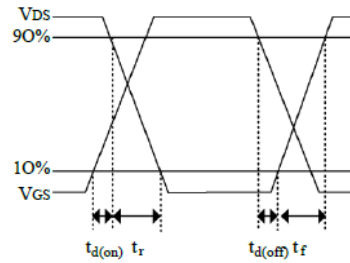
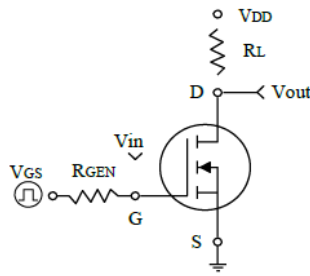
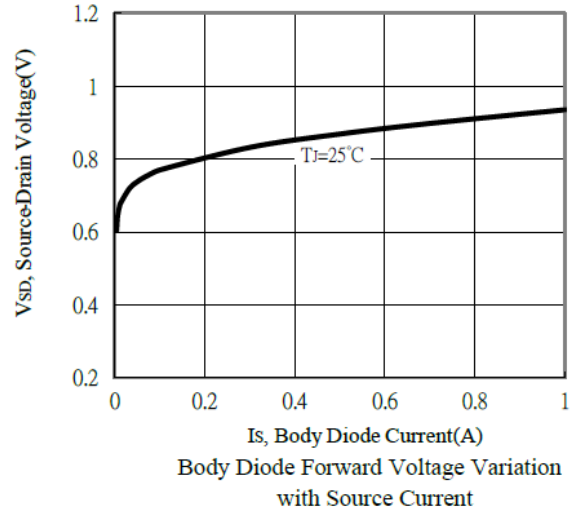
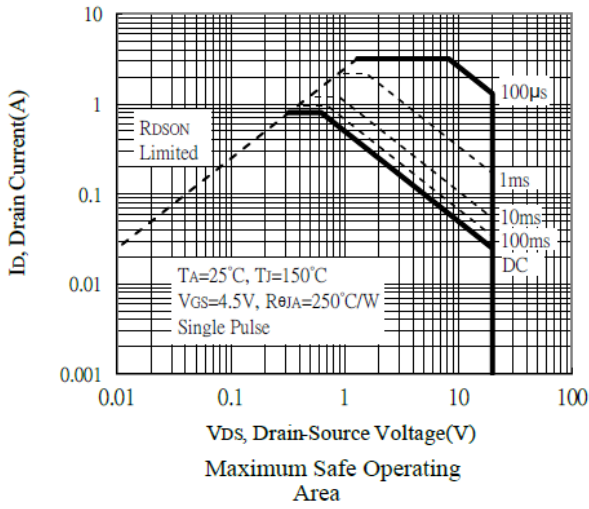
Dual N 20V Fast Switching MOSFETs

Typical Characteristics

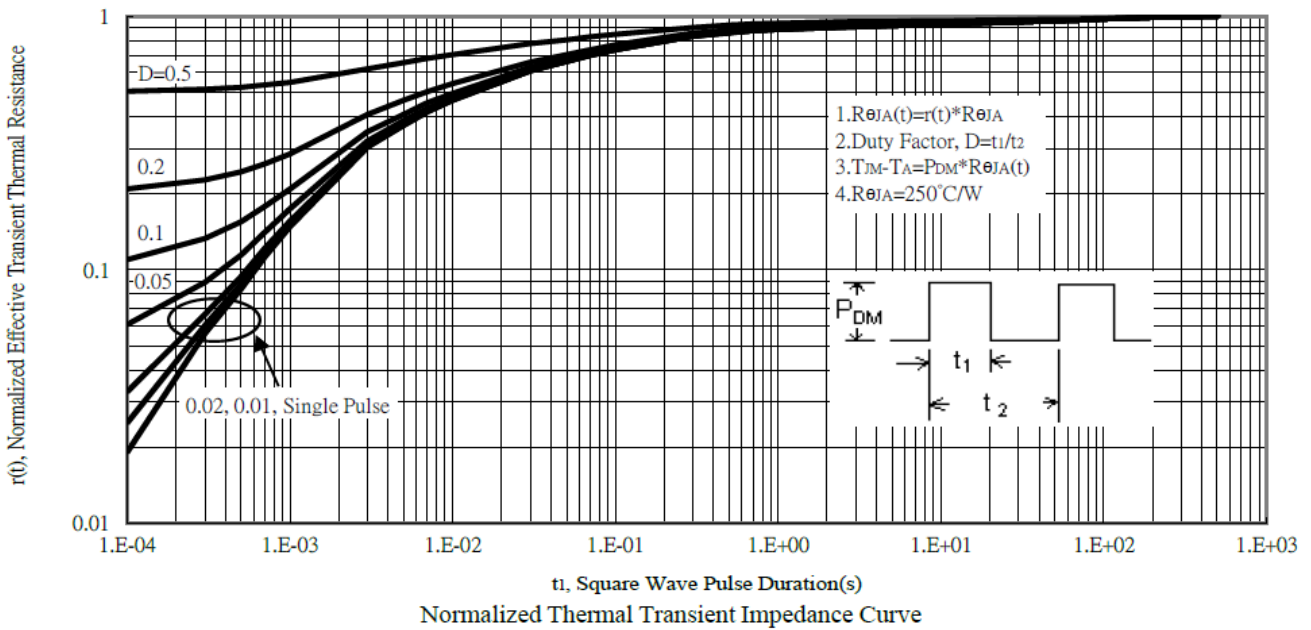




Dual N 20V Fast Switching MOSFETs



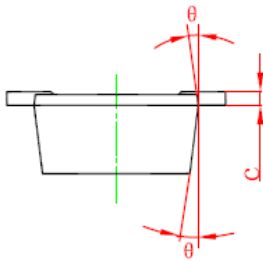
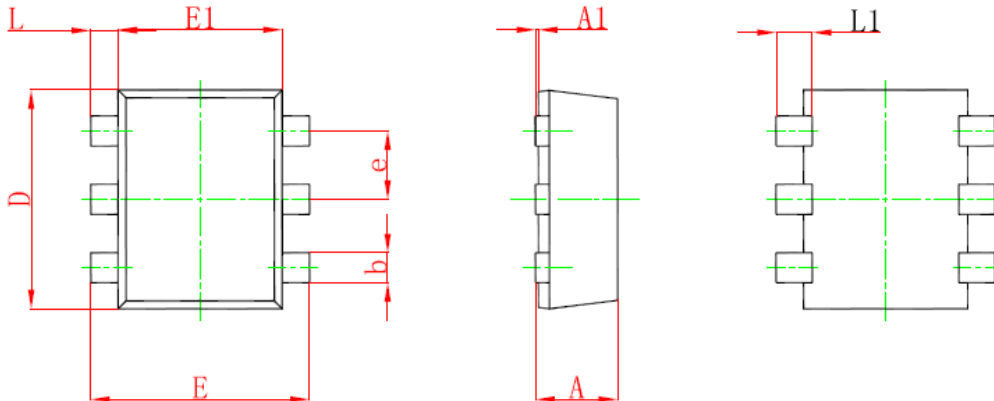
Switching Test Circuit and Switching Waveforms





Ordering Information

Part Number	Package code	Packaging
HSSX2204	SOT-563	3000/Tape&Reel



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
θ	7° ⁰ REF.		7° ⁰ REF.	

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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

Click to view products by [HUASHUO](#) 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](#)