

P-channel 4V (G-S) MOSFET

■ FEATURES

- Low On Resistance
- Ultra High Speed Switching
- -4V Driving
- EU RoHS Compliant, Pb Free

■ APPLICATIONS

- Switching

■ PRODUCT NAME

PRODUCT NAME	PACKAGE	ORDER UNIT
XP202A0003MR-G	SOT-23	3,000/Reel

* The "-G" suffix denotes Halogen and Antimony free as well as being fully EU RoHS compliant.

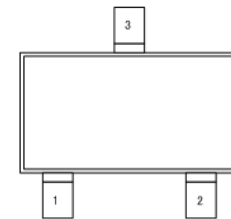
■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNITS
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current (DC)	I_D	-3	A
Drain Current(Pulse) ^{(*)1}	I_{DP}	-12	A
Channel Power Dissipation ^{(*)2}	P_d	1	W
Channel Temperature	T_{ch}	+150	°C
Storage Temperature	T_{stg}	- 55 ~ +150	°C

(*)1 $PW \leq 10 \mu s$, duty cycle $\leq 1\%$

(*)2 Ceramic Board (900mm² × 0.8mm) Mounting

■ PIN CONFIGURATION



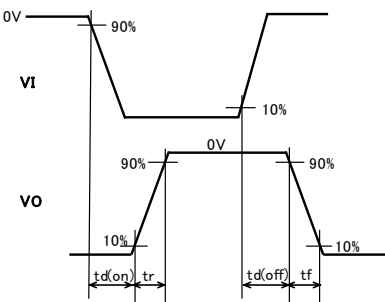
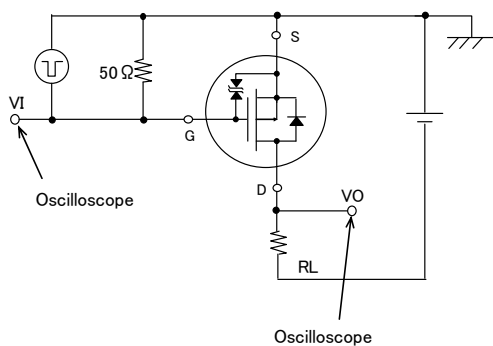
1. Gate
2. Source
3. Drain

SOT-23(TOP VIEW)

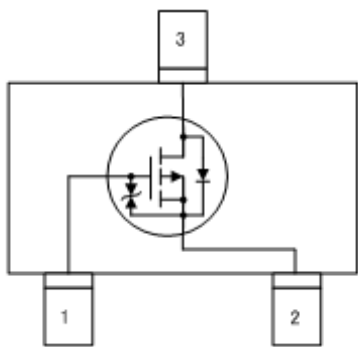
■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN.	TYP.	MAX.	
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = -1mA, V_{GS} = 0V$	-30	-	-	V
Drain-Source Cut-Off Current	I_{DSS}	$V_{DS} = -30V, V_{GS} = 0V$	-	-	-1	μA
Gate-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16V, V_{DS} = 0V$	-	-	± 10	μA
Gate-Source Cut-Off Voltage	$V_{GS(off)}$	$V_{DS} = -10V, I_D = -1mA$	-1.2	-	-2.6	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = -10V, I_D = -3A$	-	8.0	-	S
Drain-Source ON Resistance	$R_{DS(ON)1}$	$I_D = -1.5A, V_{GS} = -10V$	-	45	-	m Ω
	$R_{DS(ON)2}$	$I_D = -1.0A, V_{GS} = -4.5V$	-	67	-	m Ω
	$R_{DS(ON)3}$	$I_D = -1.0A, V_{GS} = -4V$	-	76	-	m Ω
Input Capacity	C_{iss}	$V_{DS} = -10V, f = 1MHz$	-	435	-	pF
Output Capacity	C_{oss}	$V_{DS} = -10V, f = 1MHz$	-	110	-	pF
Feedback capacity	C_{rss}	$V_{DS} = -10V, f = 1MHz$	-	85	-	pF
Turn on Delay time	$t_{d(on)}$	$I_D = -1A$	-	6	-	ns
Rise Time	t_r	$I_D = -1A$	-	12	-	ns
Turn off Delay Time	$t_{d(off)}$	$I_D = -1A$	-	28	-	ns
Fall Time	t_f	$I_D = -1A$	-	10	-	ns
All Gate Charge Amount	Q_g	$V_{DS} = -15V, V_{GS} = -10V, I_D = -3A$	-	10	-	nC
Gate Source Charge Amount	Q_{gs}	$V_{DS} = -15V, V_{GS} = -10V, I_D = -3A$	-	1.2	-	nC
Gate Drain Charge Amount	Q_{gd}	$V_{DS} = -15V, V_{GS} = -10V, I_D = -3A$	-	2.2	-	nC
Diode Forward Voltage	V_{SD}	$I_S = -3A, V_{GS} = 0V$	-	-0.8	-1.2	V

SWITCHING-TIME TEST CIRCUIT

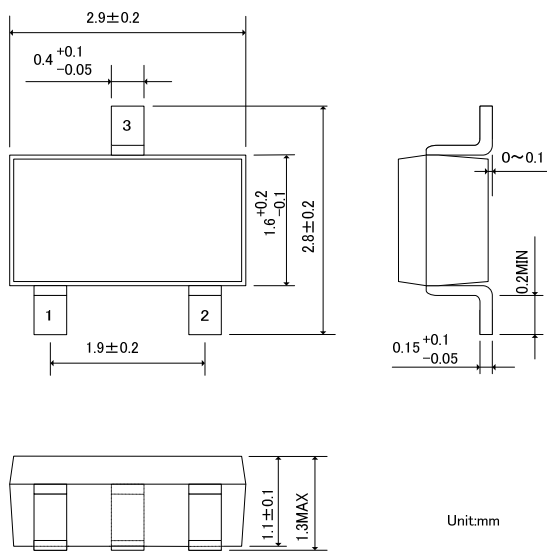


EQUIVALENT CIRCUIT

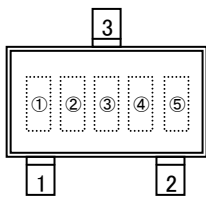


PACKAGING INFORMATION

SOT-23



MARKING RULE



① represents product series

MARK	PRODUCT SERIES
6	XP202*****-G

② ③ represents product group and number

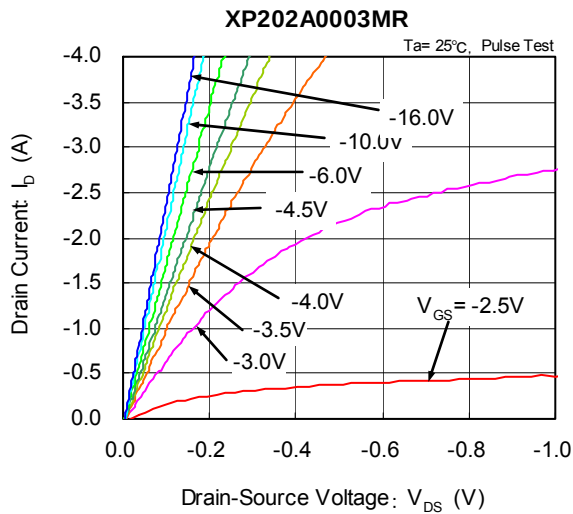
MARK		PRODUCT GROUP	PRODUCT NUMBER	PRODUCT SERIES
②	③			
A	D	00	03	XP202A0003**-G

④, ⑤ represents production lot number

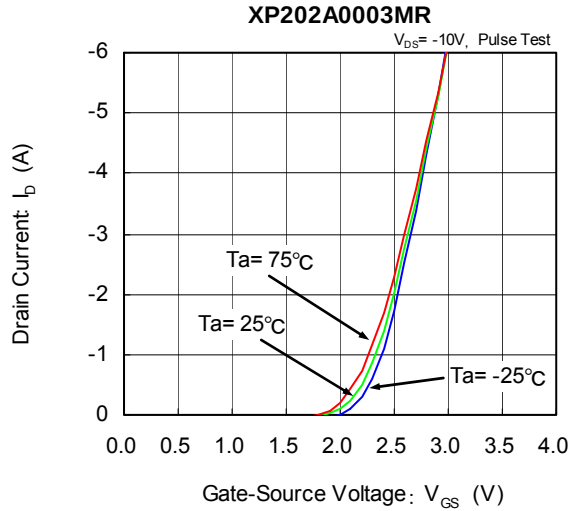
01 to 09, 0A to 0Z, 11 to 9Z, A1 to A9, AA to Z9, ZA to ZZ repeated (G, I, J, O, Q, W excluded)

TYPICAL PERFORMANCE CHARACTERISTICS

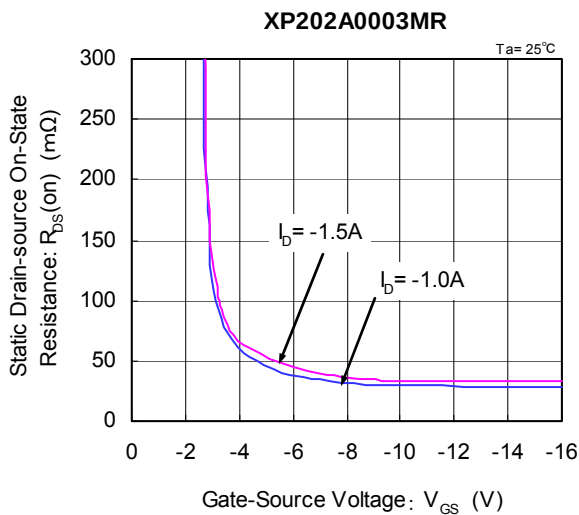
(1) Drain Current vs. Drain-Source Voltage



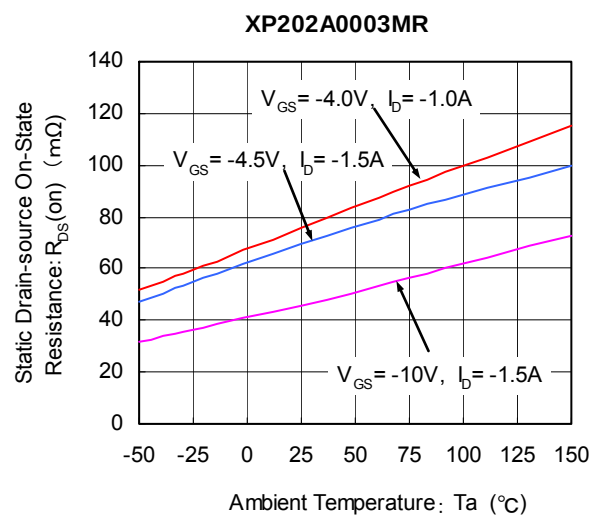
(2) Drain Current vs. Drain-Source Voltage



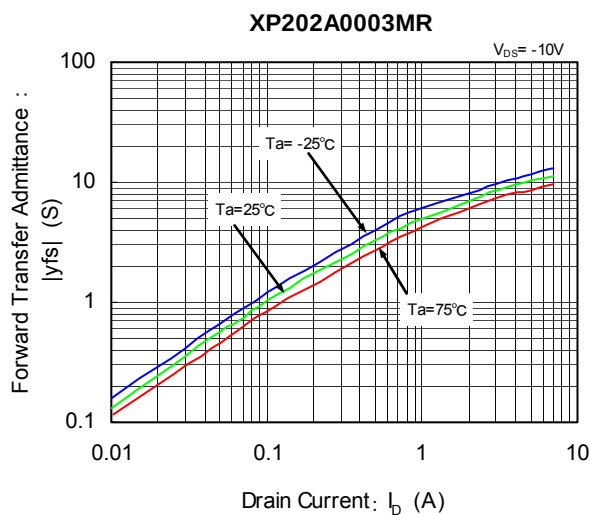
(3) Drain-Source On-State Resistance vs. Gate-Source Voltage



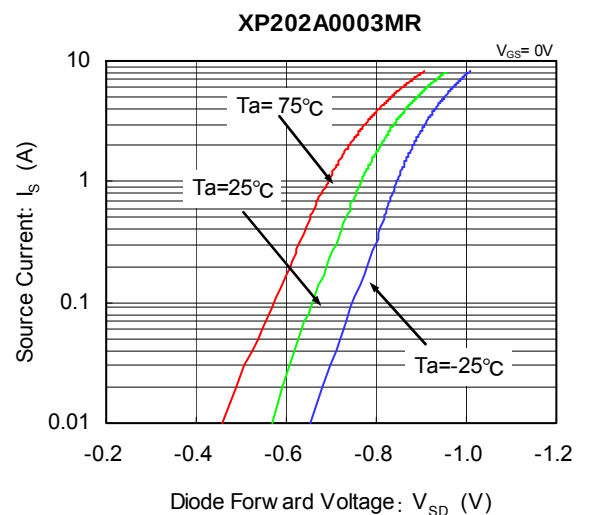
(4) Drain-Source On-State Resistance vs. Ambient Temperature



(5) Forward Transfer Admittance vs. Drain Current

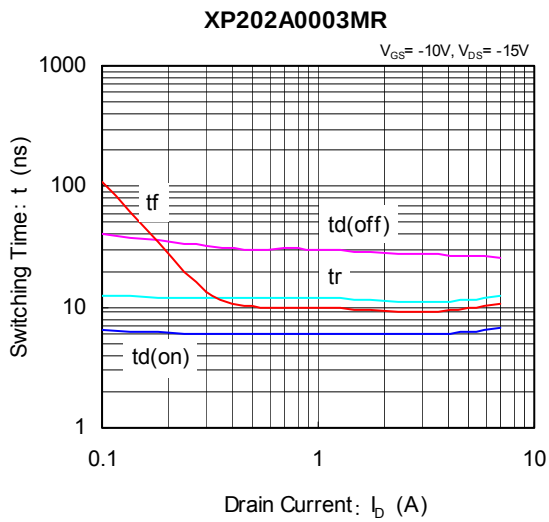


(6) Source Current vs. Diode Forward Voltage

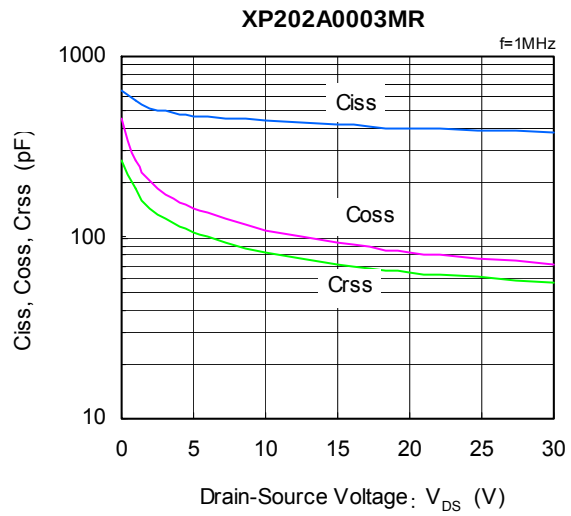


TYPICAL PERFORMANCE CHARACTERISTICS

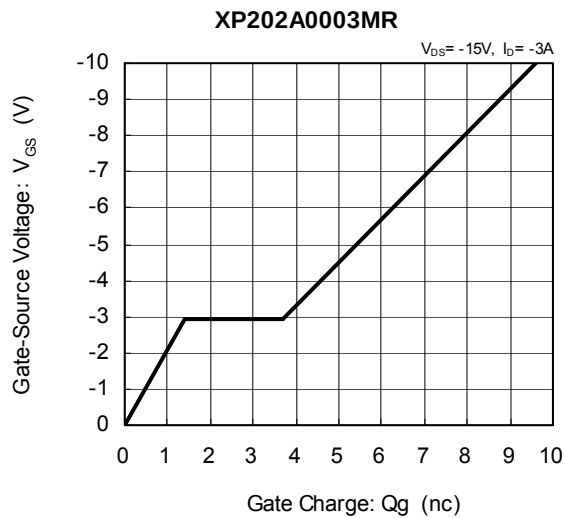
(7) Switching Time vs. Drain Current



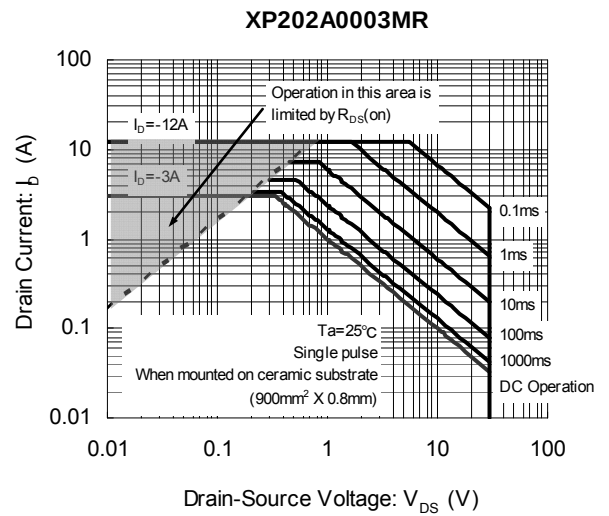
(8) C_{iss} , C_{oss} , C_{rss} vs. Drain-Source Voltage



(9) Gate-Source Voltage vs. Gate Charge



(10) Area of Safe Operation



1. The products and product specifications contained herein are subject to change without notice to improve performance characteristics. Consult us, or our representatives before use, to confirm that the information in this datasheet is up to date.
2. We assume no responsibility for any infringement of patents, patent rights, or other rights arising from the use of any information and circuitry in this datasheet.
3. Please ensure suitable shipping controls (including fail-safe designs and aging protection) are in force for equipment employing products listed in this datasheet.
4. The products in this datasheet are not developed, designed, or approved for use with such equipment whose failure or malfunction can be reasonably expected to directly endanger the life of, or cause significant injury to, the user.
(e.g. Atomic energy; aerospace; transport; combustion and associated safety equipment thereof.)
5. Please use the products listed in this datasheet within the specified ranges.
Should you wish to use the products under conditions exceeding the specifications, please consult us or our representatives.
6. We assume no responsibility for damage or loss due to abnormal use.
7. All rights reserved. No part of this datasheet may be copied or reproduced without the prior permission of TOREX SEMICONDUCTOR LTD.

TOREX SEMICONDUCTOR LTD.

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9