XP202A0003PR-G

TOREX

ETR1129-003

P-channel 4V (G-S) MOSFET

■FEATURES

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

■APPLICATION

● Switching

■PRODUCT NAME

PRODUCT NAME	PACKAGE	ORDER UNIT
XP202A0003PR-G	SOT-89	1,000/Reel

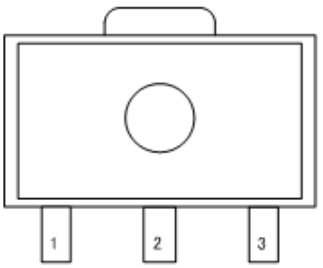
*The “-G” suffix indicates that the products are Halogen and Antimony free as well as being fully RoHS compliant.
*The high-melting solder paste (lead-containing) is used as attachment.

■ABSOLUTE MAXIMUM RATINGS

PARMETER	SYMBOL	RATINGS	UNITS
Drain-Source Voltage	V_{DSS}	-30	V
Gate-Source Voltage	V_{GSS}	±20	V
Drain Current (DC)	I_D	-5	A
Drain Current(Pulse)(*1)	I_{DP}	-20	A
Channel Power Dissipation (*2)	Pd	1.5	W
Channel Temperature	Tch	+150	℃
Storage Temperature	Tstg	- 55 ~ +150	℃

(*1)PW≦10μs,duty cycle≦1%
(*2)Ceramic Board (250mm^2×0.8mm) Mounting

■PIN CONFIGURATION



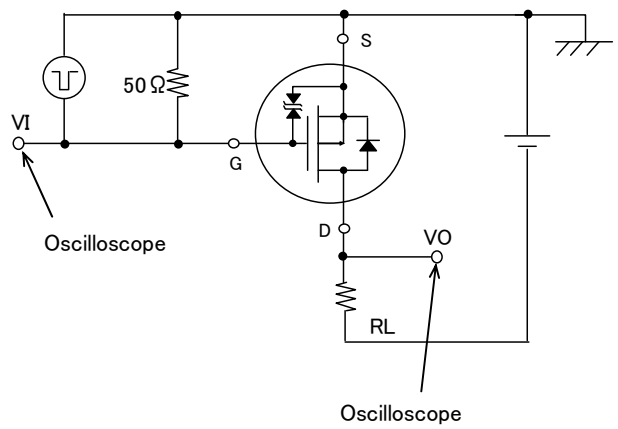
1.Gate
2.Drain
3.Source

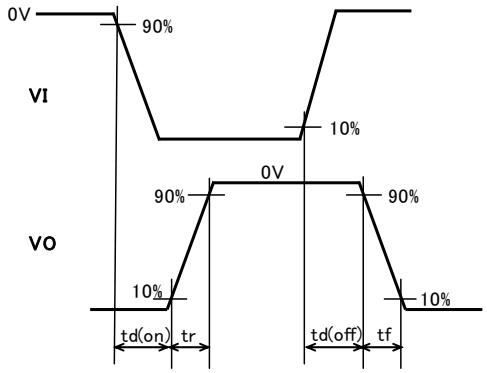
SOT-89(TOP VIEW)

■ ELECTRICAL CHARACTERISTICS

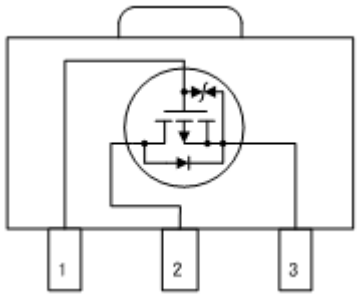
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN.	TYP.	MAX.	
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=-1mA, V_{GS}=0V	-30	-	-	V
Drain-Source Cut-Off Current	I_{DSS}	V_{DS}=-30V, V_{GS}=0V	-	-	-1	μA
Gate-Source Leakage Current	I_{GSS}	V_{GS}=±16V,V_{DS}=0V	-	-	±10	μA
Gate-Source Cut-Off Voltage	$V_{GS(off)}$	V_{DS}=-10V,I_D=-1mA	-1.2	-	-2.6	V
Forward Transfer Admittance	|yfs|	V_{DS}=-10V,I_D=-3A	2.8	8.0	-	S
Drain-Source ON Resistance	$R_{DS(ON)}1$	I_D=-3A,V_{GS}=-10V	-	47	59	mΩ
	$R_{DS(ON)}2$	I_D=-1.5A,V_{GS}=-4.5V	-	70	100	mΩ
	$R_{DS(ON)}3$	I_D=-1.5A,V_{GS}=-4V	-	80	113	mΩ
Input Capacity	Ciss	V_{DS}=-10V,f=1MHz	-	450	-	pF
Output Capacity	Coss	V_{DS}=-10V,f=1MHz	-	110	-	pF
Feedback capacity	Crss	V_{DS}=-10V,f=1MHz	-	80	-	pF
Turn on Delay time	td(on)		-	7	-	ns
Rise Time	tr		-	8	-	ns
Turn off Delay Time	td(off)		-	31	-	ns
Fall Time	tf		-	6	-	ns
All Gate Charge Amount	Qg		-	10	-	nC
Gate Source Charge Amount	Qgs		-	1.5	-	nC
Gate Drain Charge Amount	Qgd		-	2.5	-	nC
Diode Forward Voltage	V_{SD}	I_S=-5A, V_{GS}=0V	-	-0.9	-1.2	V

■SWITCHING-TIME TEST CIRCUIT



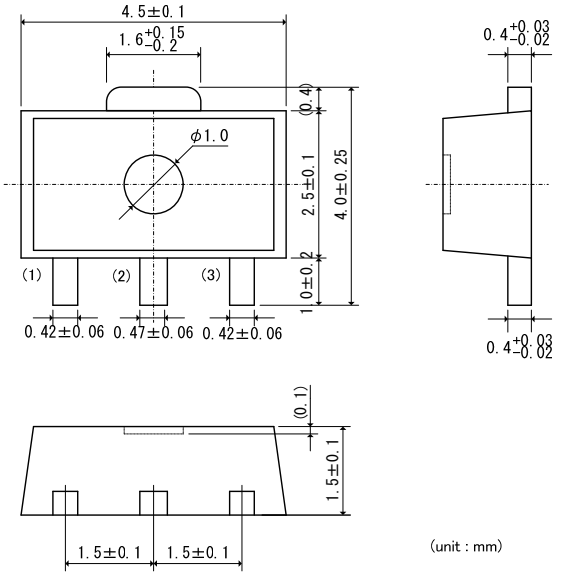


■EQUIVALENT CIRCUIT

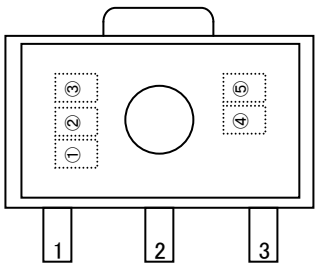


■PACKAGING INFORMATION

●SOT-89



■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

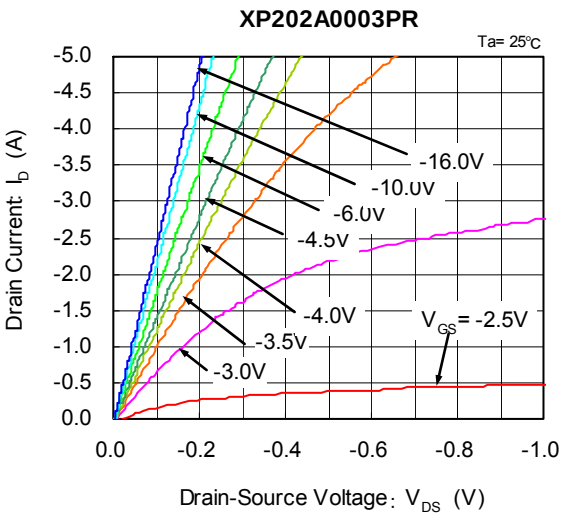
④, ⑤ represents production lot number

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

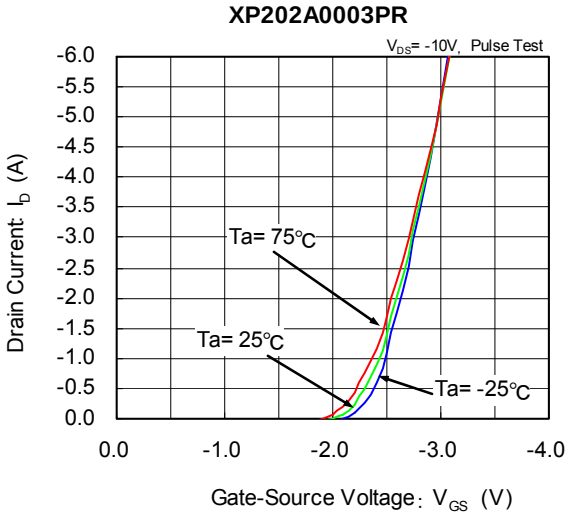
*No character inversion used

■TYPICAL PERFORMANCE CHARACTERISTICS

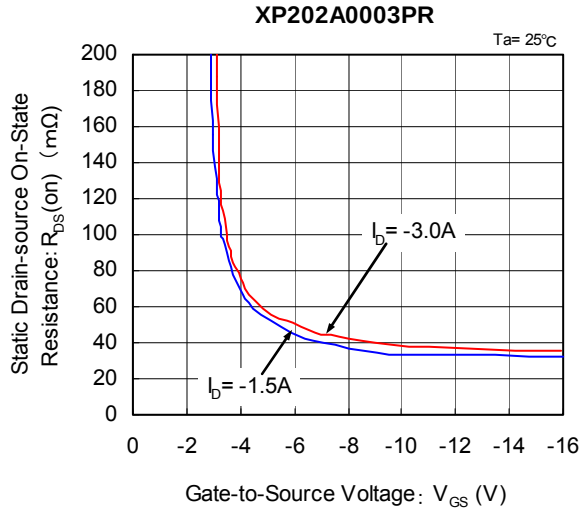
(1) Drain Current vs. Drain-Source Voltage



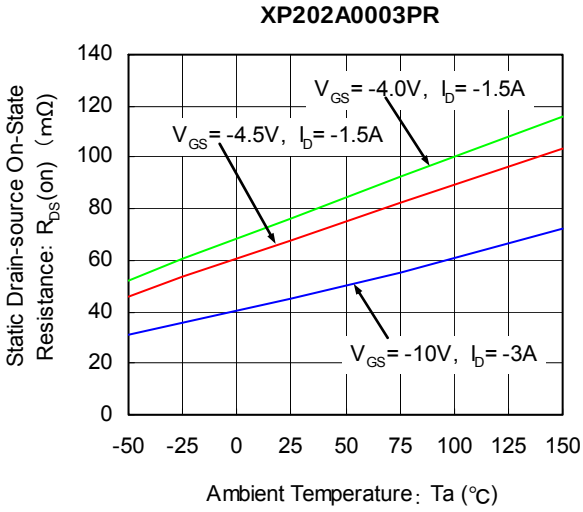
(2) Drain Current vs. Drain-Source Voltage



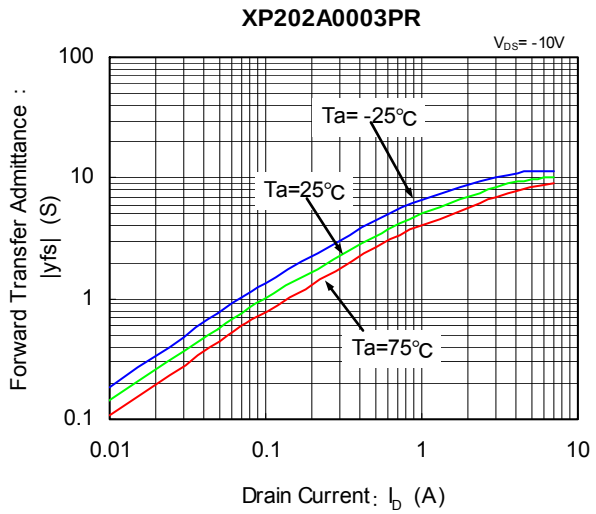
(3) Drain-Source On-State Resistance vs. Gate-Source Voltage



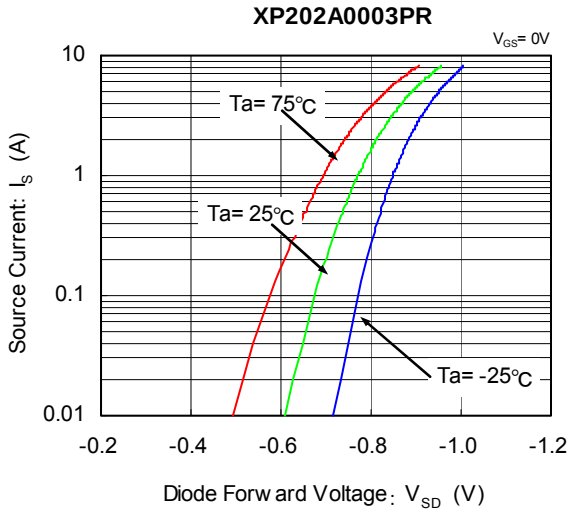
(4) Drain-Source On-State Resistance vs. Ambient Temperature



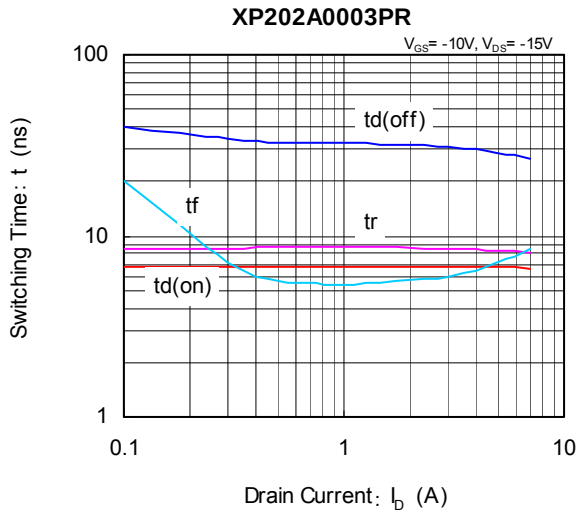
(5) Forward Transfer Admittance vs. Drain Current



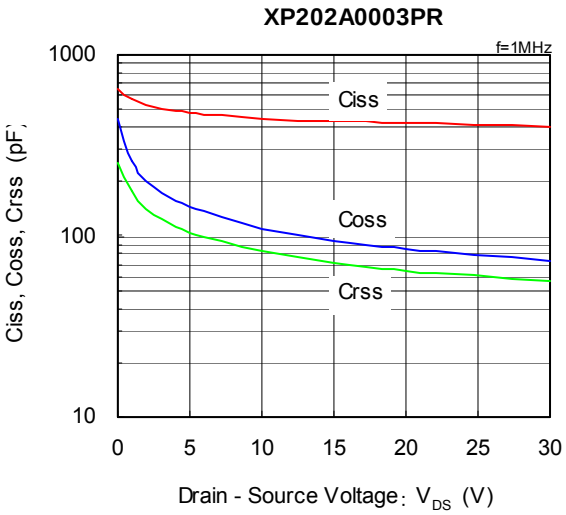
(6) Source Current vs. Diode Forward Voltage



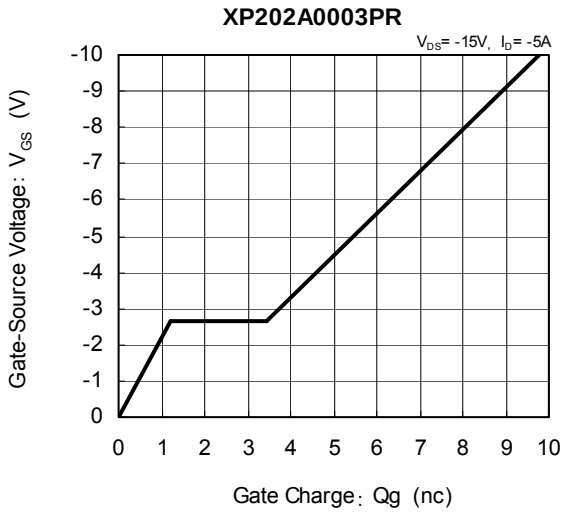
(7) Switching Time vs. Drain Current



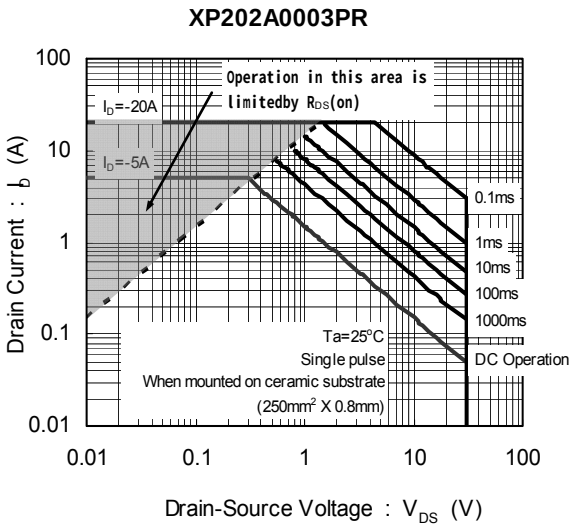
(8) Ciss, Coss, Crss vs. Drain-Source Voltage



(9) Gate-Source Voltage vs. Gate Charge



(10) Area of Safe Operation



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