XP162A11C0PR-G

TOREX

ETR1125_003

Power MOSFET

■GENERAL DESCRIPTION

The XP162A11C0PR-G is a P-channel Power MOSFET with low on-state resistance and ultra high-speed switching characteristics. Because high-speed switching is possible, the IC can be efficiently set thereby saving energy.
A gate protect diode is built-in to prevent static damage.
The small SOT-89 package makes high density mounting possible.

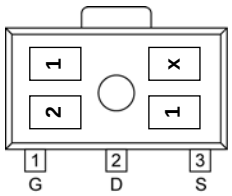
■APPLICATIONS

- ●Notebook PCs
- ●Cellular and portable phones
- ●On-board power supplies
- ●Li-ion battery systems

■FEATURES

Low On-State Resistance : Rds(on) = 0.15Ω @ Vgs = -10V
: Rds(on) = 0.28Ω @ Vgs = -4.5V
Ultra High-Speed Switching
Driving Voltage : -4.5V
Gate Protect Diode Built-in
P-Channel Power MOSFET
DMOS Structure
Small Package : SOT-89
Environmentally Friendly : EU RoHS Compliant, Pb Free

■PIN CONFIGURATION/ MARKING



G : Gate
S : Source
D : Drain

SOT-89
(TOP VIEW)

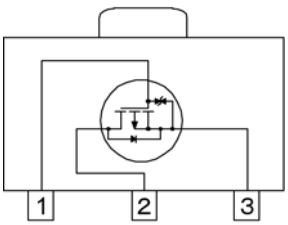
* x represents production lot number.

■PRODUCT NAME

PRODUCTS	PACKAGE	ORDER UNIT
XP162A11C0PR	SOT-89	1,000/Reel
XP162A11C0PR-G(*)	SOT-89	1,000/Reel

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

■EQUIVALENT CIRCUIT



P-channel MOSFET
(1 device built-in)

■ABSOLUTE MAXIMUM RATINGS

Ta = 25℃

PARAMETER	SYMBOL	RATINGS	UNITS
Drain-Source Voltage	Vdss	-30	V
Gate-Source Voltage	Vgss	±20	V
Drain Current (DC)	Id	-2.5	A
Drain Current (Pulse)	Idp	-10	A
Reverse Drain Current	Idr	-2.5	A
Channel Power Dissipation *	Pd	2	W
Channel Temperature	Tch	150	℃
Storage Temperature	Tstg	-55~150	℃

* When implemented on a ceramic PCB

■ELECTRICAL CHARACTERISTICS

DC Characteristics

Ta = 25℃

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Drain Cut-Off Current	Idss	Vds= -30V, Vgs= 0V	-	-	-10	μA
Gate-Source Leak Current	Igss	Vgs= ±20V, Vds= 0V	-	-	±10	μA
Gate-Source Cut-Off Voltage	Vgs(off)	Id= -1mA, Vds= -10V	-1.0	-	-2.5	V
Drain-Source On-State Resistance*1	Rds(on)	Id= -1.5A, Vgs= -10V	-	0.11	0.15	Ω
		Id= -1.5A, Vgs= -4.5V	-	0.20	0.28	Ω
Forward Transfer Admittance*1	| Yfs |	Id= -1.5A, Vds= -10V	-	2.5	-	S
Body Drain Diode Forward Voltage	Vf	If= -2.5A, Vgs= 0V	-	-0.85	-1.1	V

*1 Effective during pulse test.

Dynamic Characteristics

Ta = 25℃

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Input Capacitance	Ciss	Vds= -10V, Vgs=0V f= 1MHz	-	280	-	pF
Output Capacitance	Coss		-	200	-	pF
Feedback Capacitance	Crss		-	90	-	pF

Switching Characteristics

Ta = 25℃

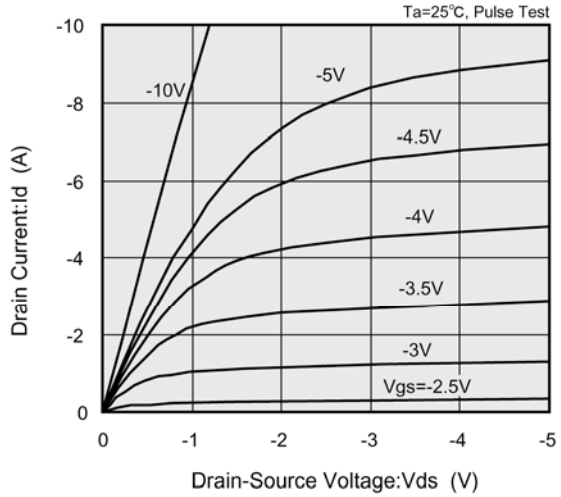
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Turn-On Delay Time	td (on)	Vgs= -5V, Id= -1.5A Vdd= -10V	-	10	-	ns
Rise Time	tr		-	30	-	ns
Turn-Off Delay Time	td (off)		-	20	-	ns
Fall Time	tf		-	35	-	ns

Thermal Characteristics

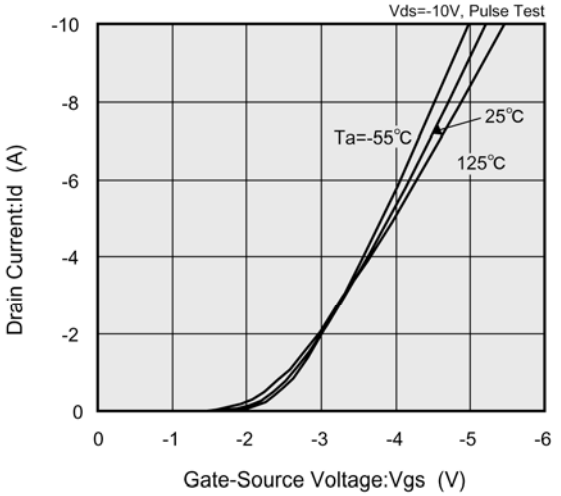
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Thermal Resistance (Channel-Ambience)	Rth (ch-a)	Implement on a ceramic PCB	-	62.5	-	℃/W

■TYPICAL PERFORMANCE CHARACTERISTICS

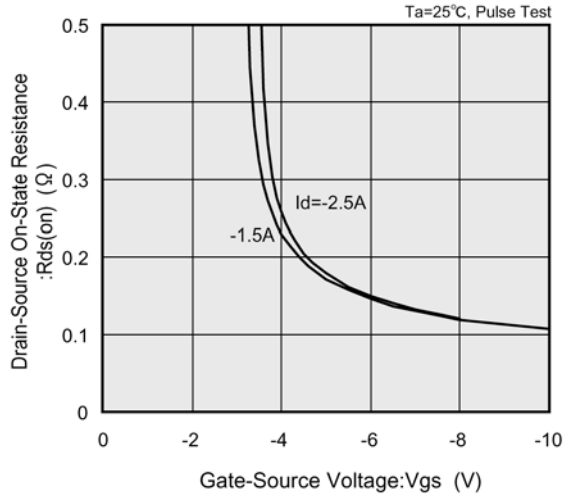
(1) Drain Current vs. Drain-Source Voltage



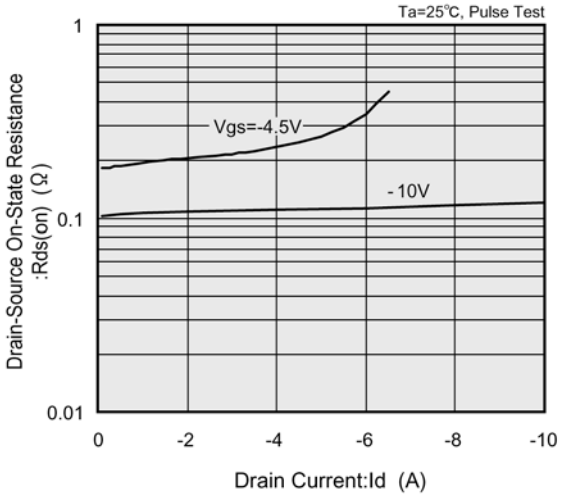
(2) Drain Current vs. Gate-Source Voltage



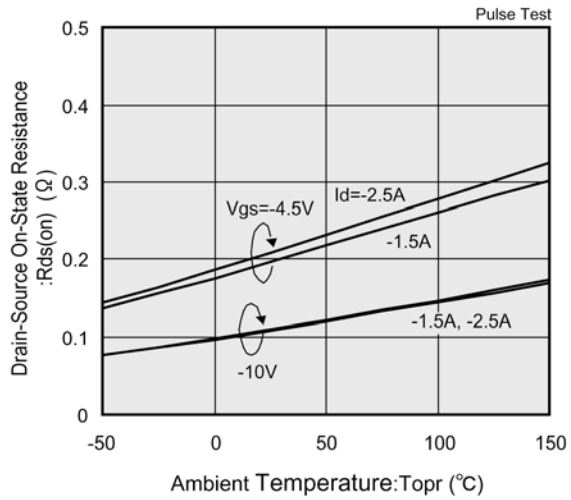
(3) Drain-Source On-State Resistance vs. Gate-Source Voltage



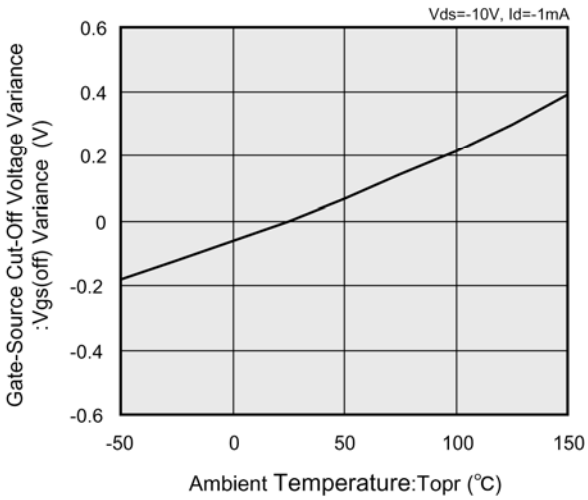
(4) Drain-Source On-State Resistance vs. Drain Current



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

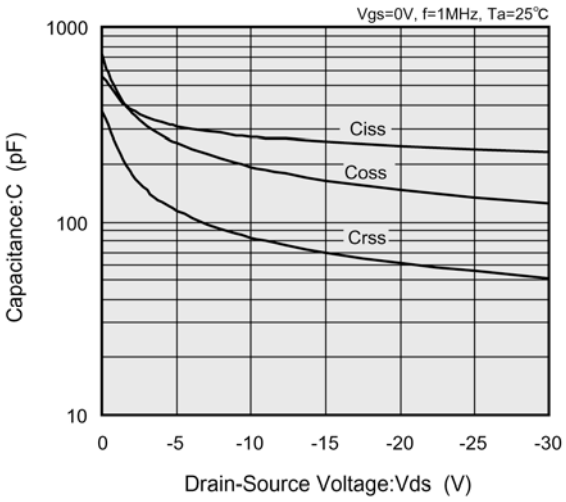


(6) Gate-Source Cut-Off Voltage Variance vs. Ambient Temperature

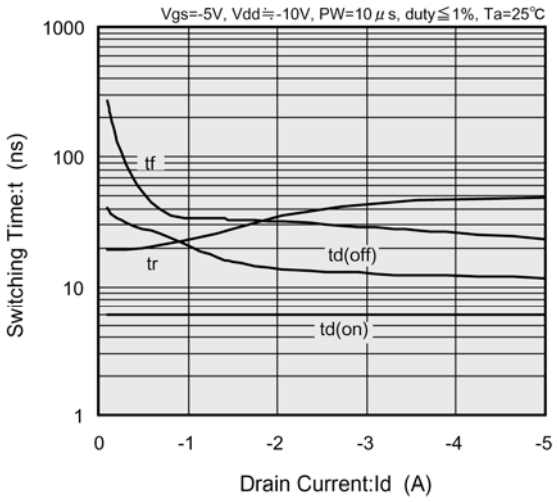


■TYPICAL PERFORMANCE CHARACTERISTICS (Continued)

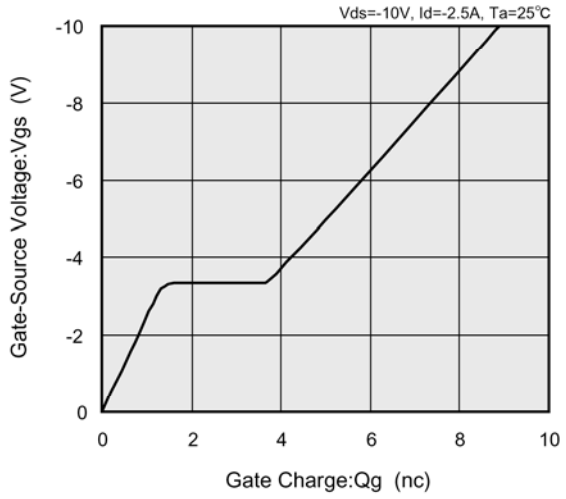
(7) Capacitance vs. Drain-Source Voltage



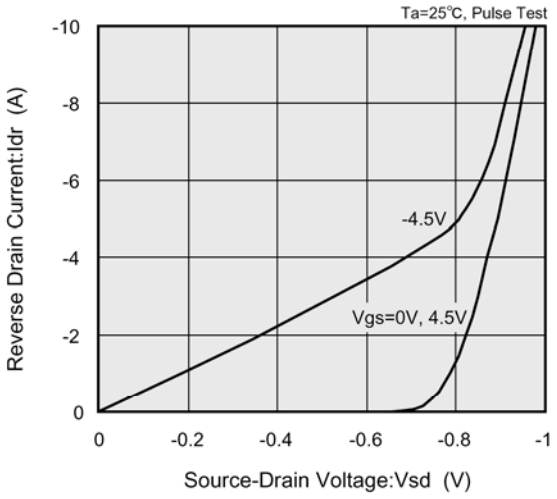
(8) Switching Time vs. Drain Current



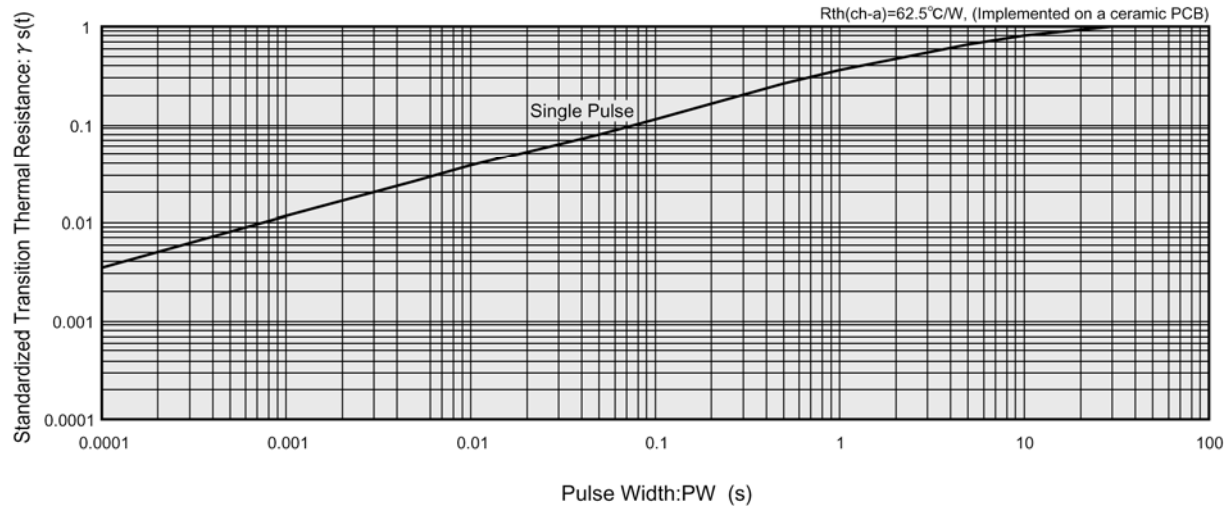
(9) Gate-Source Voltage vs. Gate Charge



(10) Reverse Drain Current vs. Source-Drain Voltage



(11) Standardized transition Thermal Resistance vs. Pulse Width



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 catalog 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 catalog.
3. Please ensure suitable shipping controls (including fail-safe designs and aging protection) are in force for equipment employing products listed in this catalog.
4. The products in this catalog are not developed, designed, or approved for use with such equipment whose failure of 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 catalog 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.

TOREX SEMICONDUCTOR LTD.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for MOSFET ***category:***

Click to view products by Torex Semiconductor ***manufacturer:***

Other Similar products are found below :

614233C 648584F IRFD120 JANTX2N5237 2N7000 FCA20N60_F109 FDZ595PZ 2SK2545(Q,T) 405094E 423220D TPCC8103,L1Q(CM MIC4420CM-TR VN1206L 614234A 715780A NTNS3166NZT5G SSM6J414TU,LF(T 751625C IPS70R2K0CEAKMA1 BUK954R8-60E DMN3404LQ-7 NTE6400 SQJ402EP-T1-GE3 2SK2614(TE16L1,Q) 2N7002KW-FAI DMN1017UCP3-7 EFC2J004NUZTDG ECH8691-TL-W FCAB21350L1 P85W28HP2F-7071 DMN1053UCP4-7 NTE221 NTE2384 NTE2903 NTE2941 NTE2945 NTE2946 NTE2960 NTE2967 NTE2969 NTE2976 NTE455 NTE6400A NTE2910 NTE2916 NTE2956 NTE2911 US6M2GTR TK10A80W,S4X(S SSM6P69NU,LF