TOIREX

XP134A1275SR

ETR1115_001

Power MOSFET

■ GENERAL DESCRIPTION

The XP134A1275SR is a P-channel Power MOSFET with low on-state resistance and ultra high-speed switching characteristics.

Two FET devices are built-into the one package.

Because high-speed switching is possible, the IC can be efficiently set thereby saving energy.

The small SOP-8 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)= 0.075Ω (Vgs=-4.5V)

:Rds(on)=0.115 Ω (Vgs=-2.5V)

Ultra High-Speed Switching

Driving Voltage : -2.5V

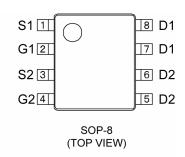
P-Channel Power MOSFET

DMOS Structure

2 FET Devices Built-in

Package : SOP-8

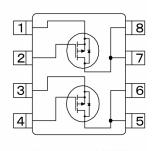
■PIN CONFIGURATION



■PIN ASSIGNMENT

PIN NUMBER	PIN NAME	FUNCTION
1	S1	Source
2	G1	Gate
3	S2	Source
4	G2	Gate
5~6	D2	Drain
7~8	D1	Drain

■EQUIVALENT CIRCUIT



P-channel MOSFET (2 devices built-in)

■ ABSOLUTE MAXIMUM RATINGS

Ta = 25°C

1a - 2						
PARAMETER	SYMBOL	RATINGS	UNITS			
Drain-Source Voltage	Vdss	-20	V			
Gate-Source Voltage	Vgss	±12	V			
Drain Current (DC)	ld	-4.5	Α			
Drain Current (Pulse)	ldp	-18	Α			
Reverse Drain Current	ldr	-4.5	Α			
Channel Power Dissipation *	Pd	2	W			
Channel Temperature	Tch	150	°C			
Storage Temperature Range	Tstg	-55~150	°C			

^{*} When implemented on a glass epoxy PCB

■ELECTRICAL CHARACTERISTICS

DC Characteristics $Ta = 25^{\circ}C$

5.5====	0) (1 4 5 0 1	001101710110		/-		
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Drain Cut-Off Current	ldss	Vds=-20V, Vgs=0V	-	-	-10	μΑ
Gate-Source Leak Current	Igss	Vgs=±12V, Vds=0V	-	-	±1	μΑ
Gate-Source Cut-Off Voltage	Vgs(off)	Id=-1mA, Vds=-10V	-0.5	-	-1.2	V
Drain-Source On-State Resistance *	Rds(on)	Id=-2.5A, Vgs=-4.5V	-	0.062	0.075	Ω
		Id=-2.5A, Vgs=-2.5V	-	0.095	0.115	Ω
Forward Transfer Admittance*	Yfs	Id=-2.5A, Vds=-10V	-	7.5	-	S
Body Drain Diode Forward Voltage	Vf	lf=-4.5A, Vgs=0V	-	-0.85	-1.1	V

^{*} Effective during pulse test.

Dynamic Characteristics

Ta = 25°C

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Input Capacitance	Ciss	Vds=-10V, Vgs=0V f=1MHz	-	770	ı	pF
Output Capacitance	Coss		-	440	ı	pF
Feedback Capacitance	Crss		-	190	ı	pF

Switching Characteristics

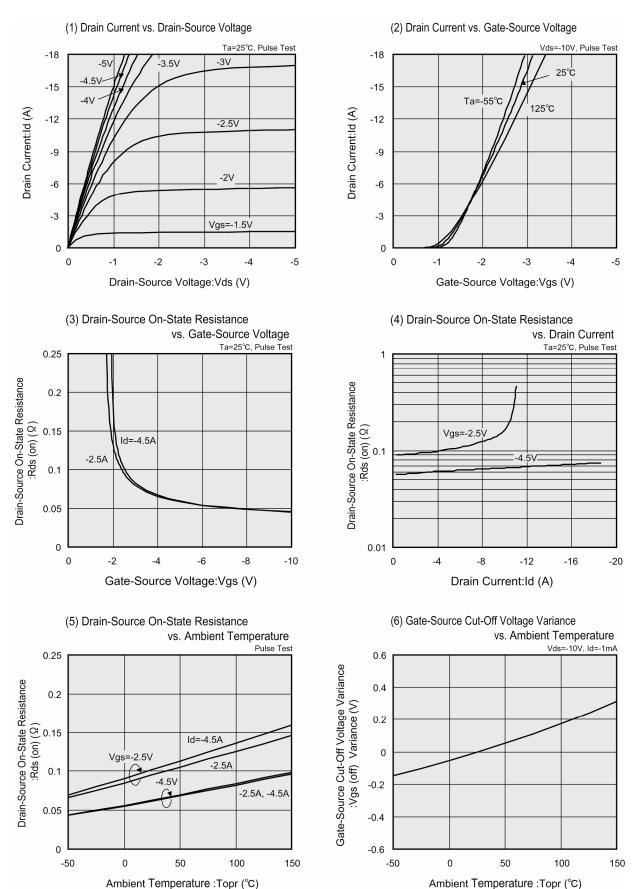
Ta = 25°C

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Turn-On Delay Time	td (on)	Vgs=-5V, Id=-2.5A Vdd=-10V	=	15	-	ns
Rise Time	tr		-	20	-	ns
Turn-Off Delay Time	td (off)		-	55	-	ns
Fall Time	tf		-	30	-	ns

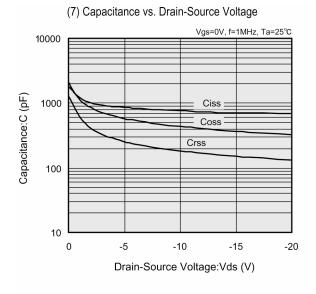
Thermal Characteristics

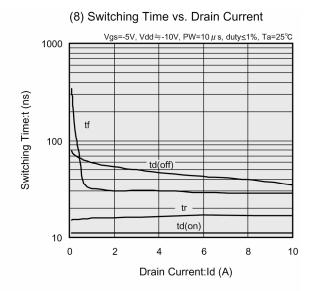
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Thermal Resistance (Channel-Ambience)	Rth (ch-a)	Implement on a glass epoxy resin PCB	ı	62.5	ı	°C/W

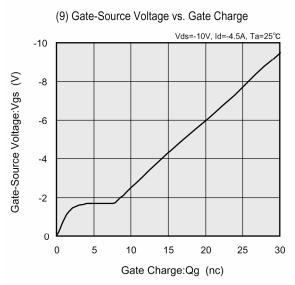
■TYPICAL PERFORMANCE CHARACTERISTICS

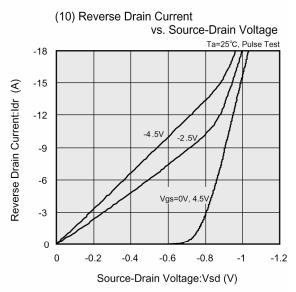


■TYPICAL PERFORMANCE CHARACTERISTICS (Continued)

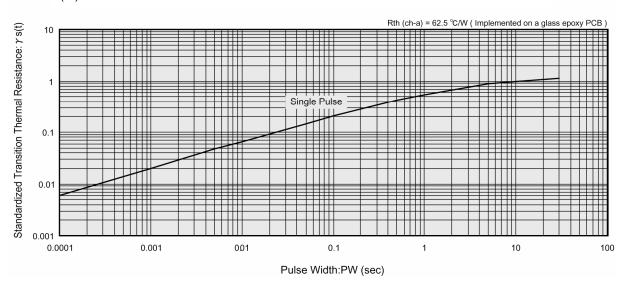








(11) Standardized transition Thermal Resistance vs. Pulse Width



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