

ELECTRICAL CHARACTERISTICS

DC Characteristics

Ta = 25°C

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°C

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°C

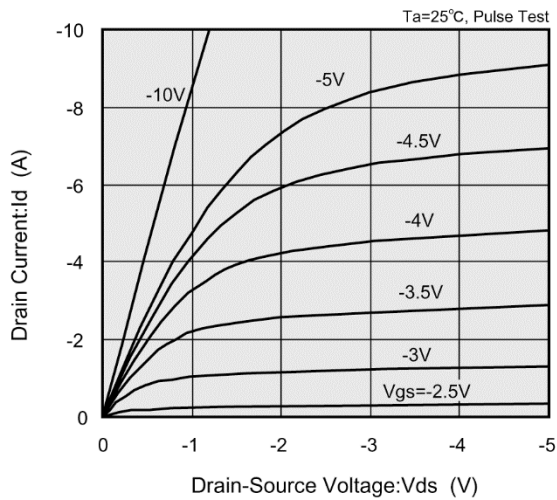
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Turn-On Delay Time	td (on)	Vgs= -5V, Id= -1.5A Vdd= -10V	-	10	-	ns
Rise Time	tr		-	30	-	ns
Turn-Off Delay Time	td (off)		-	20	-	ns
Fall Time	tf		-	35	-	ns

Thermal Characteristics

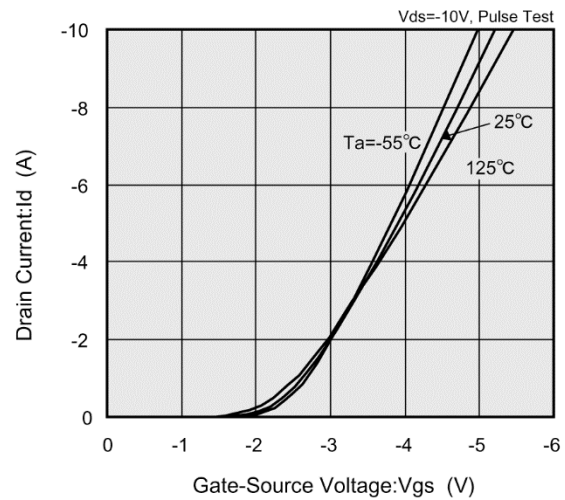
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Thermal Resistance (Channel-Ambience)	Rth (ch-a)	Implement on a ceramic PCB	-	62.5	-	°C/W

TYPICAL PERFORMANCE CHARACTERISTICS

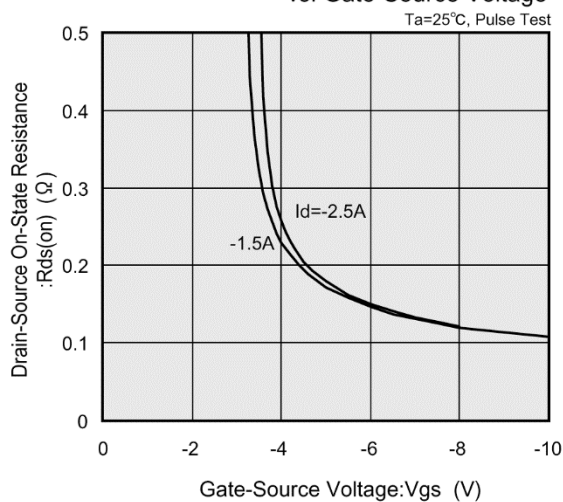
(1) Drain Current vs. Drain-Source Voltage



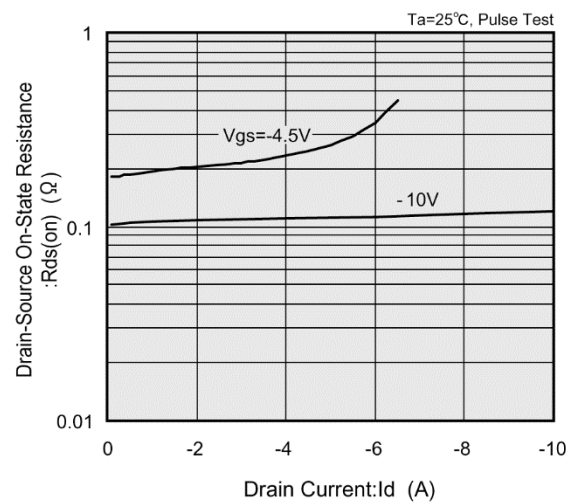
(2) Drain Current vs. Gate-Source Voltage



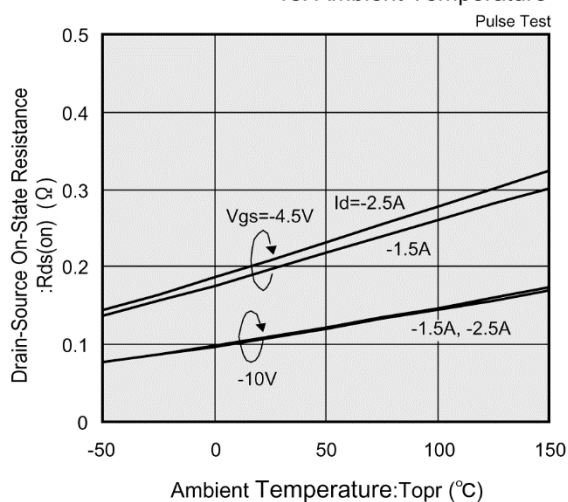
(3) Drain-Source On-State Resistance vs. Gate-Source Voltage



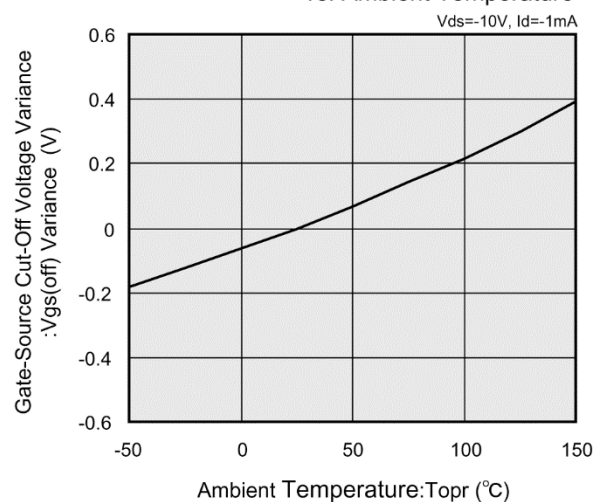
(4) Drain-Source On-State Resistance vs. Drain Current



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

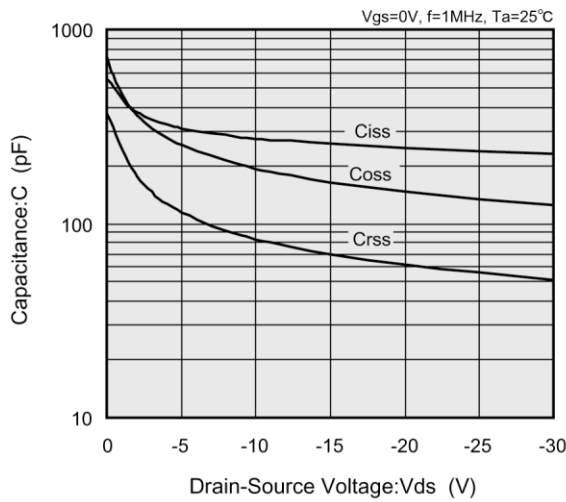


(6) Gate-Source Cut-Off Voltage Variance vs. Ambient Temperature

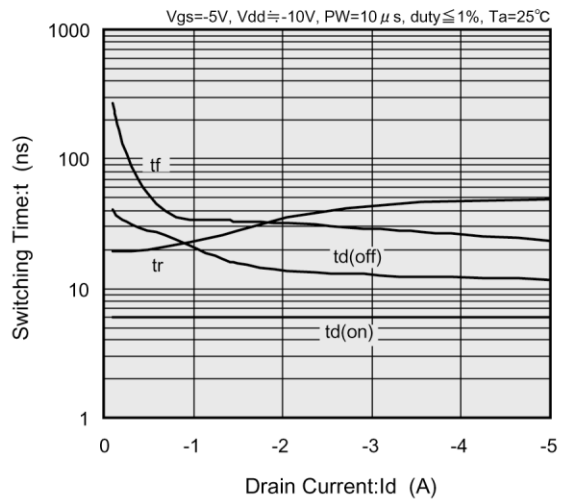


TYPICAL PERFORMANCE CHARACTERISTICS (Continued)

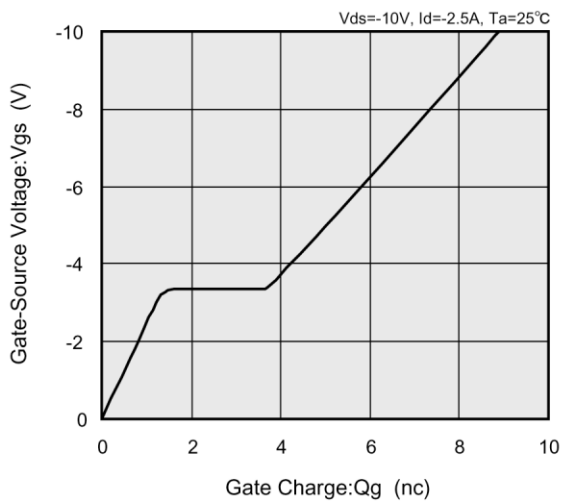
(7) Capacitance vs. Drain-Source Voltage



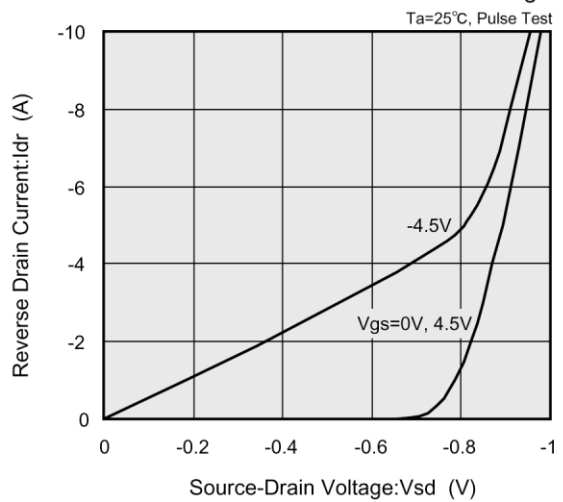
(8) Switching Time vs. Drain Current



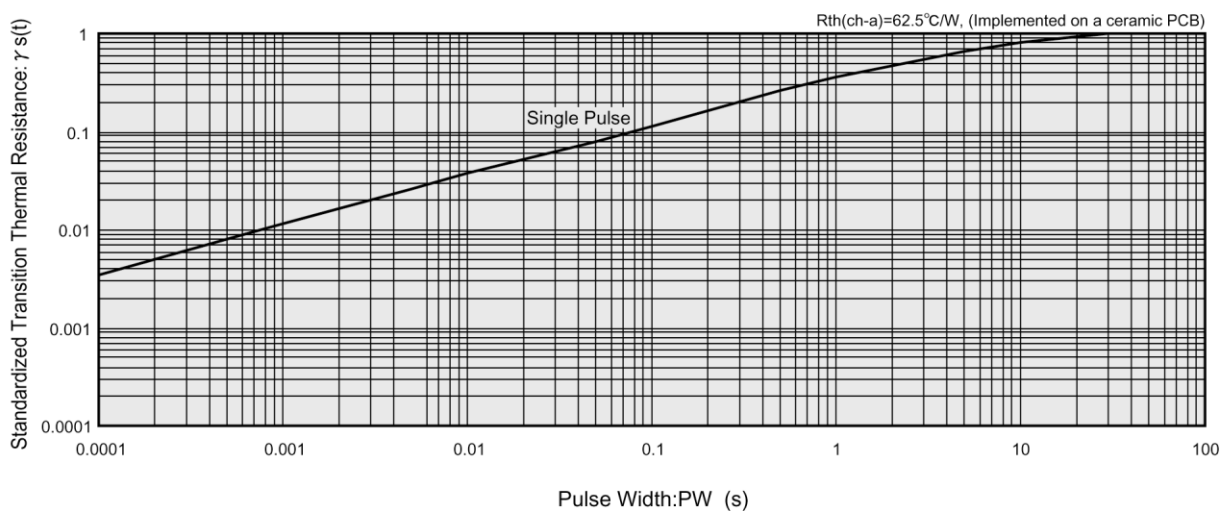
(9) Gate-Source Voltage vs. Gate Charge



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



(11) Standardized transition Thermal Resistance vs. Pulse Width



■ PACKAGING INFORMATION

For the latest package information go to, www.torexsemi.com/technical-support/packages

PACKAGE	OUTLINE / LAND PATTERN	THERMAL CHARACTERISTICS
SOT-89	SOT-89 PKG	SOT-89 Power Dissipation

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