



## Electrical Characteristics

### DC Characteristics

Ta=25°C

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Drain Cut-off Current	I <sub>dss</sub>	V <sub>ds</sub> = - 20V , V <sub>gs</sub> = 0V			- 10	μA
Gate-Source Leakage Current	I <sub>gss</sub>	V <sub>gs</sub> = ± 12V , V <sub>ds</sub> = 0V			± 1	μA
Gate-Source Cut-off Voltage	V <sub>gs (off)</sub>	I <sub>d</sub> = -1mA , V <sub>ds</sub> = - 10V	- 0.5		- 1.2	V
Drain-Source On-state Resistance ( note )	R <sub>ds ( on )</sub>	I <sub>d</sub> = - 3A , V <sub>gs</sub> = - 4.5V		0.06	0.075	Ω
		I <sub>d</sub> = - 3A , V <sub>gs</sub> = - 2.5V		0.092	0.115	Ω
Forward Transfer Admittance ( note )	Y <sub>fs</sub>	I <sub>d</sub> = - 3A , V <sub>ds</sub> = - 10V		8		S
Body Drain Diode Forward Voltage	V <sub>f</sub>	I <sub>f</sub> = - 5A , V <sub>gs</sub> = 0V		- 0.85	- 1.1	V

( note ) : Effective during pulse test.

### Dynamic Characteristics

Ta=25°C

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Input Capacitance	C <sub>iss</sub>	V <sub>ds</sub> = - 10V , V <sub>gs</sub> = 0V f = 1 MHz		770		pF
Output Capacitance	C <sub>oss</sub>			440		pF
Feedback Capacitance	C <sub>rss</sub>			180		pF

### Switching Characteristics

Ta=25°C

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS	
Turn-on Delay Time	t <sub>d ( on )</sub>	V <sub>gs</sub> = - 5V , I <sub>d</sub> = - 3A V <sub>dd</sub> = - 10V		10		ns	
Rise Time	t <sub>r</sub>			25		ns	
Turn-off Delay Time	t <sub>d ( off )</sub>				45		ns
Fall Time	t <sub>f</sub>				40		ns

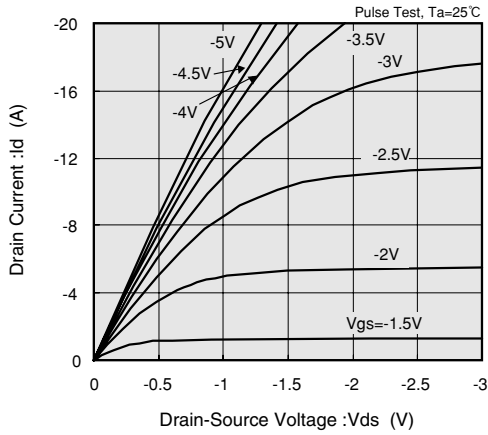
11

### Thermal Characteristics

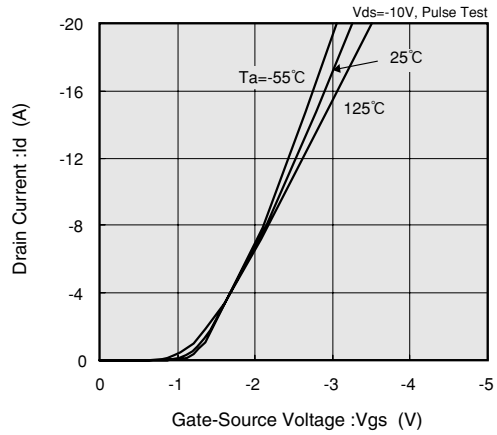
PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Thermal Resistance ( channel-ambience )	R <sub>th ( ch-a )</sub>	Implement on a glass epoxy resin PCB		50		°C / W

## Typical Performance Characteristics

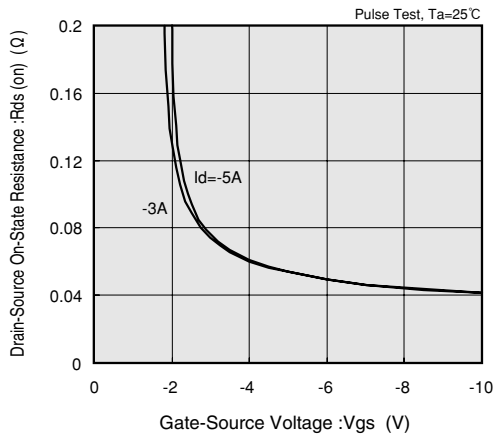
DRAIN CURRENT vs. DRAIN-SOURCE VOLTAGE



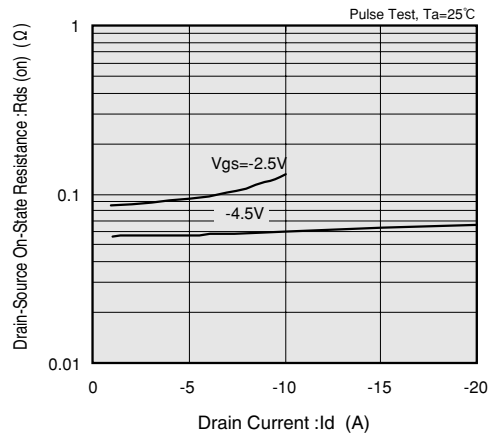
DRAIN CURRENT vs. GATE-SOURCE VOLTAGE



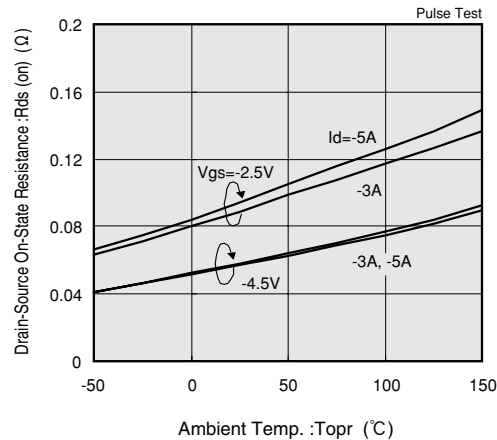
DRAIN-SOURCE ON-STATE RESISTANCE vs. GATE-SOURCE VOLTAGE



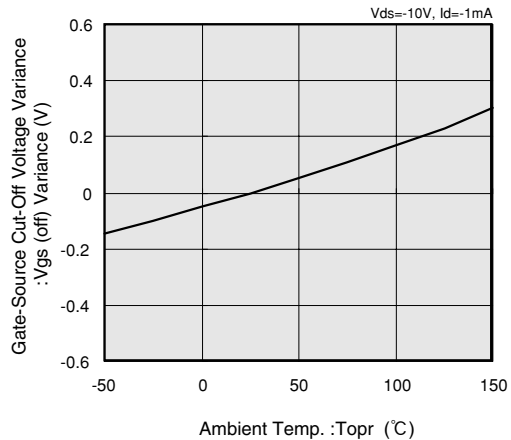
DRAIN-SOURCE ON-STATE RESISTANCE vs. DRAIN CURRENT



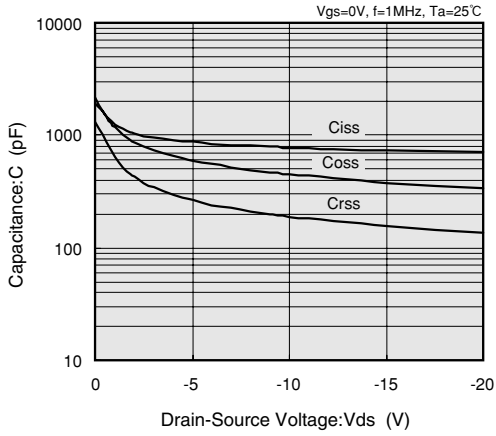
DRAIN-SOURCE ON-STATE RESISTANCE vs. AMBIENT TEMPERATURE



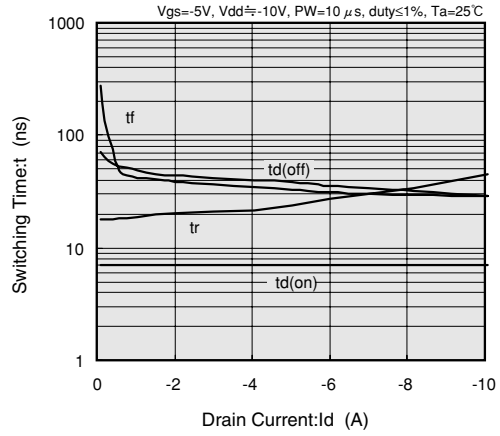
GATE-SOURCE CUT-OFF VOLTAGE VARIANCE vs. AMBIENT TEMPERATURE



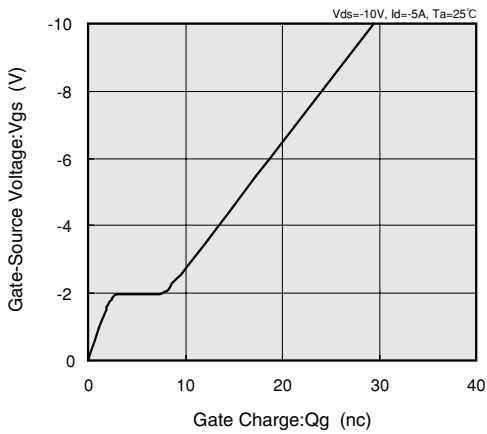
CAPACITANCE vs. DRAIN-SOURCE VOLTAGE



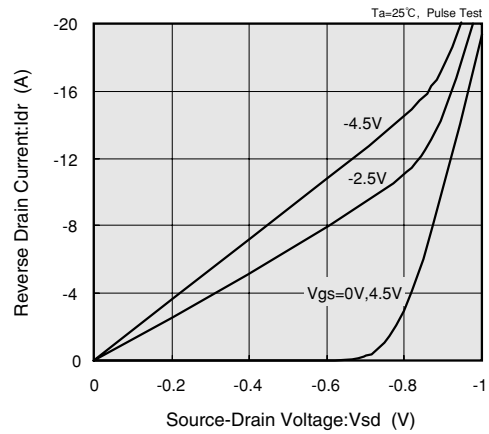
SWITCHING TIME vs. DRAIN CURRENT



GATE-SOURCE VOLTAGE vs. GATE CHARGE



REVERSE DRAIN CURRENT vs. SOURCE-DRAIN VOLTAGE



STANDARDIZED TRANSITION THERMAL RESISTANCE vs. PULSE WIDTH

