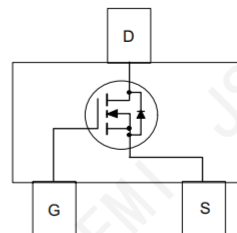


■ Features

- $V_{DS} (V) = 100V$
- $I_D = 3 A$
- $R_{DS(ON)} < 220 m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 260 m\Omega$ ($V_{GS} = 4.5V$)



Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	3	A
Pulsed Drain Current (Note 1)	I_{DM}	20	
Power Dissipation	P_D	1.5	W
Thermal Resistance Junction- to-Ambient (Note 2)	R_{thJA}	100	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

Electrical Characteristics ($T_A = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	$I_D=250\mu A, V_{GS}=0V$	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100V, V_{GS}=0V$			1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Gate Threshold Voltage (Note 3)	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1		2	V
Static Drain-Source On-Resistance (Note 3)	$R_{DS(on)}$	$V_{GS}=10V, I_D=3A$			220	m Ω
		$V_{GS}=4.5V, I_D=3A$			260	
Forward Transconductance (Note 3)	g_{FS}	$V_{DS}=5V, I_D=3A$		5		S
Input Capacitance	C_{iss}	$V_{GS}=0V, V_{DS}=50V, f=1MHz$ (Note 4)		650		pF
Output Capacitance	C_{oss}			24		
Reverse Transfer Capacitance	C_{rss}			20		
Total Gate Charge	Q_g	$V_{GS}=10V, V_{DS}=50V, I_D=3A$ (Note 4)		20		nC
Gate Source Charge	Q_{gs}			2.1		
Gate Drain Charge	Q_{gd}			3.3		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS}=10V, V_{DD}=50V, R_L=19\Omega, C=3\Omega$ (Note 4)		6		ns
Turn-On Rise Time	t_r			4		
Turn-Off DelayTime	$t_{d(off)}$			20		
	f			4		
Body-Diode Forward Current (Note 2)	I_S				3	A
Diode Forward Voltage (Note 3)	V_{SD}	$I_S=3A, V_{GS}=0V$			1.2	V

Notes: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.

2. Surface Mounted on FR4 Board, $t \leq 10$ sec.

3. Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

4. Guaranteed by design, not subject to production.

■ Typical Characteristics and Thermal Characteristics (Curves)

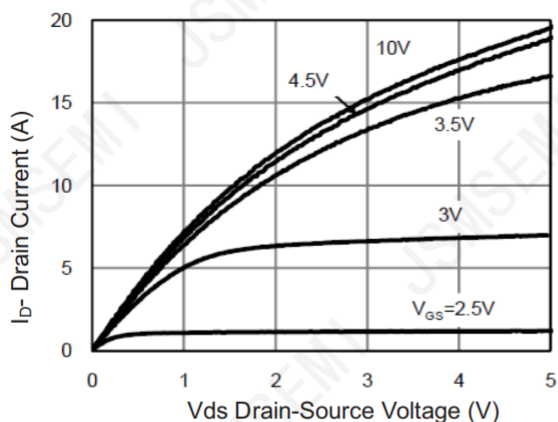


Figure 1 Output Characteristics

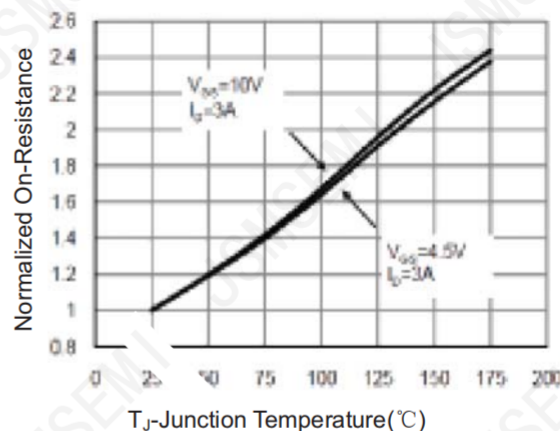


Figure 4 $R_{DS(on)}$ -Junction Temperature

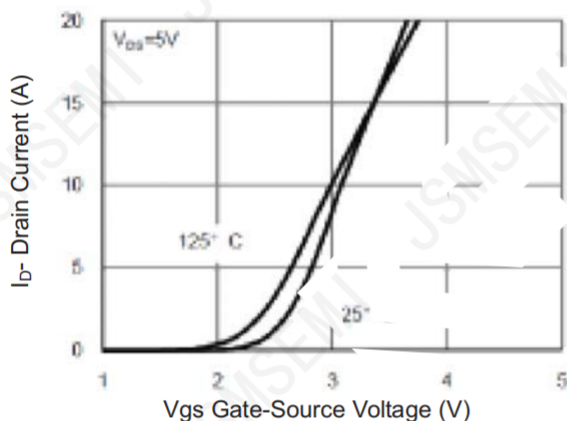


Figure 2 Transfer Characteristics

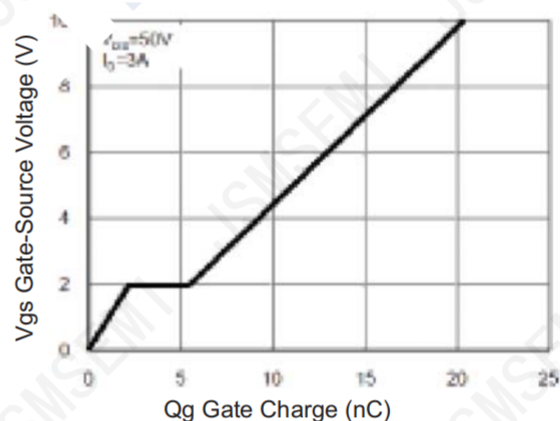


Figure 5 Gate Charge

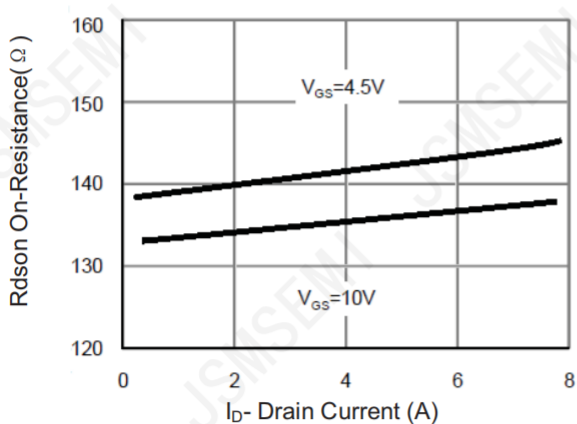


Figure 3 $R_{DS(on)}$ - Drain Current

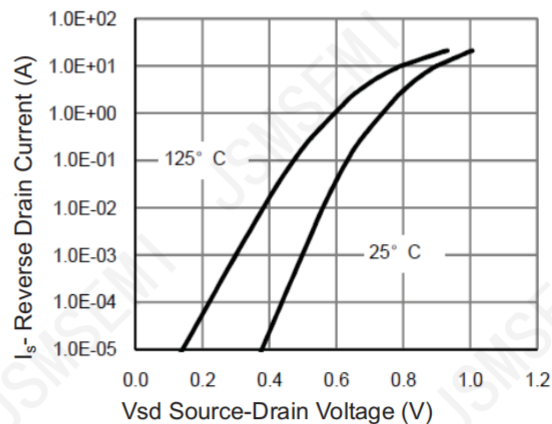


Figure 6 Source- Drain Diode Forward

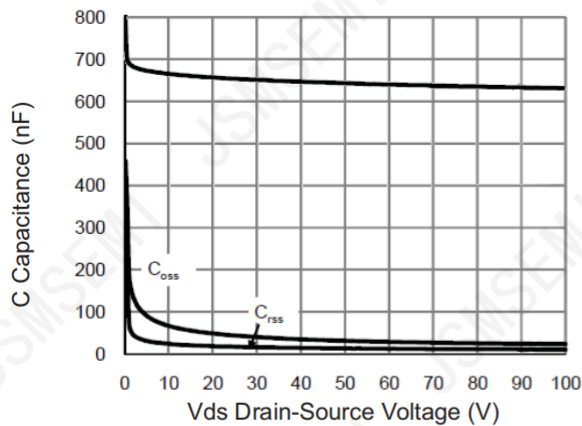


Figure 7 Capacitance vs Vds

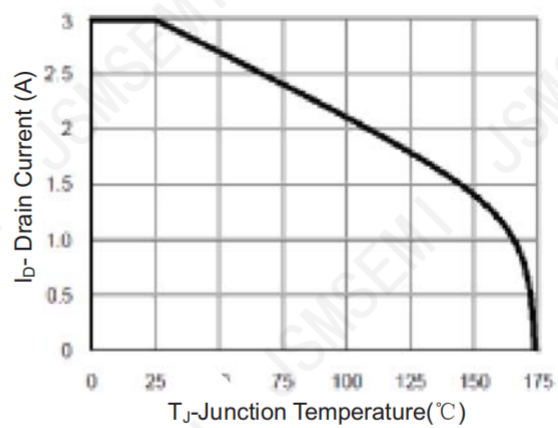


Figure 9 BV_{DSS} vs Junction Temperature

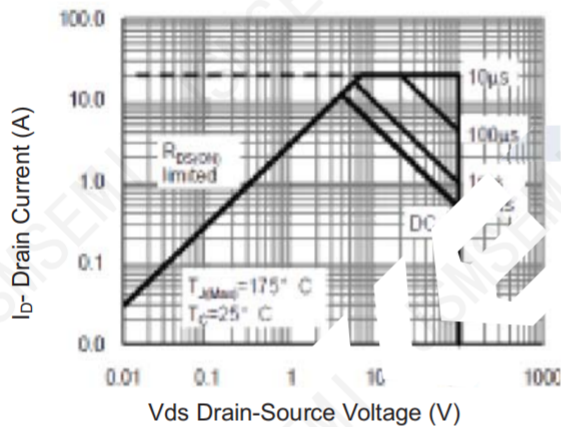


Figure 8 Safe Operation Area

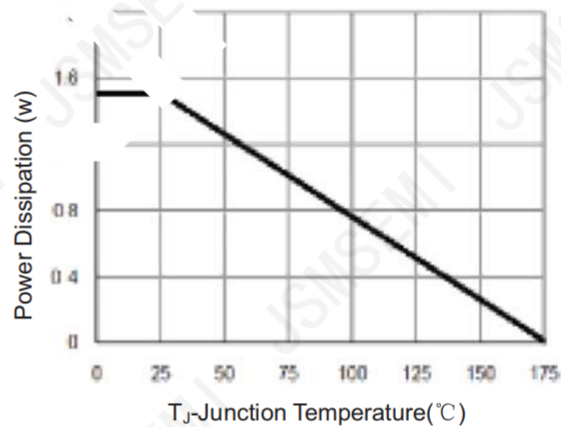


Figure 10 Power De-rating

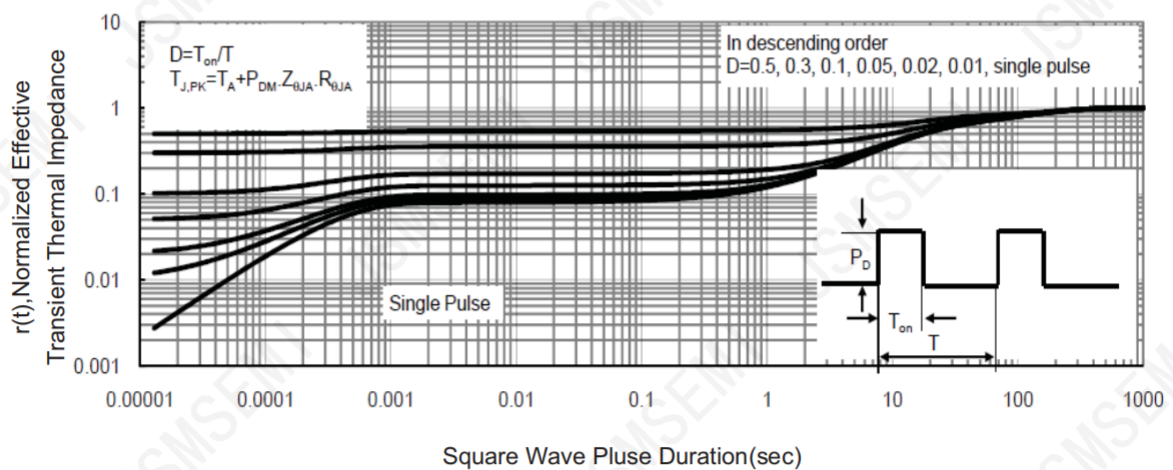


Figure 11 Normalized Maximum Transient Thermal Impedance

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