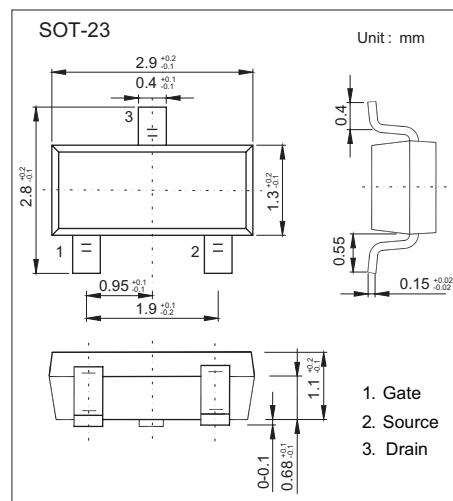
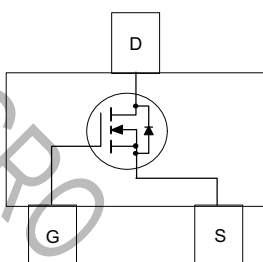


■ Features

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



■ 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	

■ Marking

Marking	W2N **
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■ Electrical Characteristics (TA = 25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	VDSS	ID=250μA, VGS=0V	100			V
Zero Gate Voltage Drain Current	IDSS	VDS=100V, VGS=0V			1	μA
Gate-Body Leakage Current	IGSS	VDS=0V, VGS=±20V			±100	nA
Gate Threshold Voltage (Note 3)	VGS(th)	VDS=VGS, ID=250μA	1		2	V
Static Drain-Source On-Resistance (Note 3)	RDS(on)	VGS=10V, ID=3A			220	mΩ
		VGS=4.5V, ID=3A			260	
Forward Transconductance (Note 3)	gFS	VDS=5V, ID=3A		5		S
Input Capacitance	Ciss	VGS=0V, VDS=50V, f=1MHz (Note 4)		650		pF
Output Capacitance	Coss			24		
Reverse Transfer Capacitance	Crss			20		
Total Gate Charge	Qg	VGS=10V, VDS=50V, ID=3A (Note 4)		20		nC
Gate Source Charge	Qgs			2.1		
Gate Drain Charge	Qgd			3.3		
Turn-On DelayTime	td(on)	VGS=10V, VDD=50V, RL=19Ω, RG=3Ω (Note 4)		6		ns
Turn-On Rise Time	tr			4		
Turn-Off DelayTime	td(off)			20		
	f			4		
Body-Diode Forward Current (Note 2)	IS				3	A
Diode Forward Voltage (Note 3)	VSD	IS=3A, VGS=0V			1.2	V

Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t ≤ 10 sec.
3. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production.

■ Typical Characteristics and Thermal Characteristics (Curves)

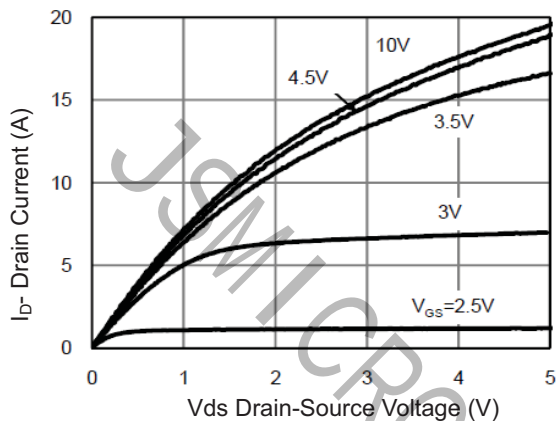


Figure 1 Output Characteristics

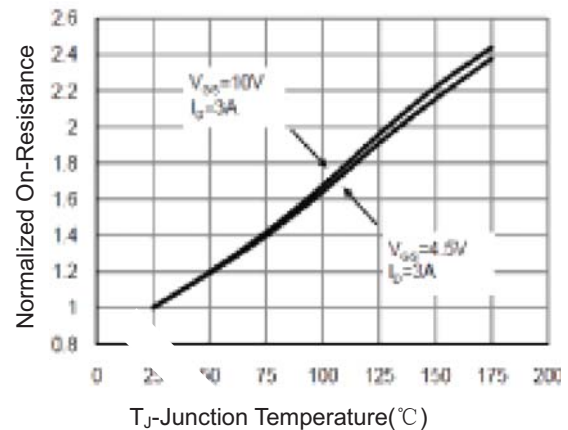


Figure 4 Rdson-Junction Temperature

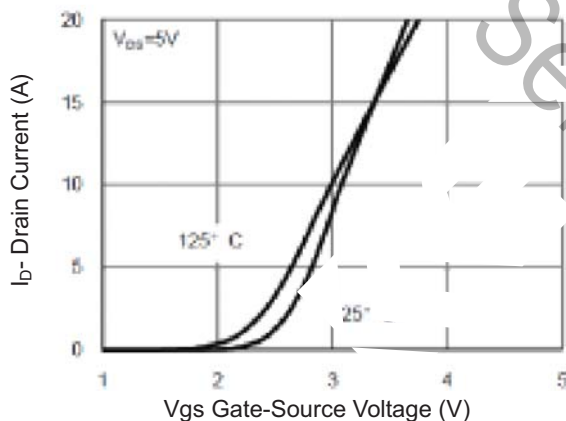


Figure 2 Transfer Characteristics

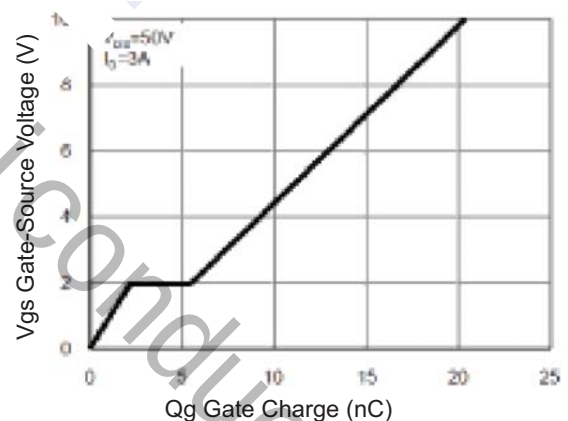


Figure 5 Gate Charge

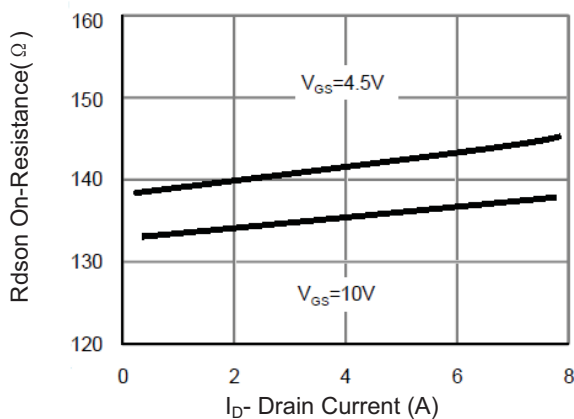


Figure 3 Rdson- Drain Current

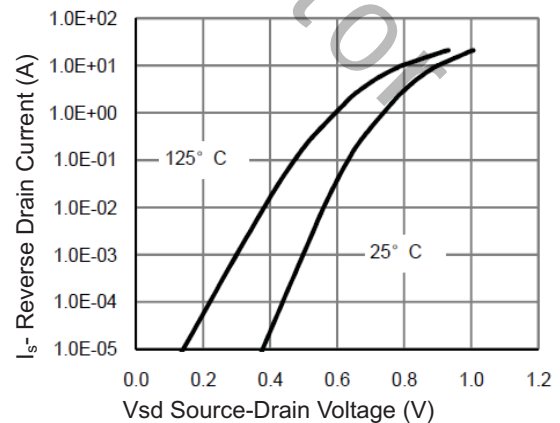


Figure 6 Source- Drain Diode Forward

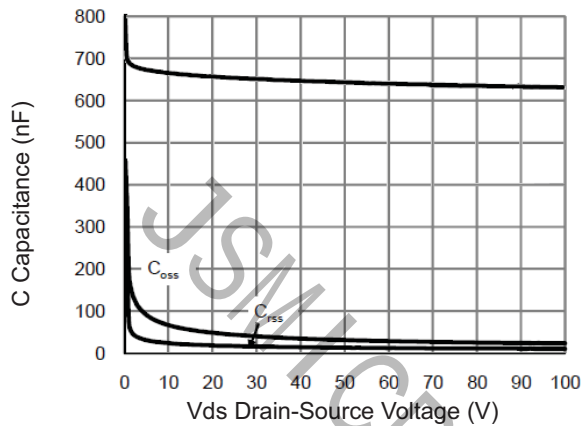


Figure 7 Capacitance vs Vds

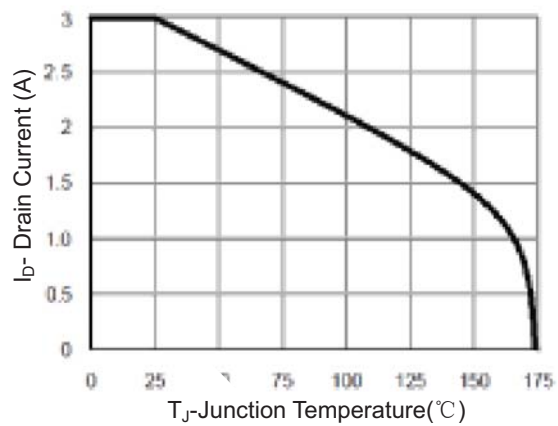
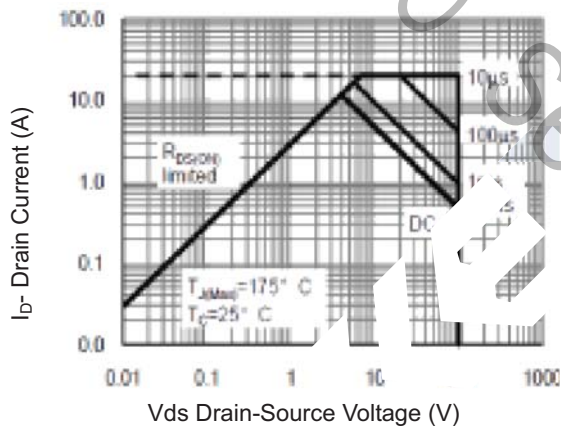

 Figure 9 BV_{DSS} vs Junction Temperature


Figure 8 Safe Operation Area

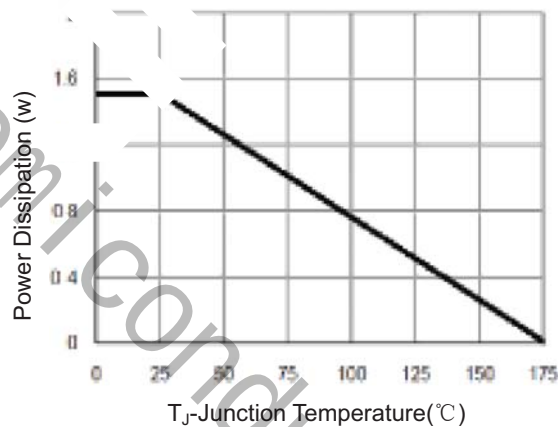


Figure 10 Power De-rating

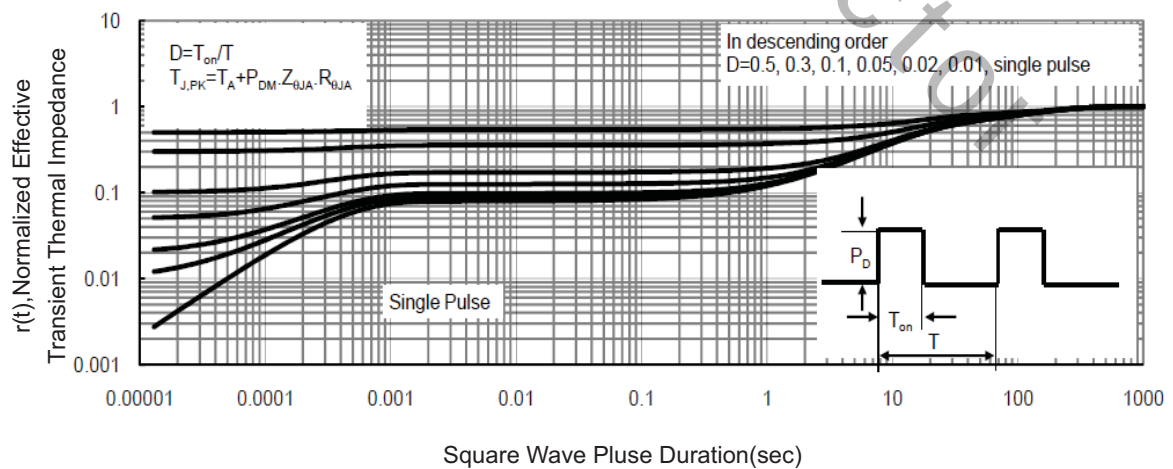


Figure 11 Normalized Maximum Transient Thermal Impedance