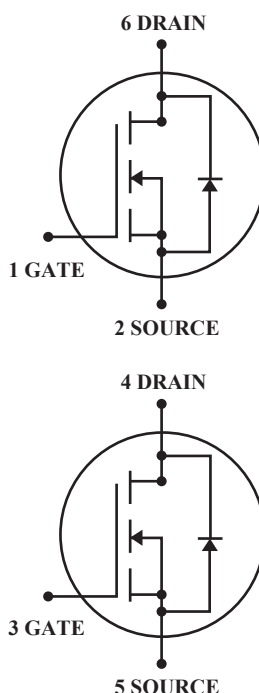


Dual N-Channel Enhancement Mode MOSFET

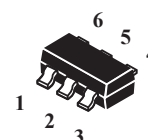
(Pb) Lead(Pb)-Free

Features:

- *Super High Dense Cell Design For Low $R_{DS(ON)}$
 $R_{DS(ON)} < 80m\Omega @ V_{GS}=4.5V$
- *Rugged and Reliable
- *Capable of 2.5V Gate Drive
- *Simple Drive Requirement
- *SOT-26 Package



DRAIN CURRENT
2.5 AMPERES
DRAIN SOURCE VOLTAGE
20 VOLTAGE



SOT-26

Maximum Ratings ($T_A=25^\circ C$ Unless Otherwise Specified)

Rating	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 10	
Continuous Drain Current ¹ , $V_{GS}@4.5V$, $T_A=25^\circ C$ -Pulsed ²	I_D	2.5	A
	I_{DM}	8	
Drain-Source Diode Forward Current ¹	I_S	1.25	
Total Power Dissipation ¹ ($T_A=25^\circ C$)	P_D	1	W
Maximum Junction-ambient ¹	$R_{\theta JA}$	125	$^\circ C/W$
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	$^\circ C$

Device Marking

WTL2622=STS2622

WTL2622**WEITRON****Electrical Characteristics** ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Min	Typ ³	Max	Unit
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OFF Characteristics

Drain-Source Breakdown Voltage $V_{GS}=0, I_D=250\mu\text{A}$	BV_{DSS}	20	-	-	V
Drain-Source Leakage Current $V_{DS}=16\text{V}, V_{GS}=0\text{V}$	I_{DSS}	-	-	1	μA
Gate-Source Leakage current $V_{GS}=\pm 10\text{V}, V_{DS}=0\text{V}$	I_{GSS}	-	-	± 100	nA

ON Characteristics²

Gate-Source Threshold Voltage $V_{DS}=V_{GS}, I_D=250\mu\text{A}$	$V_{GS(Th)}$	0.5	0.8	1.5	V
Drain-Source On-Resistance $V_{GS}=4.5\text{V}, I_D=2.5\text{A}$ $V_{GS}=2.5\text{V}, I_D=2.0\text{A}$	$R_{DS(on)}$	- -	65 90	80 110	$\text{m}\Omega$
On-State Drain Current $V_{DS}=5\text{V}, V_{GS}=4.5\text{V}$	$I_{D(ON)}$	6	-	-	A
Forward Transconductance $V_{DS}=5\text{V}, I_D=2.5\text{A}$	gfs	-	7	-	S

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Dynamic Characteristics³

Input Capacitance $V_{GS}=0\text{V}, V_{DS}=10\text{V}, f=1.0\text{MHz}$	C_{iss}	-	220	-	pF
Output Capacitance $V_{GS}=0\text{V}, V_{DS}=10\text{V}, f=1.0\text{MHz}$	C_{oss}	-	67	-	
Reverse Transfer Capacitance $V_{GS}=0\text{V}, V_{DS}=10\text{V}, f=1.0\text{MHz}$	C_{rss}	-	50	-	

WTL2622

Electrical Characteristics ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Min	Typ ³	Max	Unit
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Switching Characteristics³

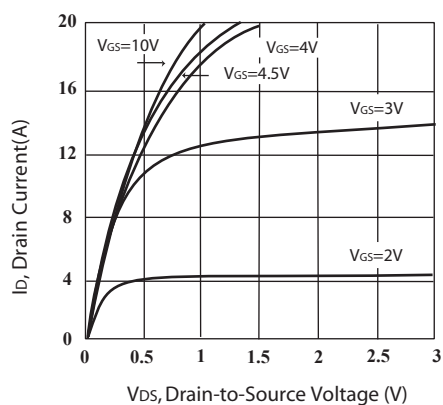
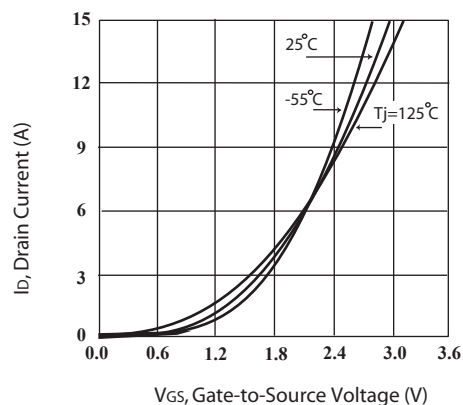
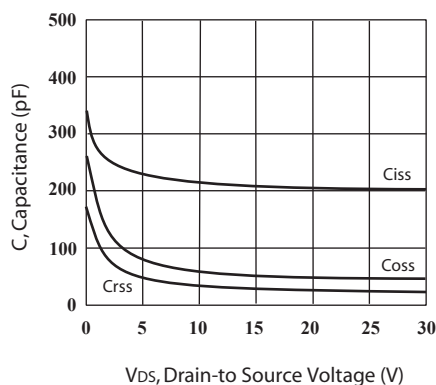
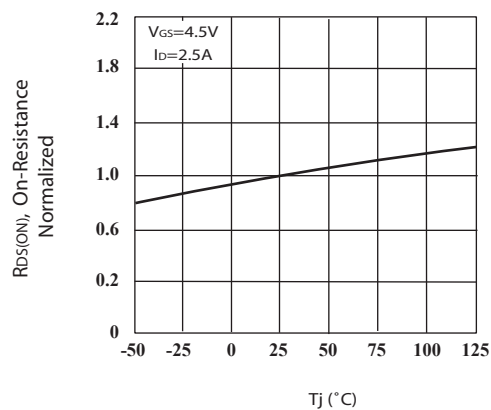
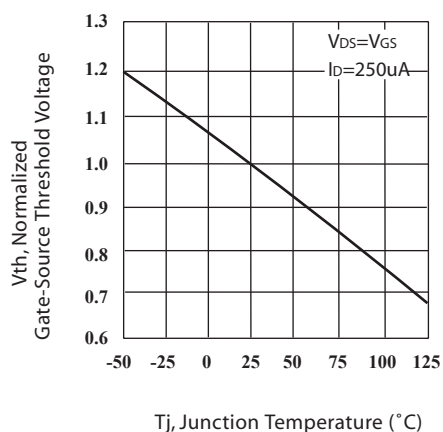
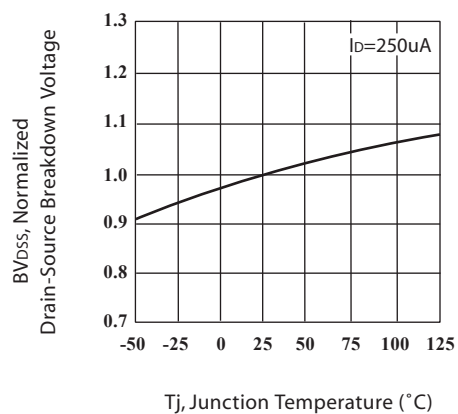
Turn-on Delay Time ² $V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=1\text{A}, R_{GEN}=6\Omega$	$t_{d(on)}$	-	10.2	-	ns
Rise Time $V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=1\text{A}, R_{GEN}=6\Omega$	t_r	-	8.3	-	
Turn-off Delay Time $V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=1\text{A}, R_{GEN}=6\Omega$	$t_{d(off)}$	-	13.5	-	
Fall Time $V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=1\text{A}, R_{GEN}=6\Omega$	t_f	-	12.7	-	
Total Gate Charge ² $V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=2.5\text{A}$	Q_g	-	4	-	nC
Gate-Source Charge $V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=2.5\text{A}$	Q_{gs}	-	1.5	-	
Gate-Source Change $V_{DS}=10\text{V}, V_{GS}=4.5\text{V}, I_D=2.5\text{A}$	Q_{gd}	-	0.7	-	

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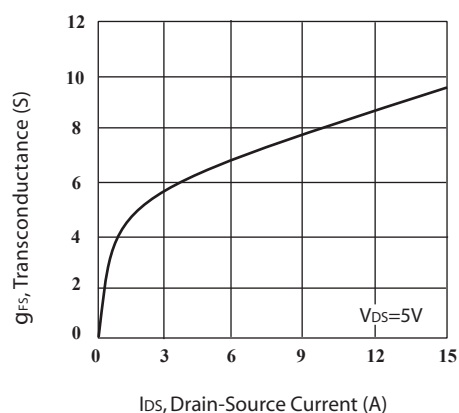
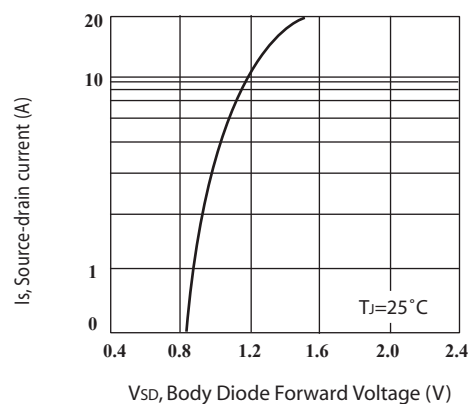
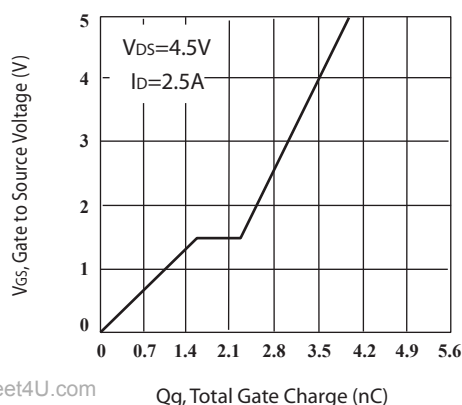
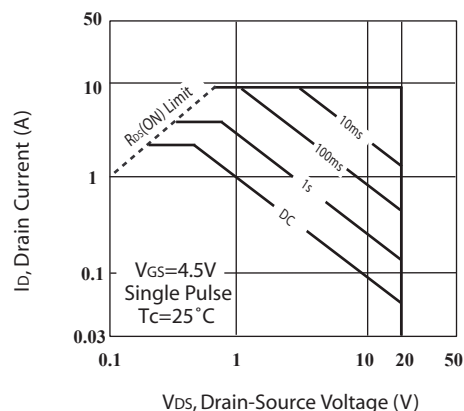
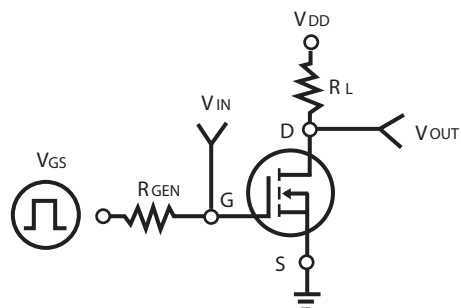
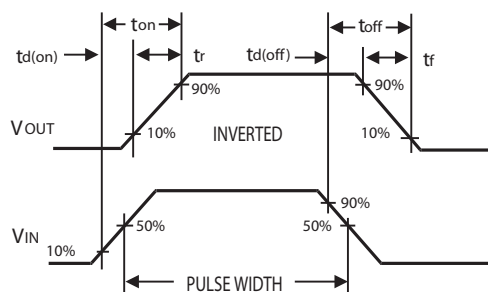
Source-Drain Diode Characteristics²

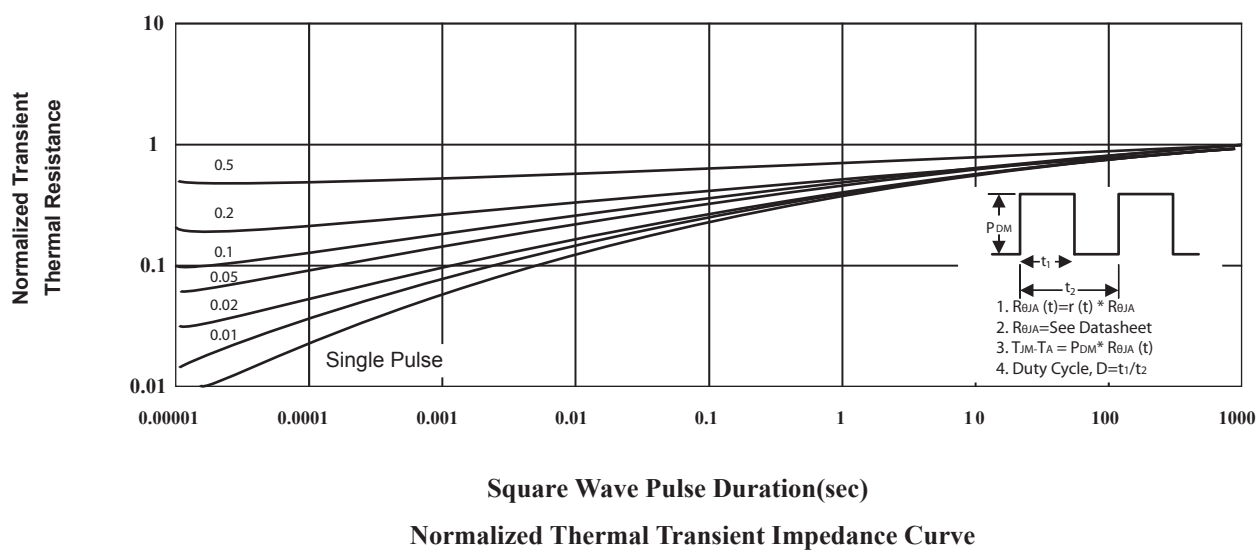
Forward On Voltage $V_{GS}=0\text{V}, I_S=1.25\text{A}$	V_{SD}	-	0.84	1.2	V
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Note: 1. Surface mounted on 1 in2 copper pad of FR4 board, $t \leq 10\text{sec}$.
 2. Pulse Test : Pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$.
 3. Guaranteed by design, not subject to production testing.

WTL2622**WEITRON****Fig.1 Output Characteristics****Fig.2 Transfer Characteristics****Fig.3 Capacitance with Drain to Source Voltage****Fig.4 On-Resistance Variation with Temperature****Fig.5 Gate Threshold Voltage Variation with Temperature****Fig.6 Breakdown Voltage Variation with Temperature**

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WTL2622**WEITRON****Fig.7 Transconductance Variation with Drain Current****Fig.8 Body Diode Forward Voltage Variation with Source Current****Fig.9 Gate Charge****Fig.10 Maximum Safe Operating Area****Fig.11 Switching Test Circuit****Fig.12 Switching Waveforms**

WTL2622**WEITRON**

SOT-26 Outline Dimension

Unit:mm

