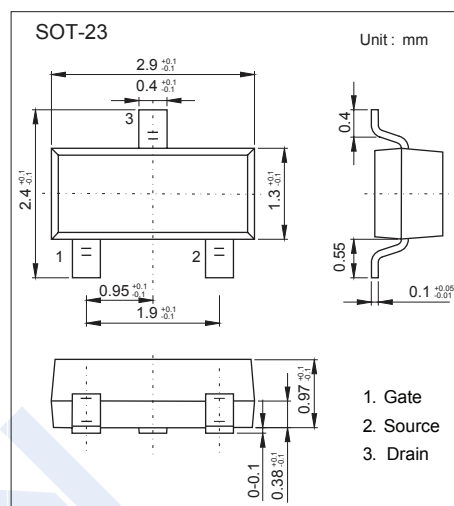
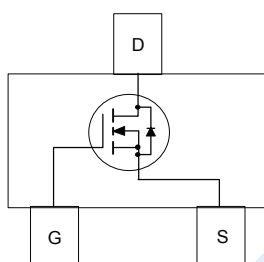


N-Channel MOSFET

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■ Features

- $V_{DS}(V) \approx 20\text{ V}$
- $I_D = 3.2\text{ A}$
- $R_{DS(ON)} < 47\text{ m}\Omega$ @ $V_{GS} = 4.5\text{ V}$
- $R_{DS(ON)} < 55\text{ m}\Omega$ @ $V_{GS} = 2.5\text{ V}$
- $R_{DS(ON)} < 66\text{ m}\Omega$ @ $V_{GS} = 1.8\text{ V}$

■ Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter		Symbol	10 S	Steady State	Unit
Drain-Source Voltage		V _{DS}	20		V
Gate-Source Voltage		V _{GS}	±8		
Continuous Drain Current (T _J = 150 °C) ^a	T _A =25°C	I _D	3.2	2.9	A
	T _A =70°C		2.5	2.3	
Maximum Power Dissipation ^a	T _A =25°C	P _D	0.8	0.7	W
	T _A =70°C		0.5	0.4	
Continuous Drain Current (T _J = 150 °C) ^b	T _A =25°C	I _D	2.9	2.7	A
	T _A =70°C		2.3	2.1	
Maximum Power Dissipation ^b	T _A =25°C	P _D	0.6	0.5	W
	T _A =70°C		0.4	0.3	
Pulsed Drain Current ^c		I _{DM}	10		A
Thermal Resistance.Junction- to-Ambient ^a		R _{thJA}	150	175	°C/W
Thermal Resistance.Junction- to-Ambient ^b		R _{thJA}	180	210	
Junction-to-Case Thermal Resistance		R _{thJC}		76	
Junction Temperature		T _J	150		°C
Storage Temperature Range		T _{stg}	-55 to 150		

Notes:

a Surface mounted on FR4 Board using 1 in sq pad size, 1oz Cu.

b Surface mounted on FR4 board using the minimum recommended pad size, 1oz Cu.

c Repetitive rating, pulse width limited by junction temperature, $t_p = 10\mu\text{s}$, Duty Cycle = 1%d Repetitive rating, pulse width limited by junction temperature $T_{J(MAX)} = 150^\circ\text{C}$.

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■ Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D=250\ \mu\text{A}$, $V_{GS}=0\text{V}$	20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=16\text{V}$, $V_{GS}=0\text{V}$			1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0\text{V}$, $V_{GS}=\pm 8\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$, $I_D=250\ \mu\text{A}$	0.4		1	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=4.5\text{V}$, $I_D=3.6\ \text{A}$			47	m Ω
		$V_{GS}=2.5\text{V}$, $I_D=3.1\ \text{A}$			55	
		$V_{GS}=1.8\text{V}$, $I_D=1\ \text{A}$			66	
Forward Transconductance	g_{FS}	$V_{DS}=5\ \text{V}$, $I_D=3.1\ \text{A}$		8.5		S
Input Capacitance	C_{iss}	$V_{GS}=0\text{V}$, $V_{DS}=10\ \text{V}$, $f=1\text{MHz}$		500		pF
Output Capacitance	C_{oss}			62		
Reverse Transfer Capacitance	C_{rss}			58		
Total Gate Charge	$Q_{g(tot)}$	$V_{GS}=4.5\ \text{V}$, $V_{DS}=10\ \text{V}$, $I_D=3.1\ \text{A}$		8.5		nC
Threshold Gate Charge	$Q_{g(th)}$			0.45		
Gate Source Charge	Q_{gs}			0.65		
Gate Drain Charge	Q_{gd}			3.1		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS}=4.5\ \text{V}$, $V_{DS}=10\ \text{V}$, $R_L=3.5\ \Omega$, $R_G=6\ \Omega$		12		ns
Turn-On Rise Time	t_r			20.8		
Turn-Off DelayTime	$t_{d(off)}$			38.8		
Turn-Off Fall Time	t_f			10.8		
Diode Forward Voltage	V_{SD}	$I_S=1\ \text{A}$, $V_{GS}=0\text{V}$			1.5	V

■ Marking

Marking	WT6*
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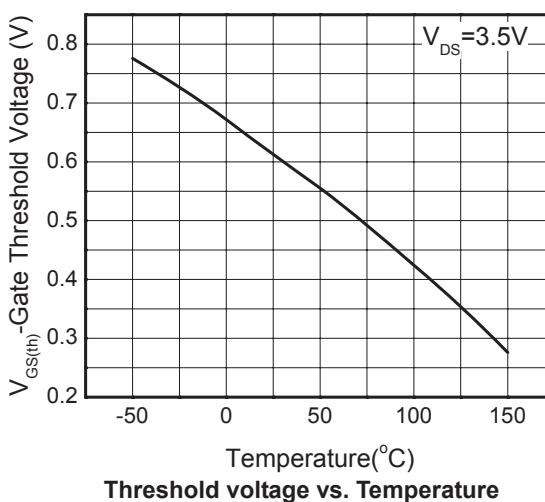
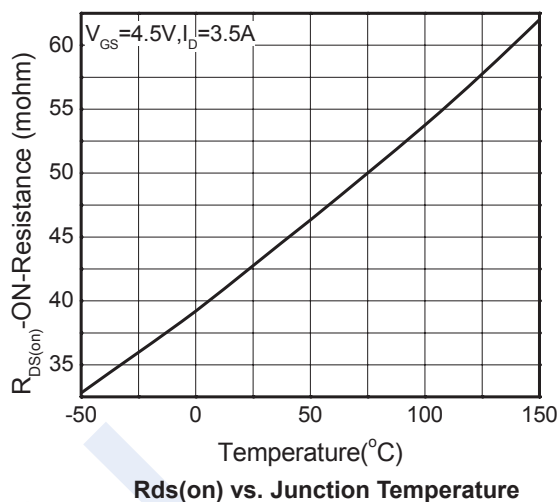
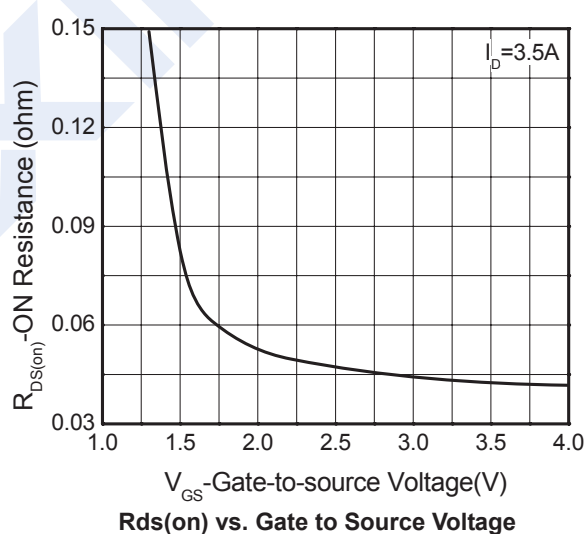
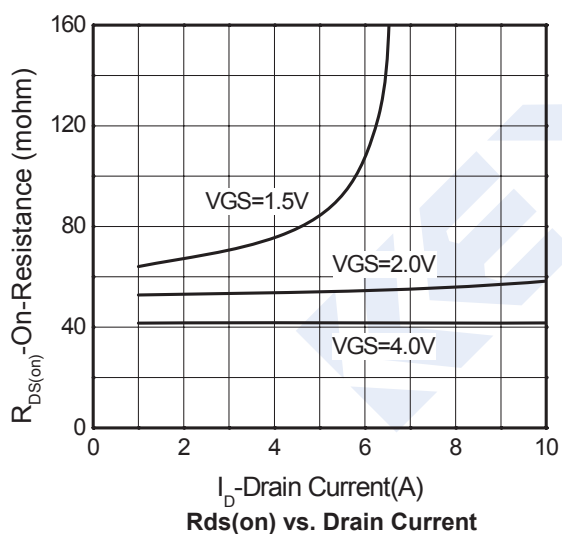
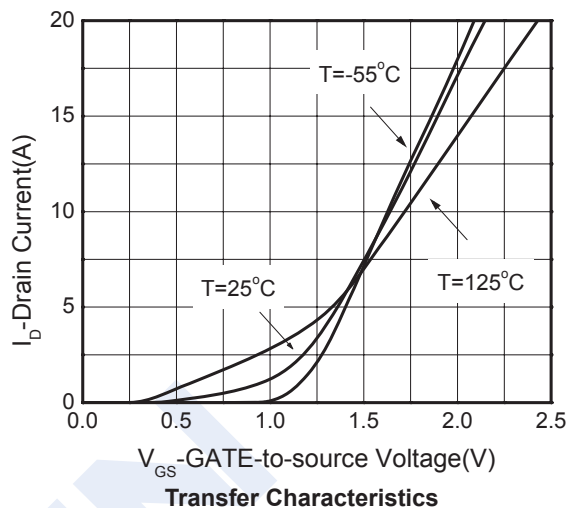
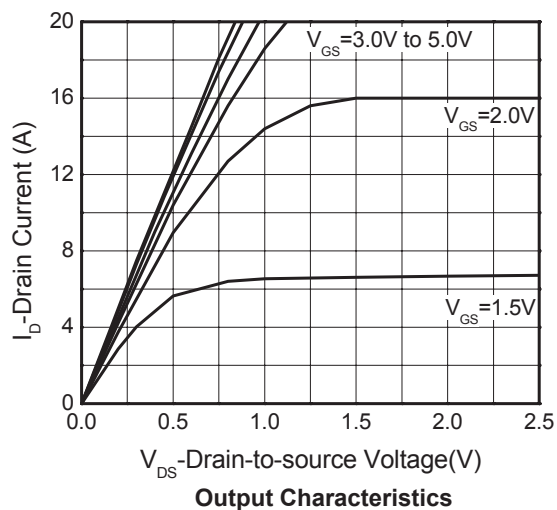
WT6 = Device Code

* = Month (A~Z)

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■ Typical Characteristics



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