
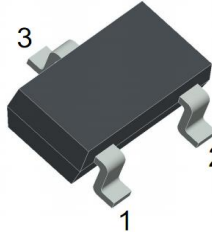
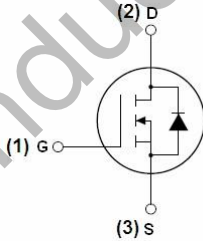
 <p style="font-size: 1.2em; font-weight: bold; margin-top: 10px;">WG2310</p> <p>60V N-Channel MOSFET</p> <p>Features:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Low Intrinsic Capacitances. <input type="checkbox"/> Excellent Switching Characteristics. <input type="checkbox"/> Extended Safe Operating Area. <input type="checkbox"/> Unrivalled Gate Charge :Qg= 6nC (Typ.). <input type="checkbox"/> BVDSS=60V, I_D=3A <input type="checkbox"/> RDS(on) : 90mΩ (Max) @VG=10V <input type="checkbox"/> 100% Avalanche Tested 	<p style="text-align: center;">SOT-23 </p> <div style="display: flex; justify-content: space-around; align-items: center;">  <div style="text-align: right;"> <p>1.GATE</p> <p>2.SOURCE</p> <p>3.DRAIN</p> </div> </div> <div style="text-align: center; margin-top: 10px;">  <p>Marking:MS10</p> </div>
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Maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	60	V
Gate-Source Voltage	V _{GS}	±20	
Continuous Drain Current	I _D	3	A
Pulsed Diode Curren	I _{DM}	10	
Continuous Source-Drain Current(Diode Conduction)	I _S	0.8	
Power Dissipation	P _D	1.25	W
Thermal Resistance from Junction to Ambient (t≤5s)	R _{θJA}	357	°C/W
Operating Junction	T _J	150	°C
Storage Temperature	T _{STG}	-55~+150	°C

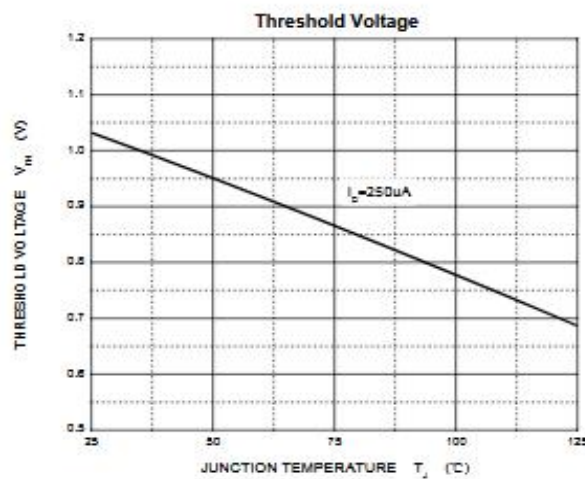
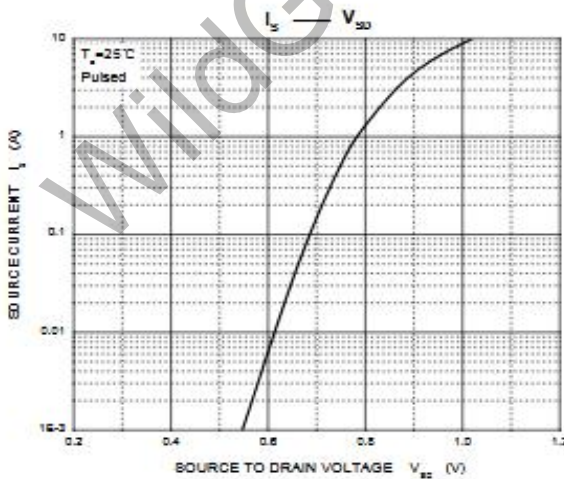
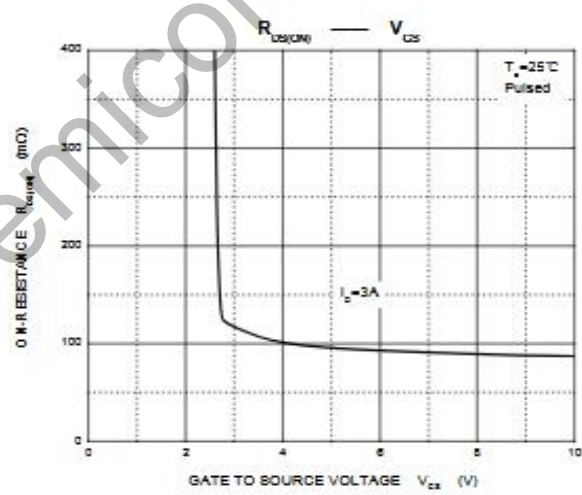
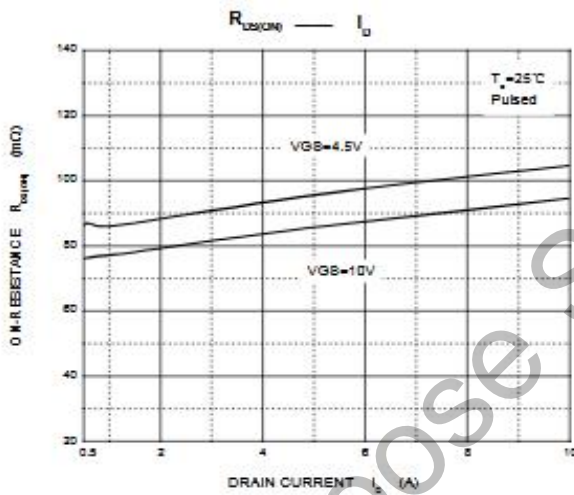
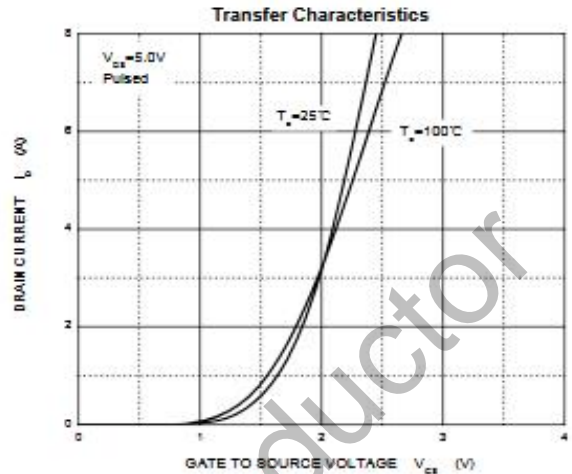
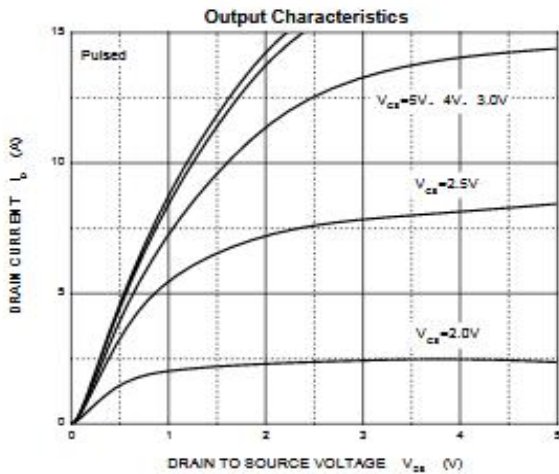
Electrical Characteristics @T_j=25°C(unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Drain-source breakdown voltage	V(BR)DSS	VGS = 0V, ID = 250μA	60			V
Gate-source threshold voltage	VGS(th)	VDS =VGS, ID = 250μA	0.9		2	V
Gate-source leakage	IGSS	VDS =0V, VGS = ±20V			±100	nA
Zero gate voltage drain current	IDSS	VDS = 60V, VGS =0V			1	μA
Drain-source on-state resistancea	RDS(on)	VGS = 10V, ID = 3 A		72	95	mΩ
		VGS = 4.5V, ID = 2 A		82	100	mΩ
Forward transconductancea	gfs	VDS = 4.5V, ID = 3A		7		S
Diode forward voltage	VSD	IS=1A,VGS=0V		0.8	1.2	V
Dynamic						
Input capacitance	Ciss	VDS = 10V,VGS =0V, f=1MHz		247		pF
Output capacitance	Coss			34		pF
Reverse transfer capacitanceb	Crss			20		pF
Total gate charge	Qg	VDS = 10V,VGS = 4.5V, ID = 3A		6	4.5	nC
Gate-source charge	Qgs			1		nC
Gate-drain charge	Qgd			1.3		nC
Gate resistance	Rg	f=1MHz		5		Ω
Switchingb						
Turn-on delay time	td(on)	VDD= 10V RL=10Ω, ID ≈ 1A, VGEN= 4.5V,Rg=6Ω		7	15	ns
Rise time	tr			15	20	ns
Turn-off delay time	td(off)			15	25	ns
Fall time	tf			10	20	ns
Drain-source body diode characteristics						
Continuous Source-Drain Diode Current	IS	Tc=25°C			1.2	A
Pulsed Diode forward Curren	ISM				20	A

Notes:

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t < 5 sec.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production testing.

Typical Characteristics



Package Dimension

SOT-23

Unit: mm

