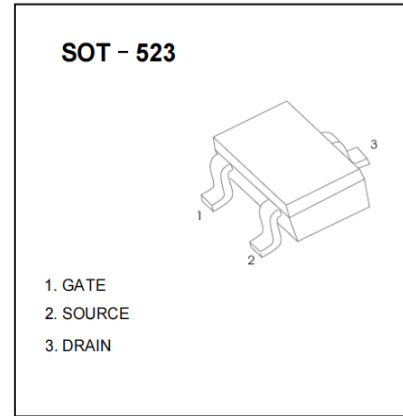


Plastic-Encapsulate MOSFETS

20V N-Channel MOSFET

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
20V	75mΩ@4.5V	1.2A
	90mΩ@2.5V	



Feature

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$ and Low Gate Charge

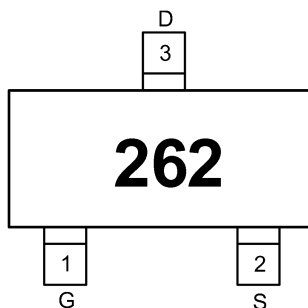
Application

- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

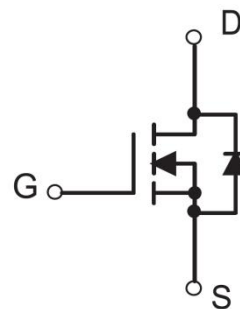
Package

Circuit diagram

Marking



262 =Device Code





Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	20	V
Gate-Source Voltage	V _{GS}	±12	V
Continuous Drain Current	I _D	1.2	A
Plused Drain Current	I _{DM}	4.8	A
Power Dissipation	P _D	0.15	W
Thermal Resistance from Junction to Ambient	R _{θJA}	833	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55~ +150	°C

Electrical characteristics (T_A=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =20V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±10V, V _{DS} = 0V			±0.1	μA
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.4	0.65	1	V
Drain-source on-resistance ¹⁾	R _{DSON}	V _{GS} =4.5V, I _D =1A		75	90	mΩ
		V _{GS} =2.5V, I _D =0.5A		90	110	
Dynamic characteristics						
Input Capacitance ²⁾	C _{iss}	V _{DS} =10V, V _{GS} =0V, f=1MHz		220		pF
Output Capacitance ²⁾	C _{oss}			40		pF
Reverse Transfer Capacitance ²⁾	C _{rss}			20		pF
Total gate charge	Q _g	V _{DS} =10V, V _{GS} =4.5V, I _D =2A		2.7		nC
Gate-source charge	Q _{gs}			0.4		nC
Gate-drain charge	Q _{gd}			0.5		nC
Switching Characteristics²⁾						
Turn-on delay time	t _{d(on)}	V _{DD} =10V, R _L =3.3Ω, V _{GEN} =4.5V, R _g =6Ω		2.3		ns
Turn-on rise time	t _r			3.1		ns
Turn-off delay time	t _{d(off)}			20		ns
Turn-off fall time	t _f			2.5		ns
Source-Drain Diode characteristics						
Diode Forward voltage	V _{SD}	V _{GS} =0V, I _S =1A			1.2	V

Notes:

- 1) Pulse Test: Pulse width≤300μs, duty cycle ≤2%.
- 2) These parameters have no way to verify.



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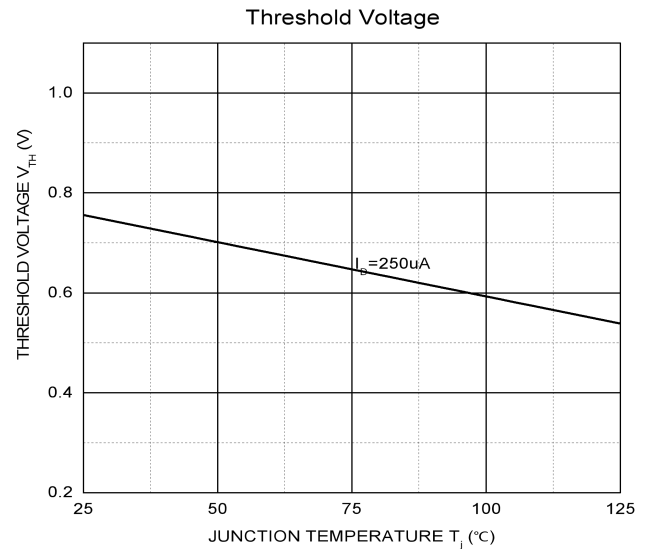
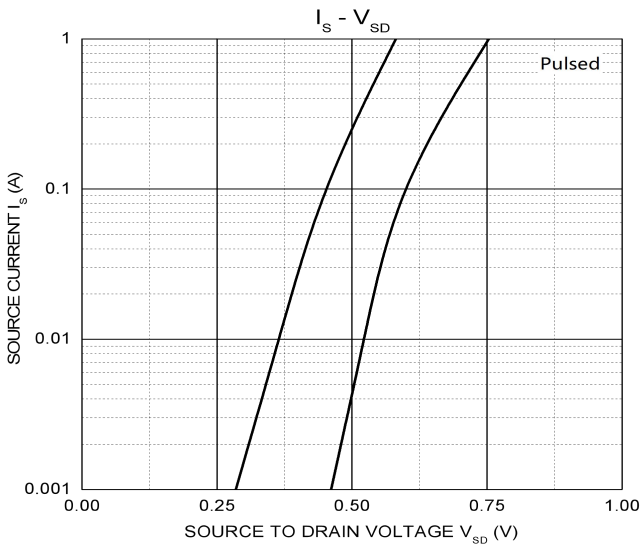
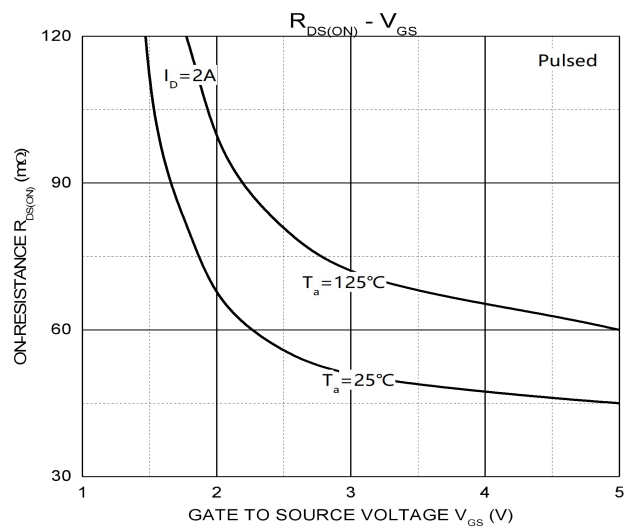
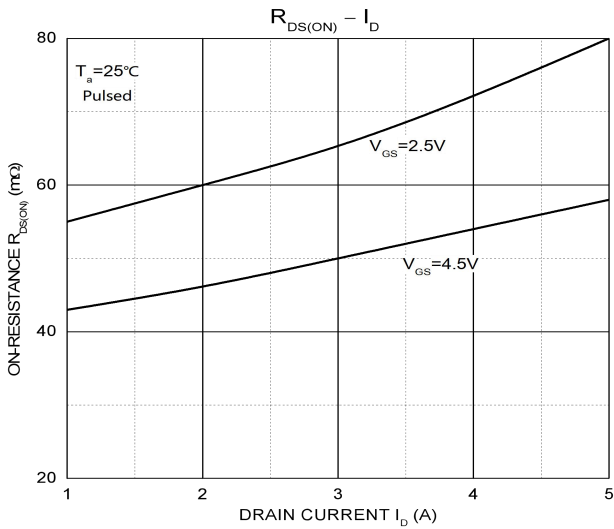
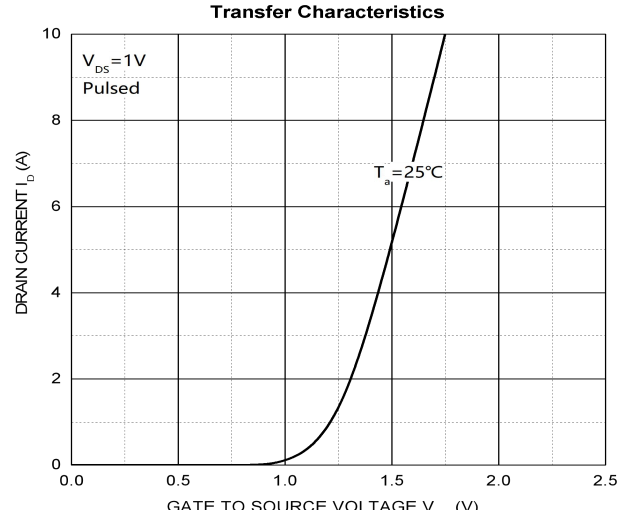
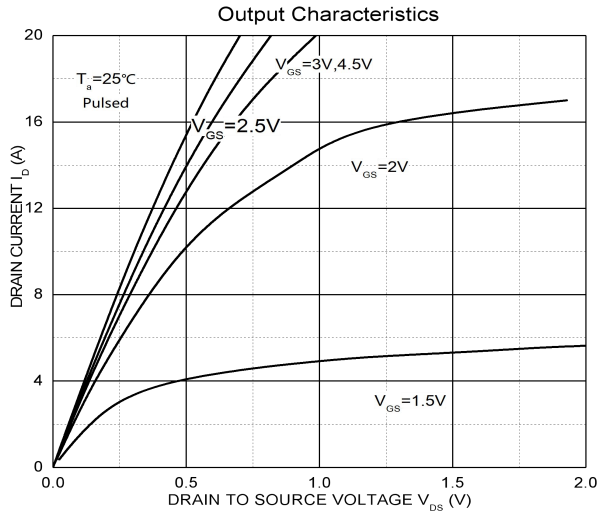
SOT-523

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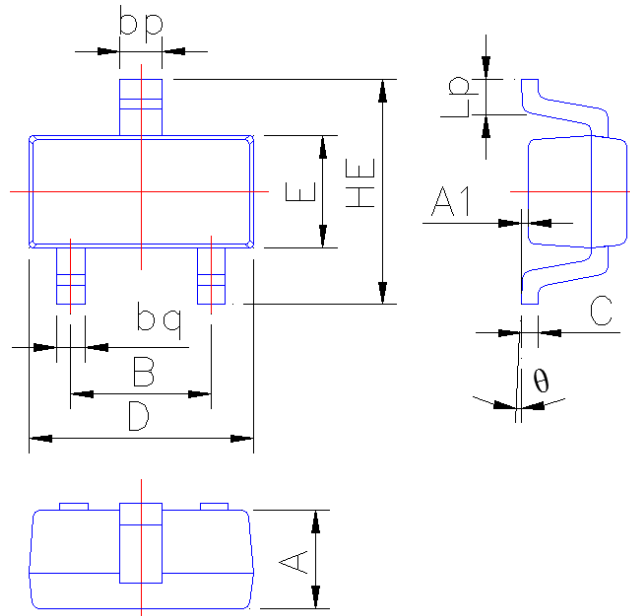


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Typical Characteristics



SOT-523-Package Outline Dimensions



Symbol	Dimension in Millimeters	
	Min	Max
A	0.60	0.80
A1	0.010	0.100
B	0.95	1.05
bp	0.26	0.40
bq	0.16	0.30
C	0.09	0.15
D	1.50	1.70
E	0.70	0.85
HE	1.45	1.75
Lp	0.16	0.36
θ	0°	5°