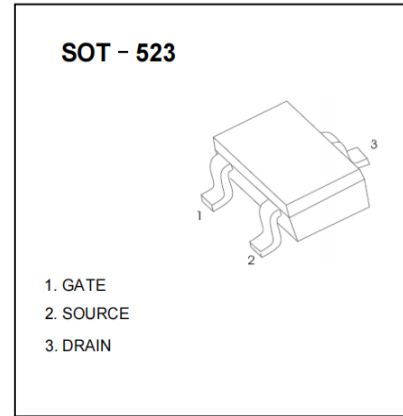


## Plastic-Encapsulate MOSFETS

### 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

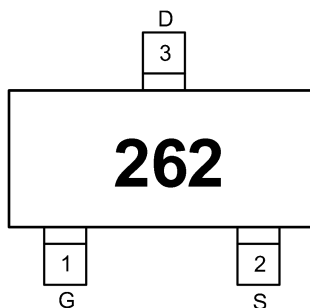
#### Application

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

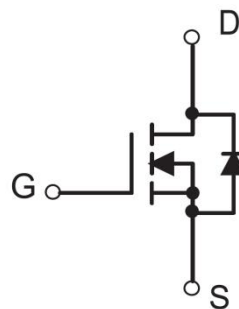
#### Package

#### Circuit diagram

#### Marking



262 =Device Code





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

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

### Electrical characteristics (T<sub>A</sub>=25 °C, unless otherwise noted)

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

