

Single N-Channel, 30V, 0.1A, MOSFET

Features

- ✧ High density cell design for Low $R_{DS(on)}$
- ✧ Voltage controlled small signal switch
- ✧ Rugged and reliable

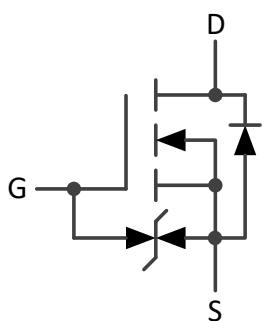
V_{DS} (V)	Typical $R_{DS(on)}$ (Ω)
30	3.8@ $V_{GS}=4V$
	6@ $V_{GS}=2.5V$

Applications

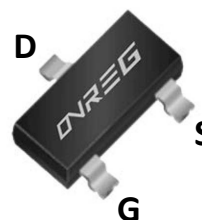
- ✧ DC/DC Converter
- ✧ Load Switch for Portable Devices
- ✧ Battery Switch

Mechanical Data

- ✧ UL Flame Rating : UL94V-0
- ✧ Reel Size : 7 inch
- ✧ RoHS/WEEE Compliant



Circuit Diagram



SOT-523

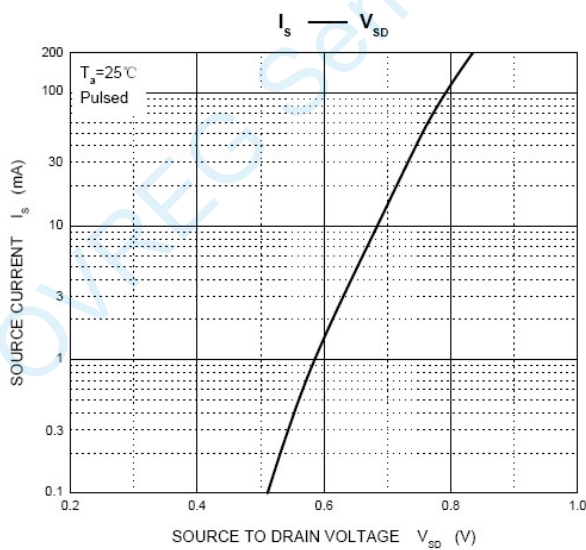
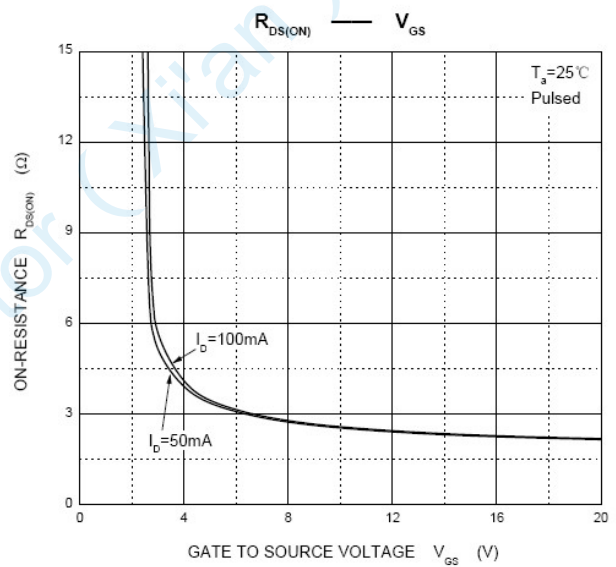
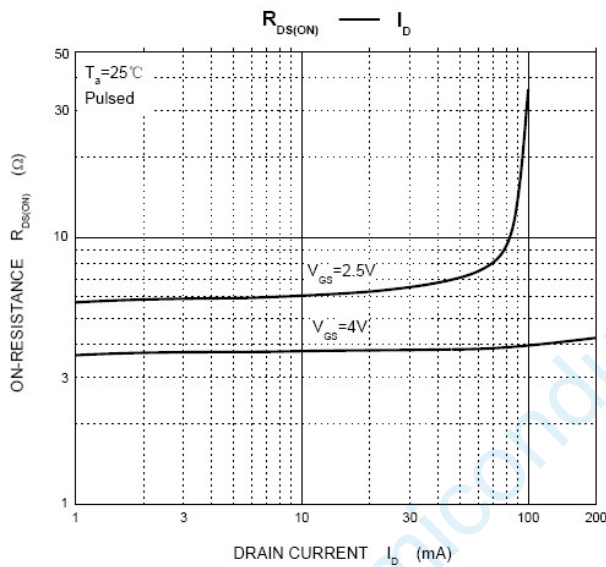
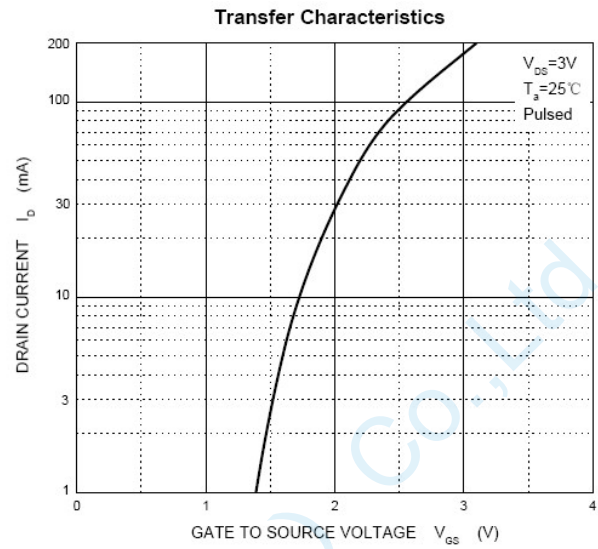
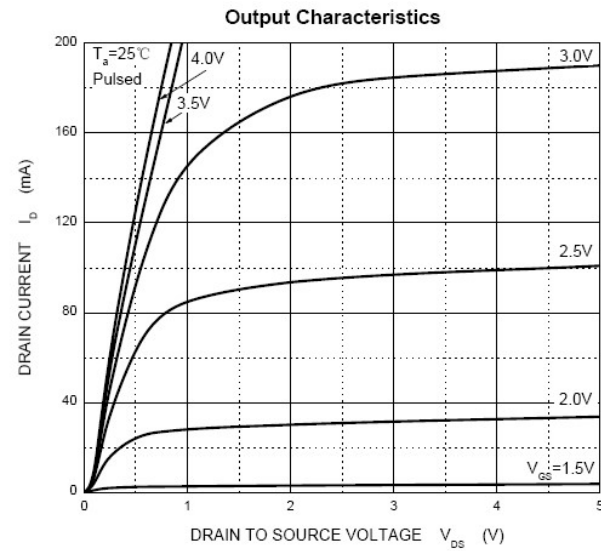
Absolute Maximum Rating at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Units
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	0.1	A
Power Dissipation	P_D	0.15	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^\circ\text{C}$

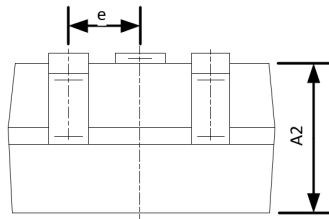
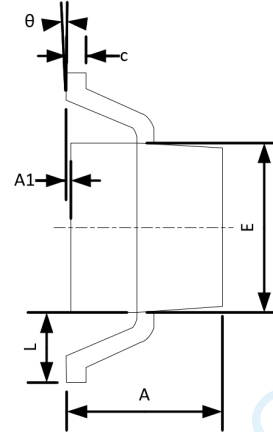
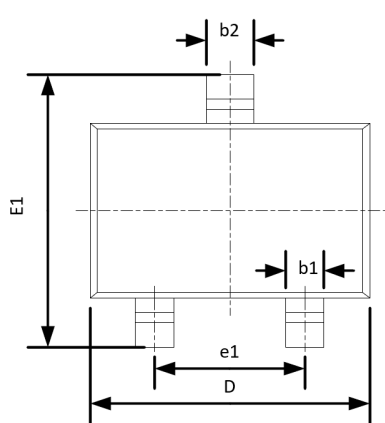
Electrical Characteristics at $T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

Parameter	Symbols	Test Condition	Limits			Unit
			Min	Typ	Max	
Off Characteristics						
Drain-Source Breakdown Voltage	V(BR)DSS	VGS=0V, ID=10uA	30			V
Gate-Threshold voltage	V GS (th)	VDS=3V, ID=100uA	0.8		1.5	V
Gate-body Leakage	IGSS	VDS=0V, VGS=±20V			±2	uA
Zero Gate Voltage Drain current	IDSS	VDS=30V, VGS=0V			1.0	uA
Drain-Source On-Resistance (note2)	RDS(ON)	VGS=4.0V, ID=10mA		3.8	8	Ω
		VGS=2.5V, IC=1mA		6	13	
Forward Tran conductance	gFS	VDS=3V, ID=10mA	20			mS
Dynamic Parameters *						
Input capacitance	Ciss	VDS=5V, VGS=0V,f=1MHz		13		pF
Output capacitance	Coss			9		
Reverse Transfer capacitance	Crss			4		
Switching Parameters *						
Turn-on Delay Time	td(on)	VGS=5V,VDD=5V, RG=10Ω RL=500Ω, ID=10mA		15		ns
Rise Time	tr			35		ns
Turn-off Delay Time	td(off)			80		ns
Fall Time	tf			80		ns

Typical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

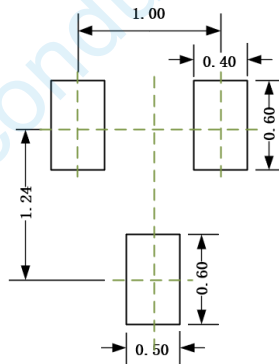


Package Information



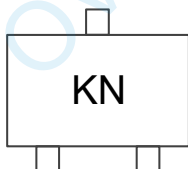
PKG REF.	COMMON DIMENSION(MM)		
	MIN.	NOM.	MAX.
A	0.65	0.80	0.95
A1	0.00	0.05	0.10
A2	0.65	0.75	0.85
b1	0.10	0.20	0.30
b2	0.20	0.30	0.40
c	0.10	0.15	0.20
D	1.40	1.60	1.80
E	0.65	0.80	0.95
E1	1.40	1.60	1.80
e	-	0.50	-
e1	0.85	1.00	1.15
L	0.55REF.		
θ	0°	-	8°

Recommend PCB Layout



Note:
1. Controlling dimension: In millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

Marking



Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVM30N8RT5	GREEN	T/R	7 inch	3k/reel	10reel= 30k/box	4boxes=120k/carton