

Single N-Channel, 20V, 0.75A, MOSFET

Features

- ✧ Trench Technology
- ✧ Supper high density cell design
- ✧ Excellent ON resistance
- ✧ Extremely Low Threshold Voltage
- ✧ Small package SOT-523

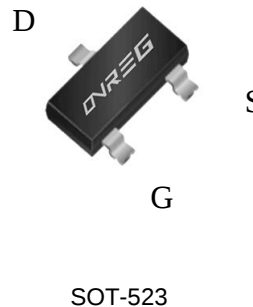
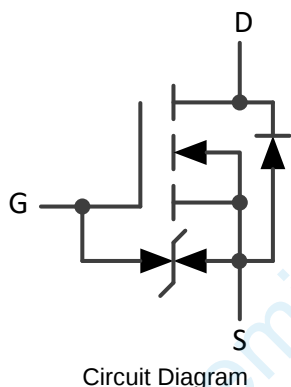
V _{DS} (V)	MAX. R _{DS(on)} (mΩ)
20	410 @ V _{GS} =4.5V
	500 @ V _{GS} =2.5V
	850 @ V _{GS} =1.8V

Applications

- ✧ Interfacing Switching
- ✧ Load/Power Switching for portable device

Mechanical Data

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



Absolute Maximum Rating at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DS}	20	V
Gate-Source Voltage	V _{GS}	±12	
Continuous Drain Current	I _D	0.75	A
Maximum Power Dissipation	P _D	0.15	W
Pulsed Drain Current	I _{DM}	2.8	A
Operating Junction Temperature	T _J	-55 to 150	°C
Lead Temperature	T _L	260	°C
Storage Temperature Range	T _{stg}	-55 to 150	°C

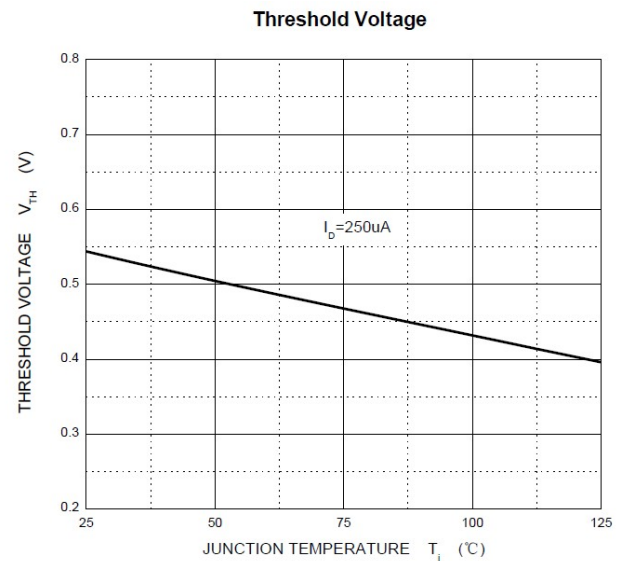
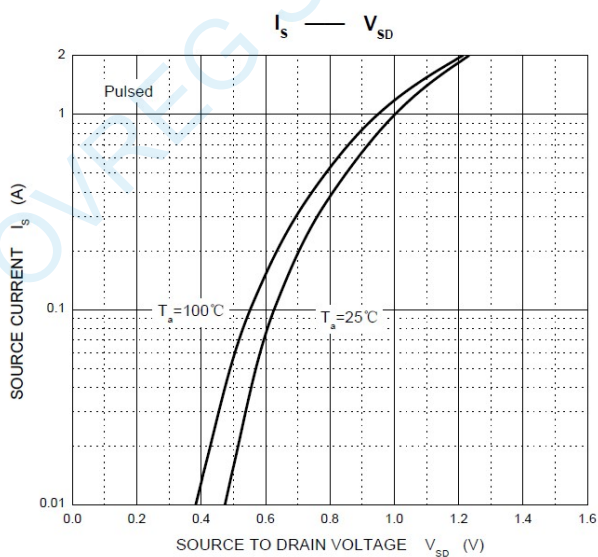
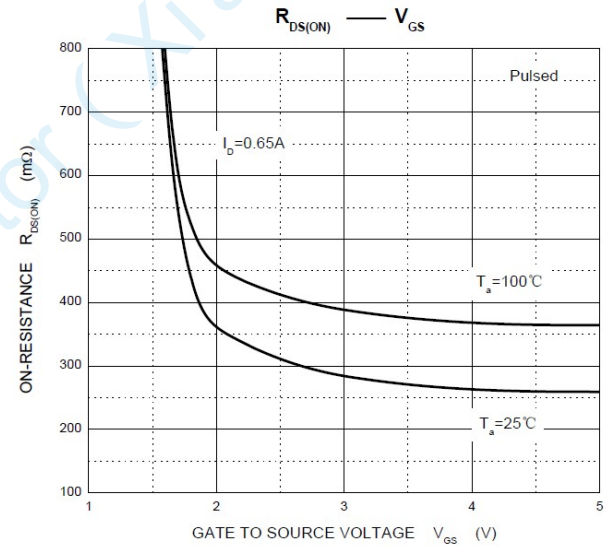
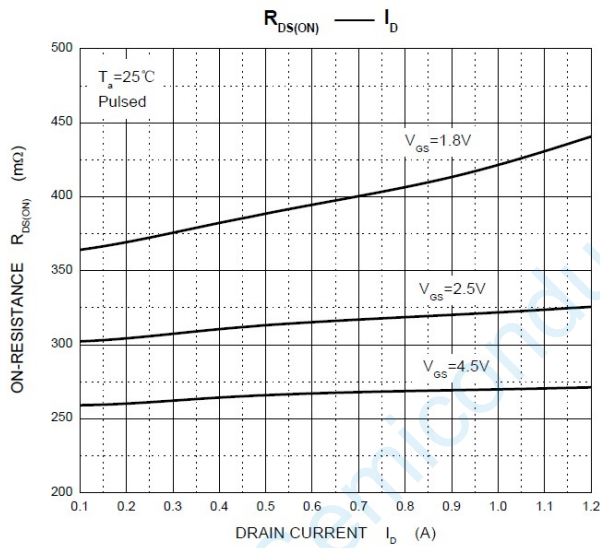
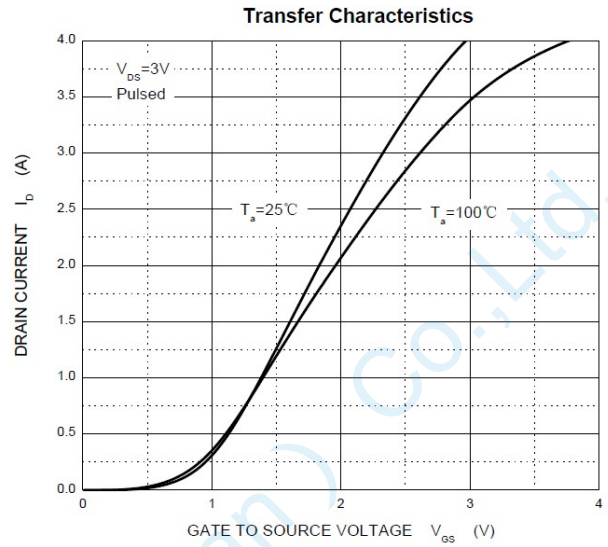
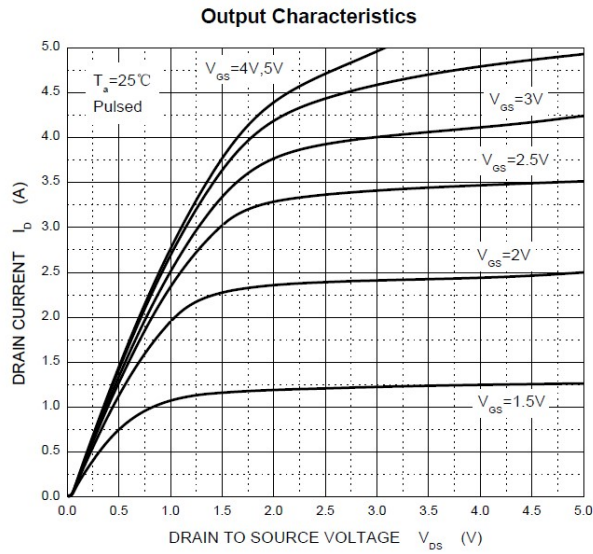
Electronics Characteristics (Ta=25°C, unless otherwise noted)

Parameter	Symbols	Test Condition	Limits			Unit
			Min	Typ	Max	
On/Off States						
Drain-Source Breakdown Voltage	V(BR)DSS	VGS=0V, ID=250uA	20			V
Gate-Threshold voltage(note3)	V GS (th)	VDS=VGS, ID=250uA	0.35	0.54	1.1	V
Gate-body Leakage	IGSS	VDS=0V, VGS=± 10V			± 20	uA
Zero Gate Voltage Drain current	IDSS	VDS=20V, VGS=0V			1	uA
Drain-Source On-Resistance (note3)	RDS(ON)	VGS=4.5V, ID=0.65A			410	mΩ
		VGS=2.5V, IC=0.55A			500	
		VGS=1.8V, IC=0.45A			850	
Forward trans conductance	gfs	VDS=10V, ID=0.8A	1			S
Dynamic Characteristics(note4)						
Input capacitance	Ciss	VDS=16V, VGS=0V,f=1MHz			120	pF
Output capacitance	Coss				20	
Reverse Transfer capacitance	Crss				15	
Switching Time(note4)						
Turn-on Delay Time	td(on)	VDD=10V, RGEN=10Ω, VGS=4.5V, ID=0.5A,		6.7		ns
Rise time	tr			4.8		
Turn-off Delay Time	td(off)			17.3		
Fall time	tf			7.4		
Drain-Source Diode Characteristics						
Diode forward voltage(note3)	VSD	IS=0.15A, VGS=0V			1.2	V

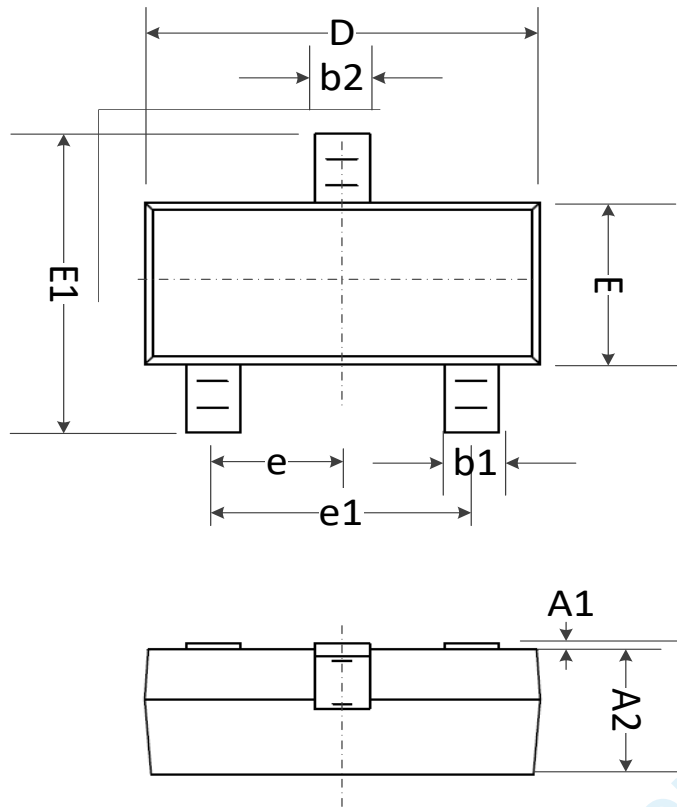
Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with on heat sink at Ta=25°C
3. Pulse Test: Pulse Width ≤300us, Duty Cycle≤0.5%.
4. These parameters have no way to verify.

Electronics Characteristics ($T_a=25^\circ\text{C}$, unless otherwise noted)

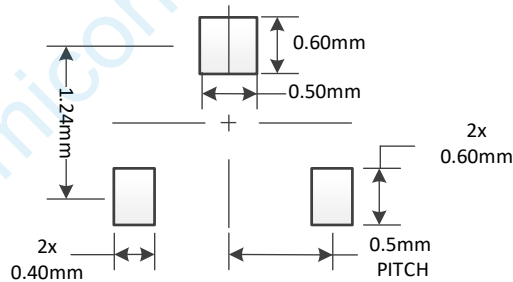


Package information



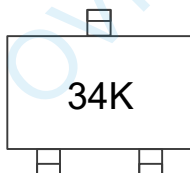
COMMON DIMENSION (MM)			
PKG	SOT-523		
REF.	MIN.	NOM.	MAX.
A	0.70	0.80	0.90
A1	0.00	-	0.10
A2	0.70	-	0.80
b1	0.15	0.20	0.25
b2	0.25	0.30	0.35
c	0.10	-	0.20
D	1.50	-	1.70
E	0.70	-	0.90
E1	1.45	-	1.75
e	0.5BSC		
e1	0.90	1.00	1.10
L	0.20	-	0.40

Recommend PCB Layout



Notes: This PCB Layout Is For Reference Purposes Only

Marking



Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVM20N410T5	GREEN	T/R	7 inch	3k/reel	10reel= 30k/box	4boxes=120k/carton