

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-723

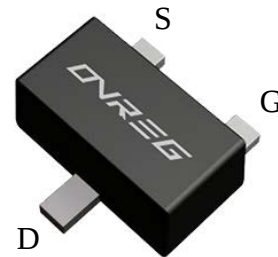
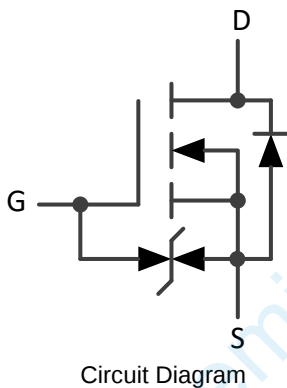
V _{DS} (V)	Max. R _{DS(on)} (mΩ)
20	380 @ V _{GS} =4.5V
	450 @ V _{GS} =2.5V
	800 @ V _{GS} =1.8V

Applications

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

Mechanical Data

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



SOT-723

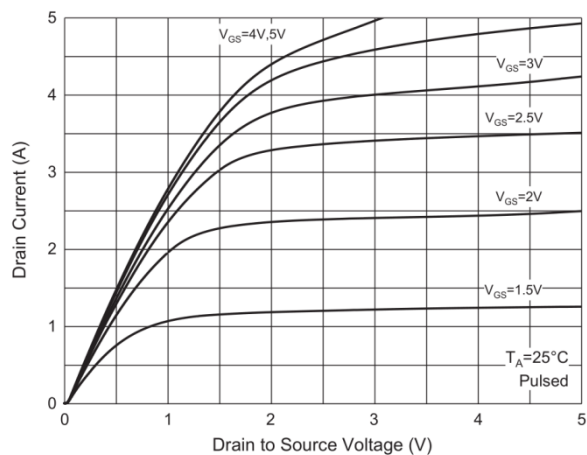
Absolute Maximum Rating at T_A = 25°C, unless otherwise specified

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}	1.8	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

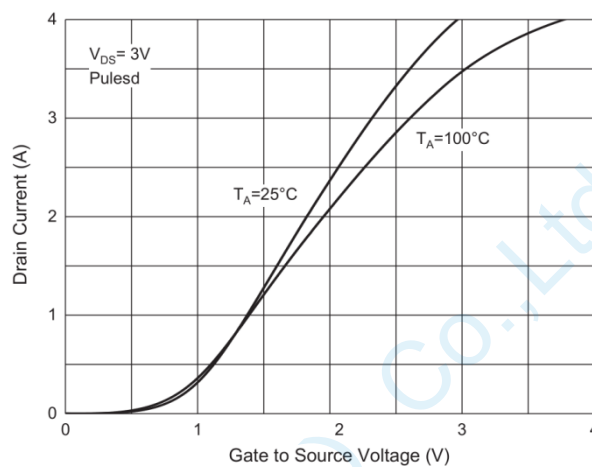
Electronics Characteristics (Ta=25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Drain-to-Source Breakdown Voltage	BV_{DSS}	$V_{GS} = 0\text{ V}, I_D = 250\mu\text{A}$	20			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 20\text{V}, V_{GS} = 0\text{V}$			1	μA
Gate-to-source Leakage Current	I_{GSS}	$V_{DS} = 0\text{ V}, V_{GS} = \pm 8\text{V}$			± 20	μA
ON CHARACTERISTICS						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{GS} = V_{DS}, I_D = 250\mu\text{A}$	0.35		1.1	V
Drain-to-source On-resistance	$R_{DS(on)}$	$V_{GS} = 4.5\text{V}, I_D = 0.65\text{A}$			380	m Ω
		$V_{GS} = 2.5\text{V}, I_D = 0.55\text{A}$			450	
		$V_{GS} = 1.8\text{V}, I_D = 0.45\text{A}$			800	
Forward Trans conductance	g_{FS}	$V_{DS} = 10\text{V}, I_D = 0.8\text{A}$		1.6		S
CHARGES, CAPACITANCES AND GATE RESISTANCE						
Input Capacitance	C_{ISS}	$V_{GS} = 0\text{ V}, f = 1.0\text{MHz}, V_{DS} = 16\text{V}$		79	120	pF
Output Capacitance	C_{OSS}			13	30	
Reverse Transfer Capacitance	C_{RSS}			9	10	
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	$t_d(ON)$	$V_{DS} = 10\text{ V}, V_{GEN} = 4.5\text{V}, I_D = 0.5\text{A}, R_G = 10\Omega,$		6.7		ns
Rise Time	t_r			4.8		
Turn-Off Delay Time	$t_d(OFF)$			17.3		
Fall Time	t_f			7.4		
BODY DIODE CHARACTERISTICS						
Forward Voltage	V_{SD}	$V_{GS} = 0\text{ V}, I_S = 0.15\text{A}$			1.2	V

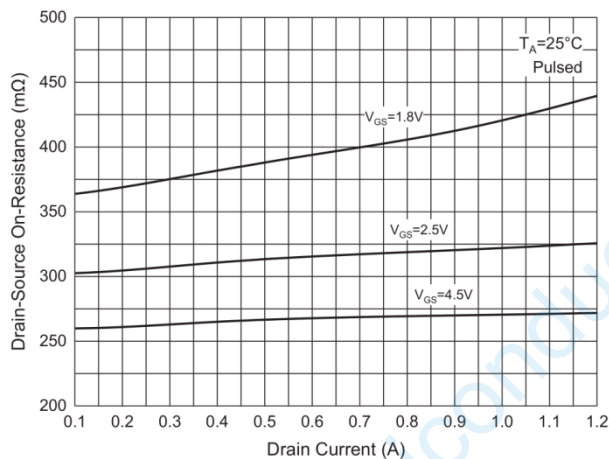
Electronics Characteristics ($T_A=25^\circ\text{C}$, unless otherwise noted)



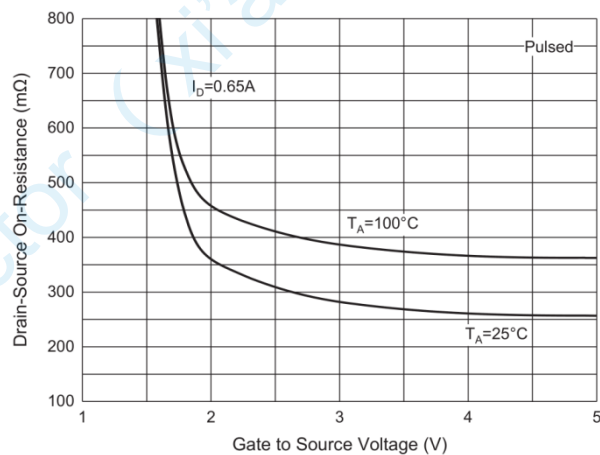
Output Characteristics



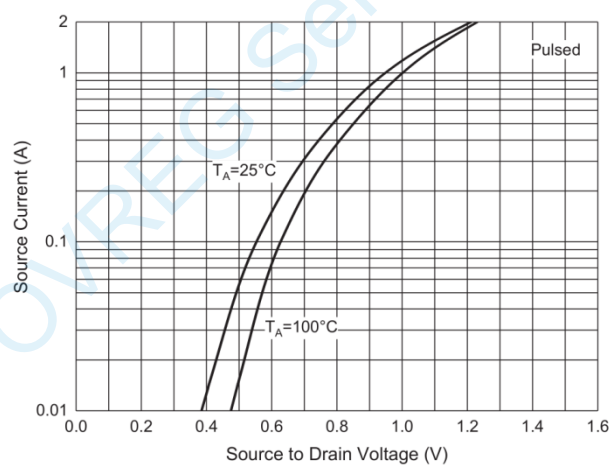
Transfer Characteristics



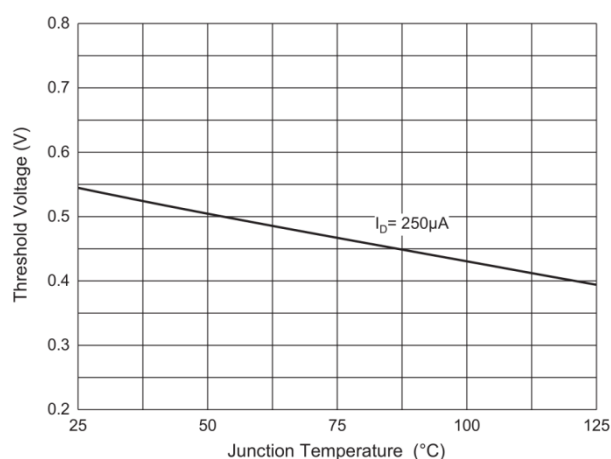
$R_{DS(ON)}-I_D$ Characteristics



$R_{DS(ON)}-V_{GS}$ Characteristics



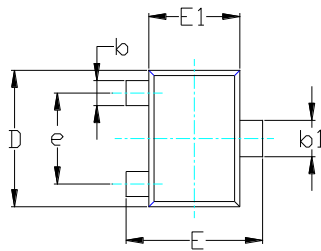
I_S-V_{SD} Characteristics



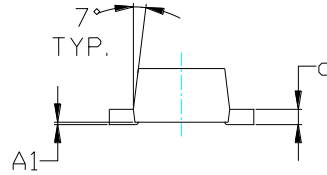
Threshold Voltage Characteristics

Package information

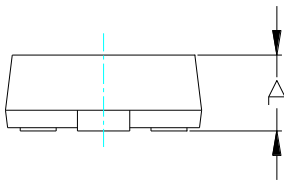
Top view



Side view

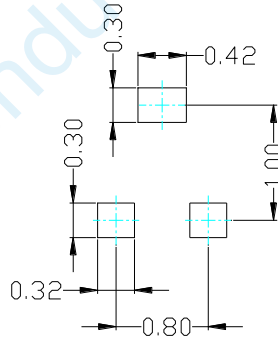


Front view



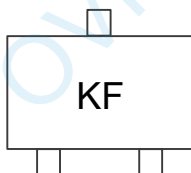
SYMBOL	DIMENSIONS IN MILLIMETER	
	MIN	MAX
A	0.430	0.500
A1	0.000	0.050
b	0.170	0.270
b1	0.270	0.370
c	0.080	0.150
D	1.150	1.250
E	1.150	1.250
E1	0.750	0.850
e	0.800 TYP.	
θ	0°	7°

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
OVM20N380T7	GREEN	T/R	7 inch	8k/reel	10reel= 80k/box	4boxes=320k/carton