

Single N-Channel, 60V, 380mA, MOSFET

Features

- ✧ High density cell design for Low $R_{DS(on)}$
- ✧ Voltage controlled small signal switch
- ✧ Rugged and reliable
- ✧ ESD protected Gate HBM 2.5kV

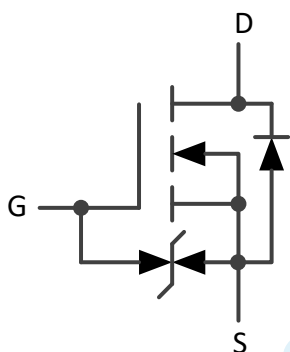
V_{DS} (V)	Max. $R_{DS(on)}$ (Ω)
60	2.8 @ $V_{GS}=10V$
	3.2 @ $V_{GS}=4.5V$

Applications

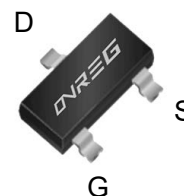
- ✧ DC/DC Converter
- ✧ Load Switch for Portable Devices
- ✧ Battery Switch

Mechanical Data

- ✧ UL Flame Rating : UL94V-0
- ✧ RoHS/WEEE Compliant



Circuit Diagram



SOT-23

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

Parameter	Symbol	Value	Units
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	380	mA
Power Dissipation	P_D	0.3	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

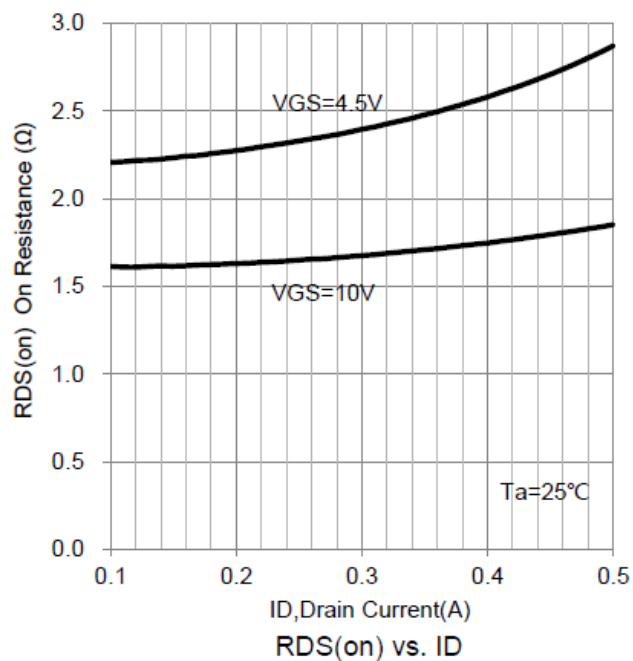
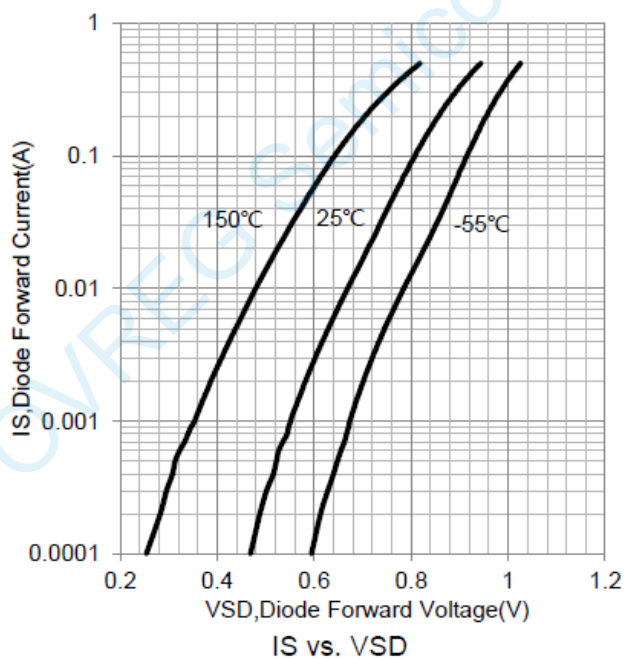
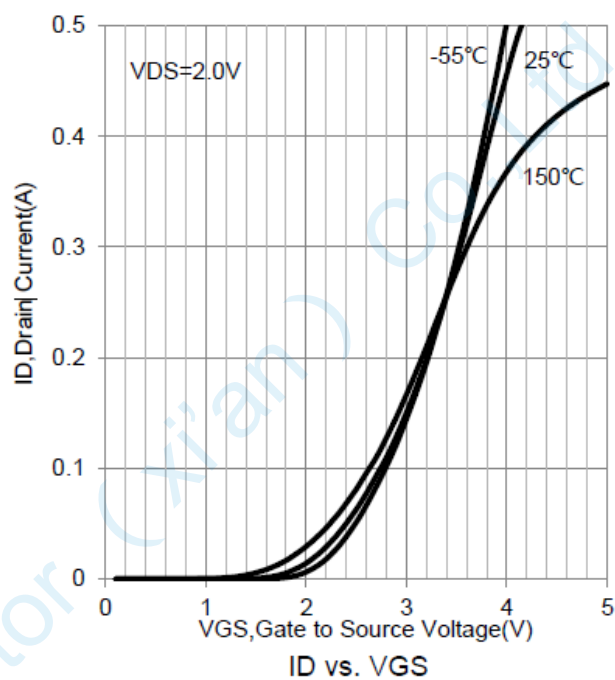
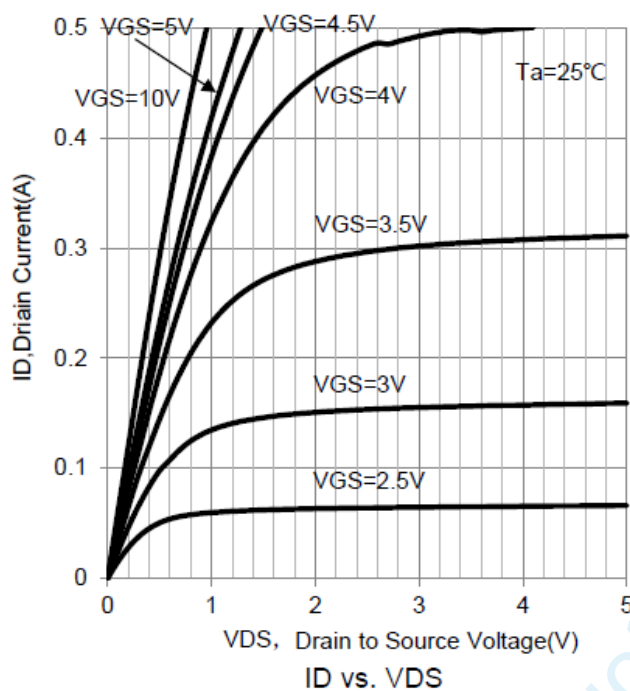
Electrical Characteristics at $T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified

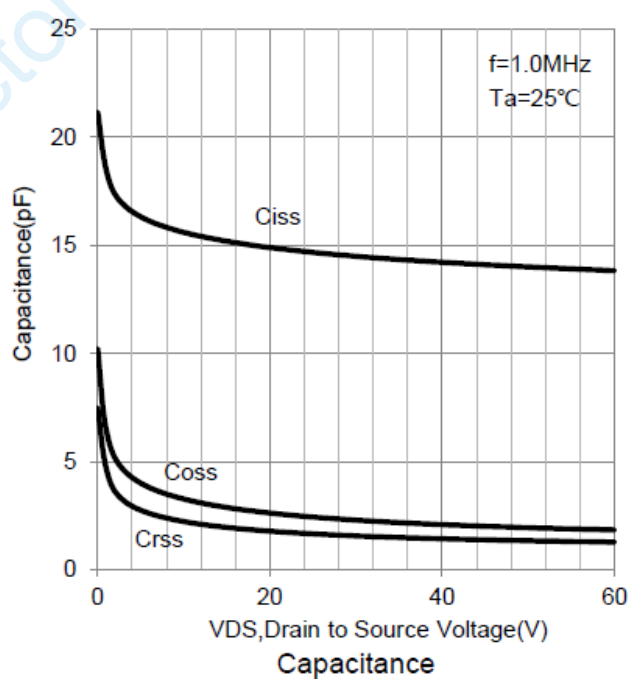
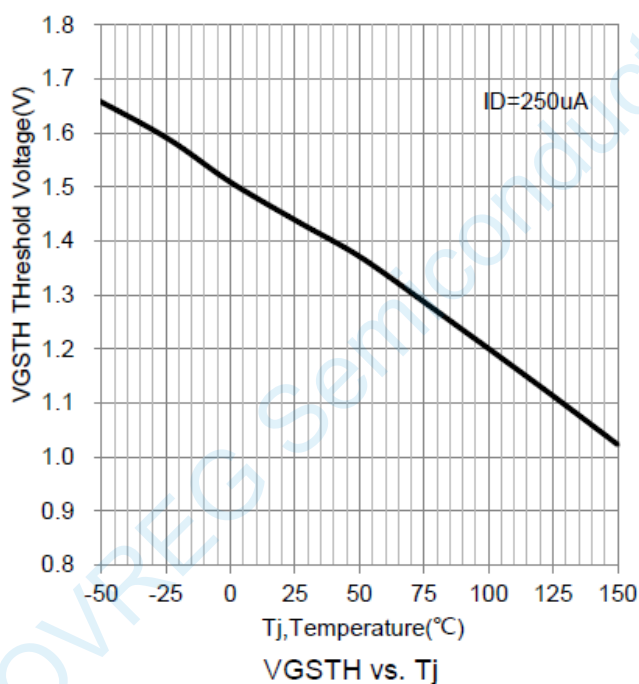
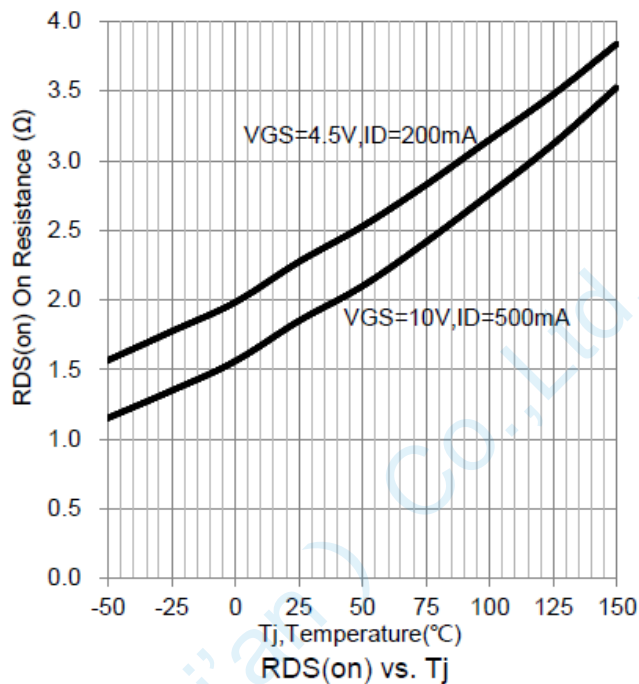
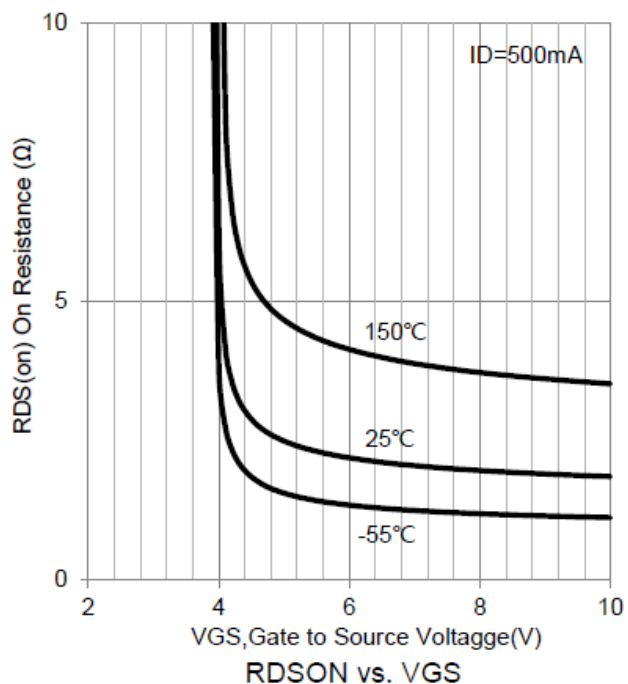
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	60			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 60V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSSF}	$V_{GS} = 20V, V_{DS} = 0V$			10	μA
	I_{GSSR}	$V_{GS} = -20V, V_{DS} = 0V$			-10	μA
Gate threshold voltage*	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1		2.0	V
Drain-source on-resistance*	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 500mA$			2.8	Ω
		$V_{GS} = 4.5V, I_D = 200mA$			3.2	
Total Gate charge	Q_G	$V_{GS} = 4.5V, V_{DS} = 10V, I_D = 500mA$		0.44		nC
Dynamic characteristics						
Input Capacitance	C_{iss}	$V_{DS} = 25V, V_{GS} = 0V, f = 1MHz$			35	pF
Output Capacitance	C_{oss}				10	
Reverse Transfer Capacitance	C_{rss}				5	
Switching Characteristics						
Turn-on delay time	$t_{d(on)}$	$V_{GEN} = 10V, V_{DS} = 30V, R_G = 25\Omega, I_D = 500mA, R_L = 60\Omega$		2.7		ns
Turn-off delay time	$t_{d(off)}$			13		
Reverse recovery Time	t_{rr}			2.5		
Source-Drain Diode characteristics						
Diode Forward voltage	V_{SD}	$V_{GS} = 0V, I_S = 500mA$		0.85		V
GATE-SOURCE ZENER DIODE						
Gate-Source Breakdown Voltage	BV_{GSO}	$I_{GS} = \pm 1mA$ (Open Drain)	± 21.5		± 30	V

Notes:

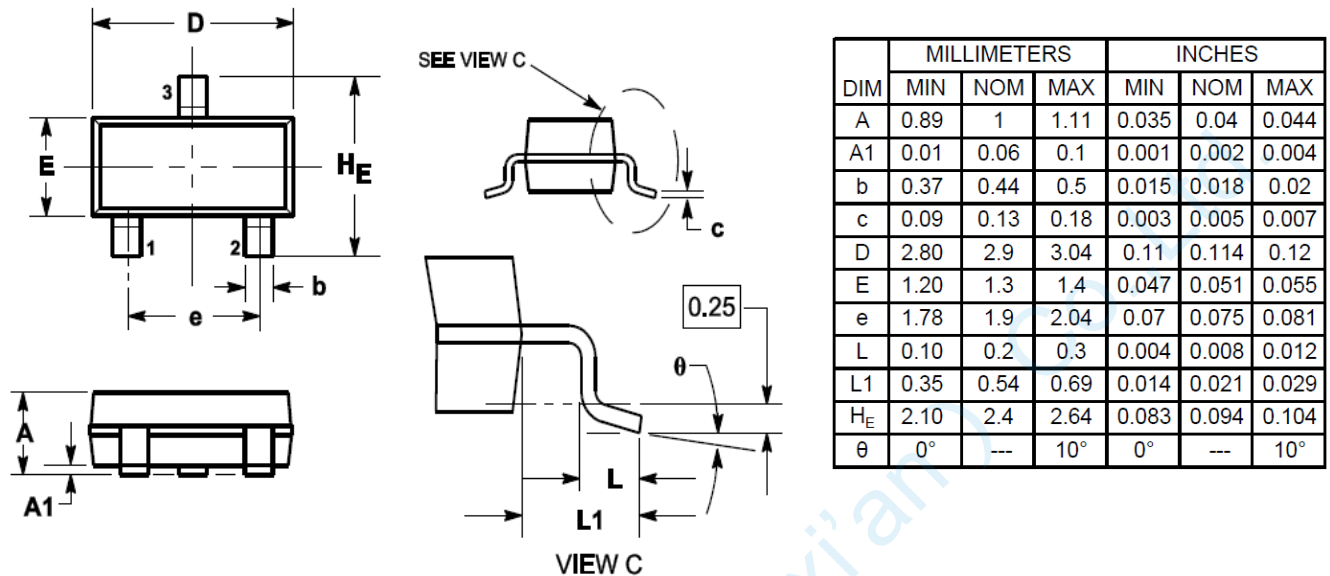
*Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

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

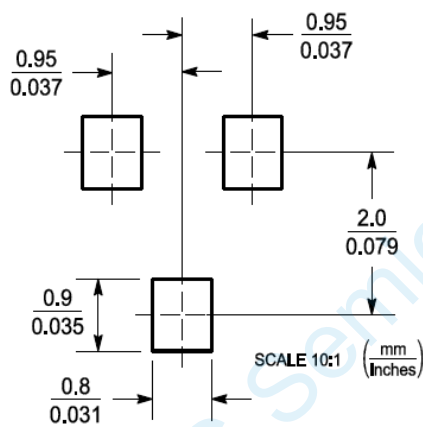




Package Information

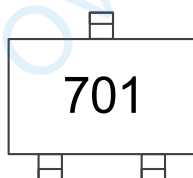


Recommend PCB Layout



Notes: This PCB Layout Is For Reference Purposes Only

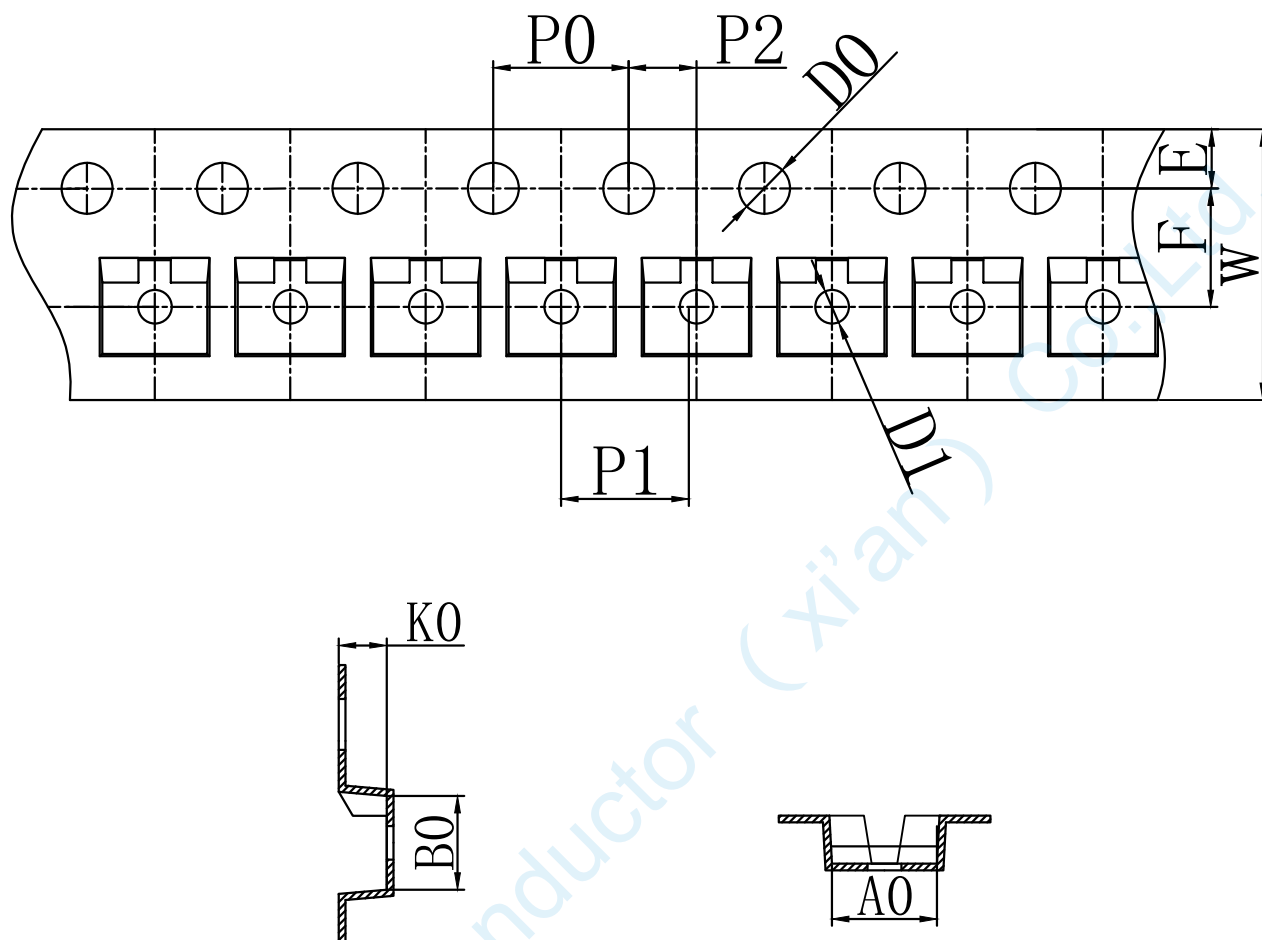
Marking



Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OVM6032ES2	GREEN	T/R	7 inch	3k/reel	10reel= 30k/box	4boxes=120k/carton

Tape information



SYMBOL	A0	B0	K0	P0	P1	P2
SPEC	3.08 ± 0.10	2.84 ± 0.10	1.27 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05
SYMBOL	E	F	D0	D1	W	
SPEC	1.75 ± 0.10	3.50 ± 0.05	$1.50^{+0.1}_{0}$	1.0 ± 0.2	$8.00^{+0.3}_{-0.1}$	