

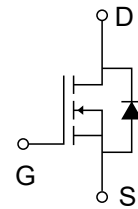
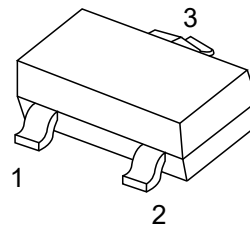
1.Features

- $V_{DS(V)}=100V$
- $I_D=1.5A$
- $R_{DS(ON)}<245m\Omega(V_{GS}=10V)$
- $R_{DS(ON)}<265m\Omega(V_{GS}=4.5V)$

2.Pinning information

Pin	Symbol	Description
1	G	GATE
2	S	SOURCE
3	D	DRAIN

SOT-23



3.Absolute Maximum Ratings $T_A = 25^\circ C$

Parameter		Symbol	5s	Steady State	Units
Drain-Source Voltage		V _{DS}	100		V
Gate-Source Voltage		V _{GS}	±20		
Continuous Drain Current *1	T _C =25°C	I _D	1.5	1.15	A
	T _C =70°C		1.2	0.92	
Pulsed Drain Current *2		I _{DM}	6		
Avalanche Current *2	L=0.1mH	I _{AS}	6		
Single Avalanche Energy		E _{AS}	1.8		
Power Dissipation *1	T _C =25°C	P _D	1.25	0.73	W
	T _A =70°C		0.80	0.47	
Thermal Resistance.Junction- to-Ambient *1	t≤5 sec	R _{thJA}	100		°C/W
	Steady State		170		
Thermal Resistance.Junction-to-Foot		R _{thJF}	55		
Junction Temperature		T _J	-55 to 150		°C
Storage Temperature Range		T _{STG}	-55 to 150		

*1 Surface Mounted on 1" x 1" FR4 Board.

*2 Pulse width limited by maximum junction temperature.



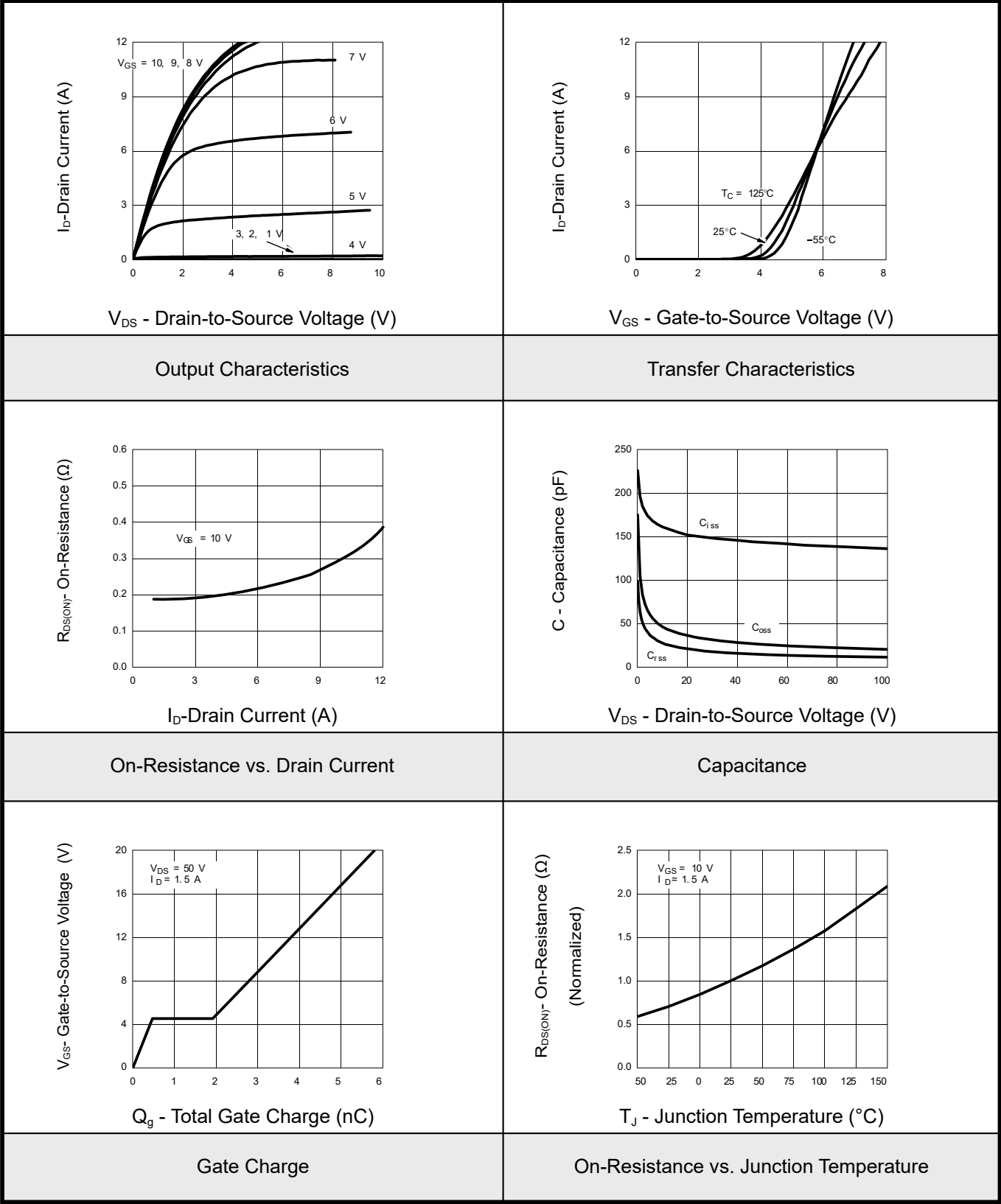
4. Electrical Characteristics $T_A = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Drain-Source Breakdown Voltage	V_{DSS}	$I_D = 1\text{mA}$, $V_{GS} = 0\text{V}$,	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 100\text{V}$, $V_{GS} = 0\text{V}$			1	μA
		$V_{DS} = 100\text{V}$, $V_{GS} = 0\text{V}$, $T_A = 70^\circ\text{C}$			75	
Gate-Body leakage current	I_{GSS}	$V_{DS} = 0\text{V}$, $V_{GS} = \pm 20\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 250\mu\text{A}$	2		4	V
On-State Drain Current *1	$I_{D(ON)}$	$V_{DS} \geq 15\text{V}$, $V_{GS} = 10\text{V}$	6			A
Static Drain-Source On-Resistance *1	$R_{DS(ON)}$	$V_{GS} = 10\text{V}$, $I_D = 1.5\text{A}$			245	$\text{m}\Omega$
		$V_{GS} = 4.5\text{V}$, $I_D = 1\text{A}$			265	$\text{m}\Omega$
Forward Transconductance *1	g_{FS}	$V_{DS} = 15\text{V}$, $I_D = 1.5\text{A}$		4		S
Gate Resistance	R_g		0.5		2.4	Ω
Total Gate Charge	Q_g	$V_{GS} = 10\text{V}$, $V_{DS} = 50\text{V}$, $I_D = 1.5\text{A}$		3.3	4	nC
Gate Source Charge	Q_{gs}			0.47		
Gate Drain Charge	Q_{gd}			1.45		
Turn-On DelayTime	$t_{D(on)}$	$I_D = 0.2\text{A}$, $V_{DS} = 50\text{V}$ $V_{GEN} = 10\text{V}$ $R_L = 33\Omega$, $R_G = 6\Omega$		7	11	ns
Turn-On Rise Time	t_r			11	17	
Turn-Off DelayTime	$t_{D(off)}$			9	15	
Turn-Off Fall Time	t_f			10	15	
Body Diode Reverse Recovery Time	t_{rr}	$I_F = 1.5\text{A}$, $dI/dt = 100\text{A}/\mu\text{s}$		50	100	
Maximum Body-Diode Continuous Current	I_S				1	A
Diode Forward Voltage	V_{SD}	$I_S = 1\text{A}$, $V_{GS} = 0\text{V}$		0.8	1.2	V

*1 Pulse test: $PW \leq 300\mu\text{s}$ duty cycle $\leq 2\%$.

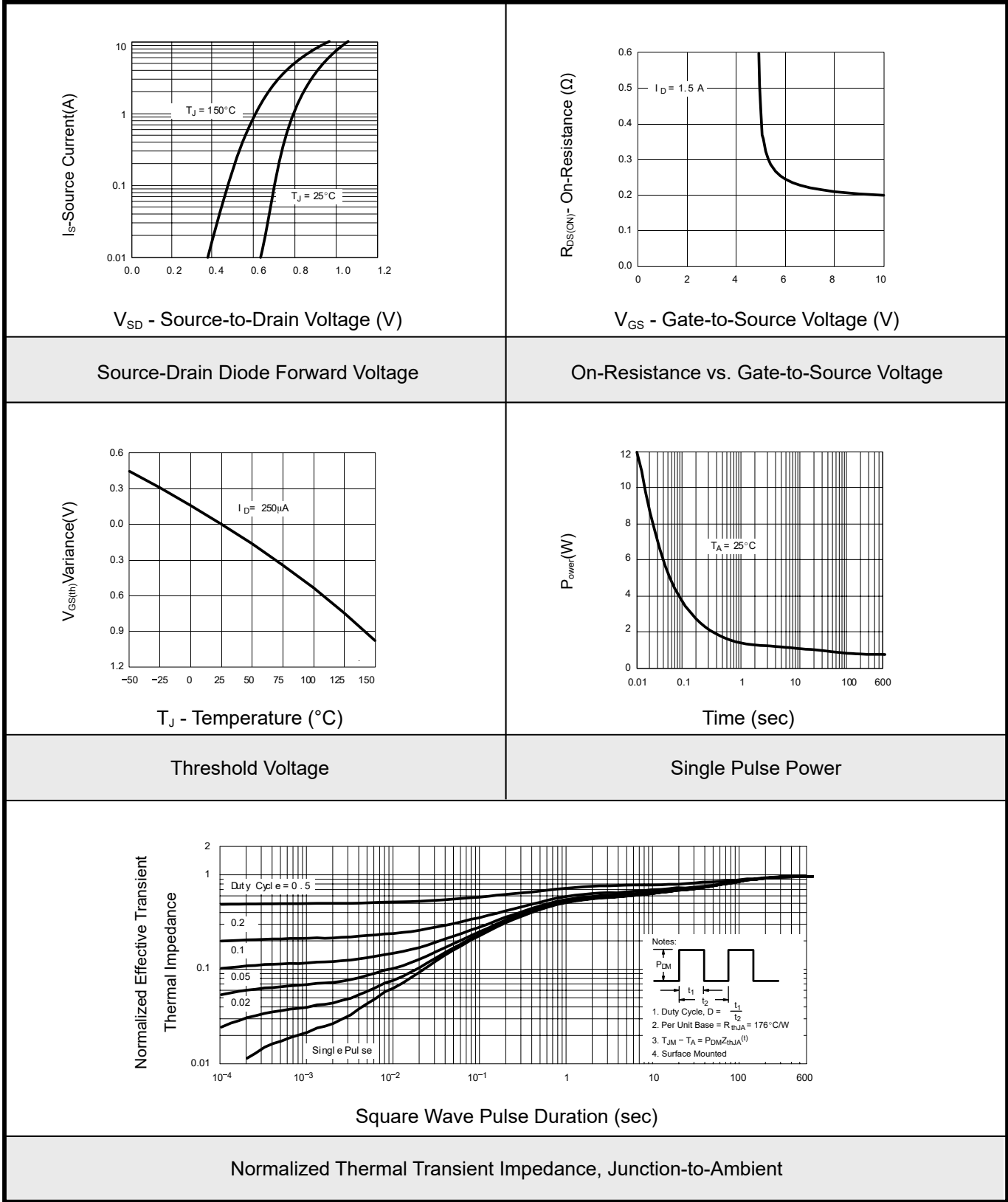


5.1Typical Characterisitics



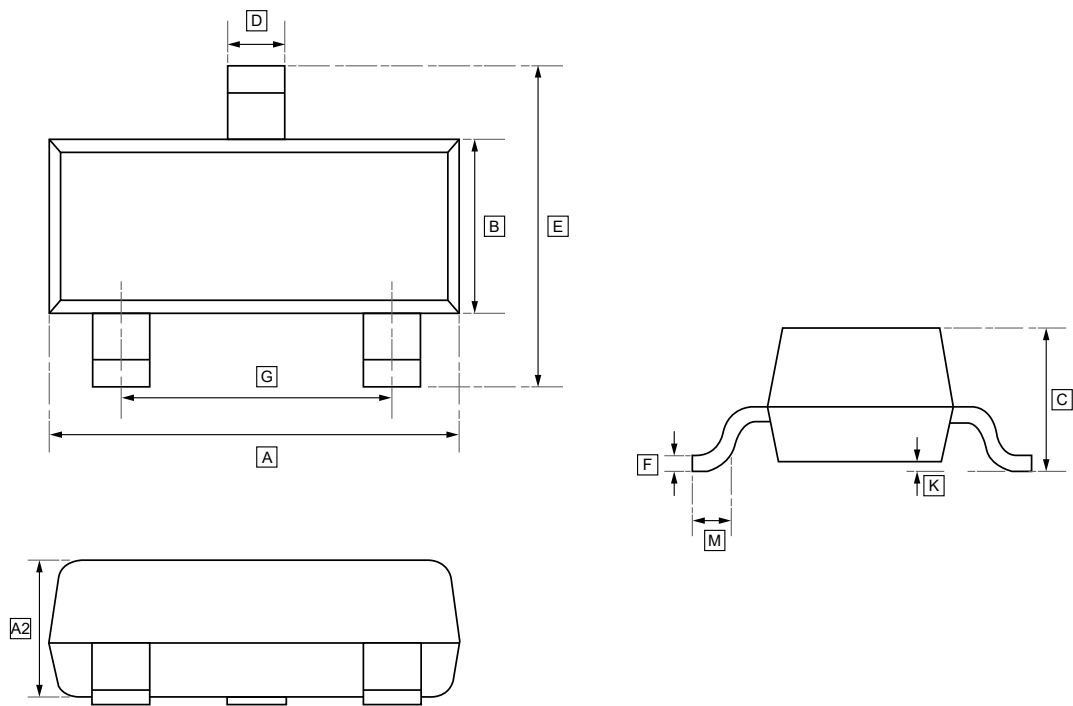


5.2Typical Characteristics





6.SOT-23 Package Outline Dimensions

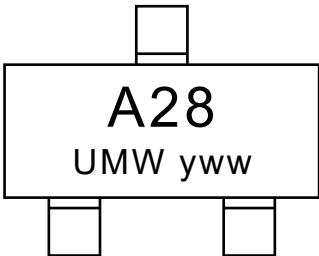


DIMENSIONS (mm are the original dimensions)

Symbol	A	B	C	D	E	G	K	M	A2	F
Min	2.85	1.20	0.90	0.40	2.25	1.80	0.00	0.30	0.95	0.095
Max	3.04	1.40	1.10	0.50	2.55	2.00	0.10	-	1.05	0.115



7.Ordering information



yww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW SI2328A	SOT-23	3000	Tape and reel



8.Disclaimer

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