



1.Features

- $V_{DS(V)} = -30V$
- $I_D = -1.7A$
- $R_{DS(ON)} < 190m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 330m\Omega (V_{GS} = -4.5V)$

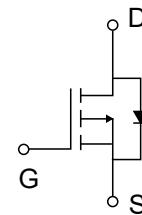
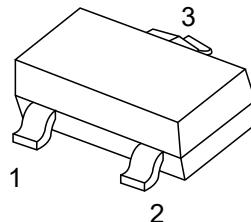
2.Application

- Load Switch for Portable Devices
- DC/DC Converter

3.Pinning information

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

SOT-23



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

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	-1.7	A
Pulsed Drain Current	I_{DM}	-10	
Continuous Source-Drain Current(Diode Conduction)	I_S	-1	
Power Dissipation	P_D	0.9	W
Thermal Resistance from Junction to Ambient ($t \leq 5s$)	$R_{\theta JA}$	357	°C/W
Operating Junction	T_J	150	°C
Storage Temperature	T_{STG}	-55 to 150	°C



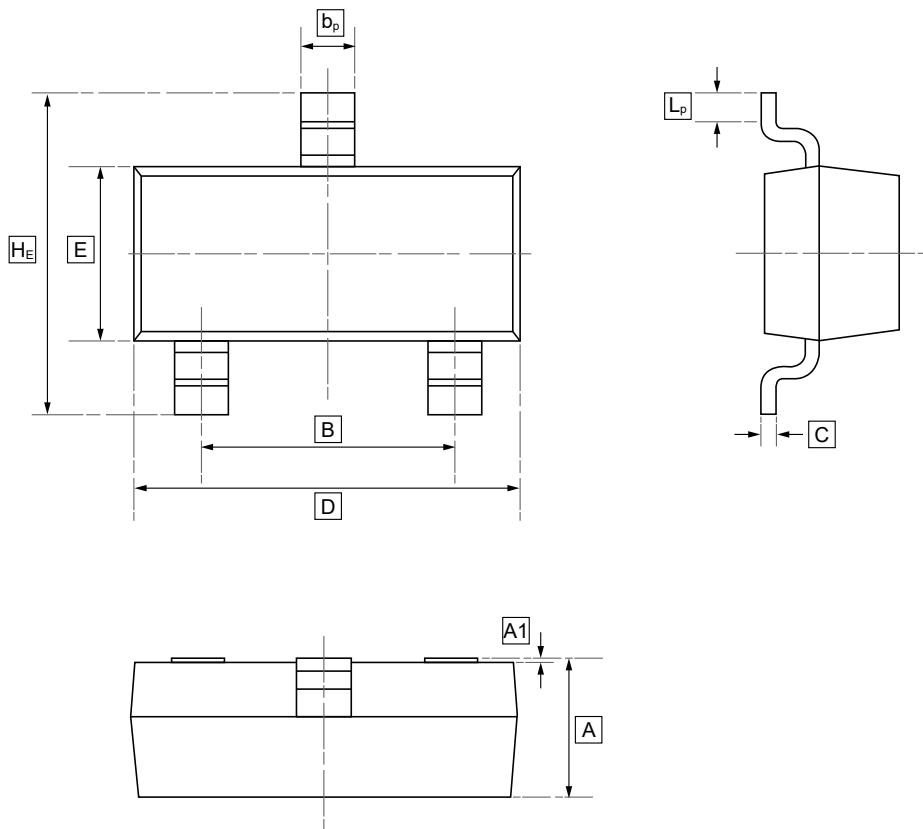
5.Electrical Characteristics $T_A = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static						
Drain-source breakdown voltage	$V_{(\text{BR})\text{DSS}}$	$V_{\text{GS}}=0\text{V}, I_D=-250\mu\text{A}$	-30			V
Gate-source threshold voltage	$V_{\text{GS}(\text{th})}$	$V_{\text{DS}}=V_{\text{GS}}, I_D=-250\mu\text{A}$	-1		-3	V
Gate-source leakage	I_{GSS}	$V_{\text{DS}}=0\text{V}, V_{\text{GS}}=\pm20\text{V}$			±100	nA
Zero gate voltage drain current	I_{DSS}	$V_{\text{DS}}=-30\text{V}, V_{\text{GS}}=0\text{V}$			-1	μA
Drain-source on-state resistance	$R_{\text{DS}(\text{ON})}$	$V_{\text{GS}}=-10\text{V}, I_D=-1.7\text{A}$		120	190	$\text{m}\Omega$
		$V_{\text{GS}}=-4.5\text{V}, I_D=-1.3\text{A}$		150	330	$\text{m}\Omega$
Forward transconductance	g_{FS}	$V_{\text{DS}}=-10\text{V}, I_D=-1.7\text{A}$	5.5			S
Diode forward voltage	V_{SD}	$I_S=-1\text{A}, V_{\text{GS}}=0\text{V}$		-0.8	-1.2	V
Dynamic						
Input Capacitance	C_{iss}	$V_{\text{DS}}=-15\text{V}, V_{\text{GS}}=0\text{V}, f=1\text{MHz}$		155		pF
Output Capacitance	C_{oss}			35		pF
Reverse Transfer Capacitance	C_{rss}			25		pF
Total gate charge	Q_g	$V_{\text{DS}}=-15\text{V}, V_{\text{GS}}=-4.5\text{V}$ $I_D=-1.7\text{A}$		2	4	nC
Gate-source charge	Q_{gs}			0.6		nC
Gate-drain charge	Q_{gd}			1		nC
Gate resistance	R_g	$f=1\text{MHz}$		8.5	17	Ω
Switching						
Turn-On Delay Time	$t_{\text{D}(\text{on})}$	$V_{\text{DD}}=-15\text{V}$ $R_L=10\Omega, I_D \approx -1.5\text{A}$ $V_{\text{GEN}}=-4.5\text{V}, R_G=5\Omega$		36	44	ns
Rise Time	t_r			37	45	ns
Turn-Off Delay Time	$t_{\text{D}(\text{off})}$			12	18	ns
Fall time	t_f			9	14	ns
Drain-Source Body Diode Characteristics						
Continuous Source-Drain Diode Current	I_S	$T_C=25^\circ\text{C}$			-1.75	A
Pulsed Diode forward Current	I_{SM}				-10	A

1. Repetitive rating : Pulse width limited by junction temperature.
 2. Surface mounted on FR4 board , $t < 5$ sec.
3. Pulse Test : Pulse Width $\leq 300\mu\text{s}$, Duty Cycles $\leq 2\%$.
 4. Guaranteed by design, not subject to production testing.



6.SOT-23 Package Outline Dimensions

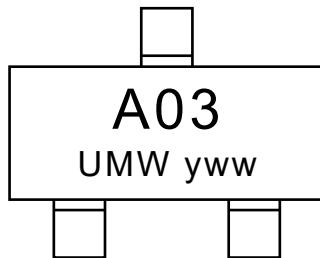


DIMENSIONS (mm are the original dimensions)

Symbol	A	B	b _p	C	D	E	H _E	A1	L _p
Min	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20
Max	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50



7.Ordering information



yww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW SI2303	SOT-23	3000	Tape and reel



8.Disclaimer

UMW reserves the right to make changes to all products, specifications. Customers should obtain the latest version of product documentation and verify the completeness and currency of the information before placing an order.

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