

1.Features

- $BV_{DSS}=20V$
- $R_{DS(ON)} \leq 27m\Omega (V_{GS}=4.5V), I_D=5A$
- $R_{DS(ON)} \leq 36m\Omega (V_{GS}=2.5V), I_D=3A$
- Low gate Charge
- Fast switching capability
- High reliability and rugged

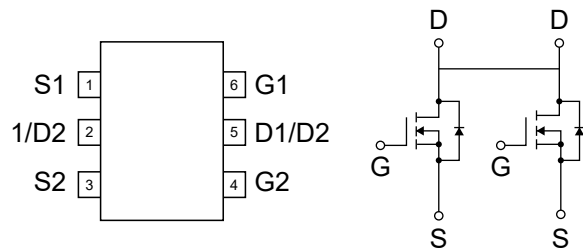
2.Application

- Portable Equipment
- Battery Powered System

3.Pinning information

Pin	Symbol	Description
4, 6	G	GATE
1, 3	S	SOURCE
2, 5	D	DRAIN

TSOP6
SOT23-6



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

Parameter		Symbol	Rating	Units
Drain-Source Voltage		V_{DSS}	20	V
Gate-Source Voltage		V_{GSS}	± 12	
Drain Current (Note1)	Continuous	I_D	5	A
	Pulsed	I_{DM}	20	
Power Dissipation ($T_A=25^\circ C$) (Note 2)	$T_A=25^\circ C$	P_D	0.83	W
	$T_A=100^\circ C$		0.3	W
Thermal Resistance-Junction to Ambient		$R_{\theta JA}$	150	$^\circ C/W$
Maximum Junction Temperature		T_J	150	$^\circ C$
Storage Temperature Range		T_{STG}	-55 to 150	$^\circ C$

1. Pulse Test: Pulse width $\leq 300\mu s$, Duty cycle $\leq 2\%$

2. Pulse width limited by $T_{J(MAX)}$

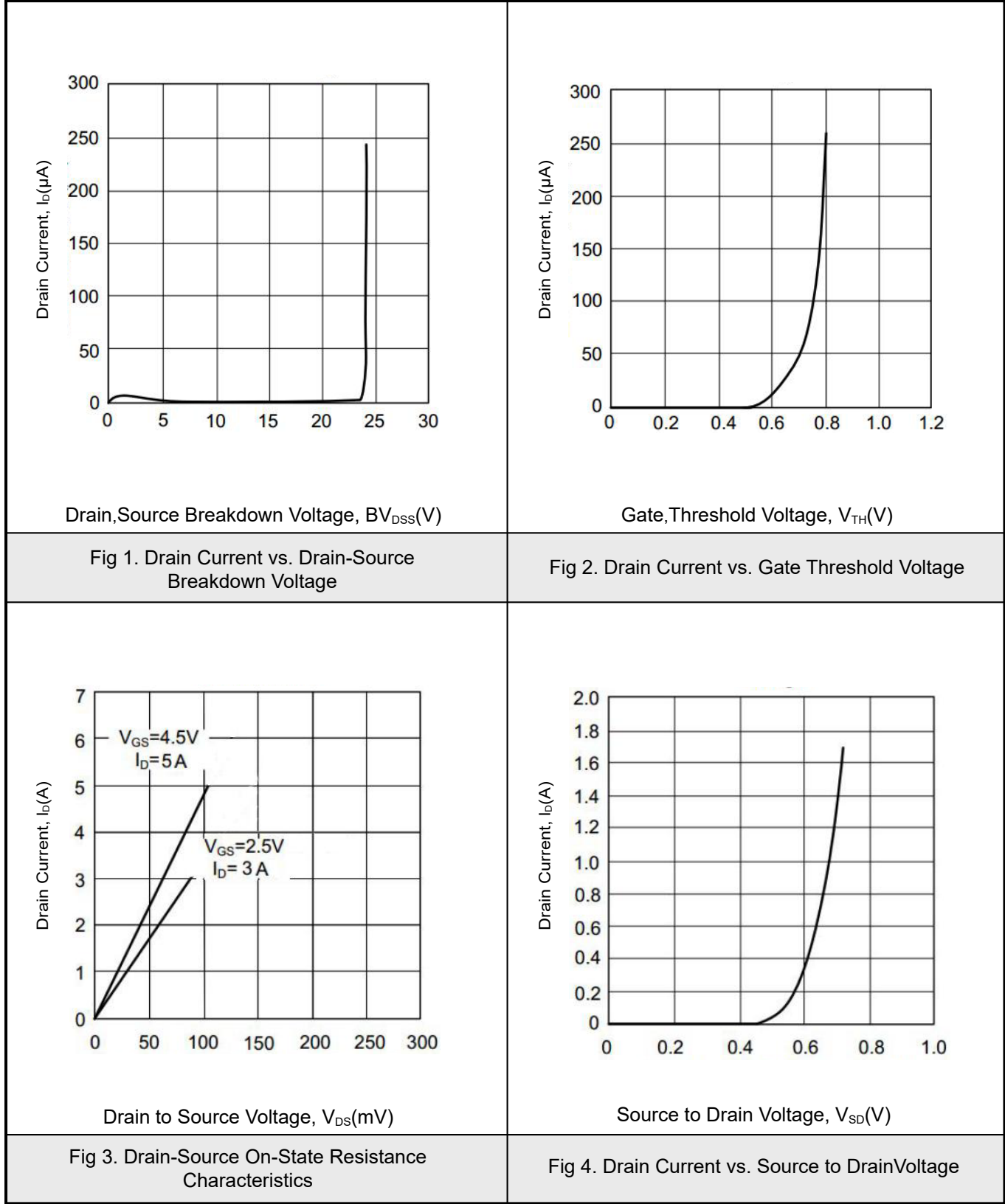


5. Electrical Characteristics $T_J = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Units
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =250μA	20			V
Drain-Source Leakage Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	μA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±8V			±100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.5		1.2	V
Drain-Source On-State Resistance	R _{DS(ON)}	V _{GS} =4.5V, I _D =5A		22	27	mΩ
		V _{GS} =2.5V, I _D =3A		28	36	mΩ
DYNAMIC PARAMETERS						
Input Capacitance	C _{iss}	V _{DS} =10V, V _{GS} =0V, f=1MHz		630		pF
Output Capacitance	C _{oss}			312		pF
Reverse Transfer Capacitance	C _{rss}			145		pF
SWITCHING PARAMETERS						
Turn-ON Delay Time (Note)	t _{D(on)}	V _{GS} =4V, V _{DS} =10V, R _D =10Ω R _G =10Ω, I _D =1A		18		ns
Turn-ON Rise Time	t _r			5		ns
Turn-OFF Delay Time	t _{D(off)}			42		ns
Turn-OFF Fall-Time	t _f			19		ns
Total Gate Charge(Note)	Q _g	V _{DS} =20V, V _{GS} =5V, I _D =5A		23		nC
Gate Source Charge	Q _{gs}			4.5		nC
Gate Drain Charge	Q _{gd}			6.8		nC
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Drain-Source Diode Forward Voltage	V _{SD}	I _S =1.7A, V _{GS} =0V		1.2		V
Diode Continuous Forward Current	I _S	V _D =V _G , V _S =1.3V		1.5		A

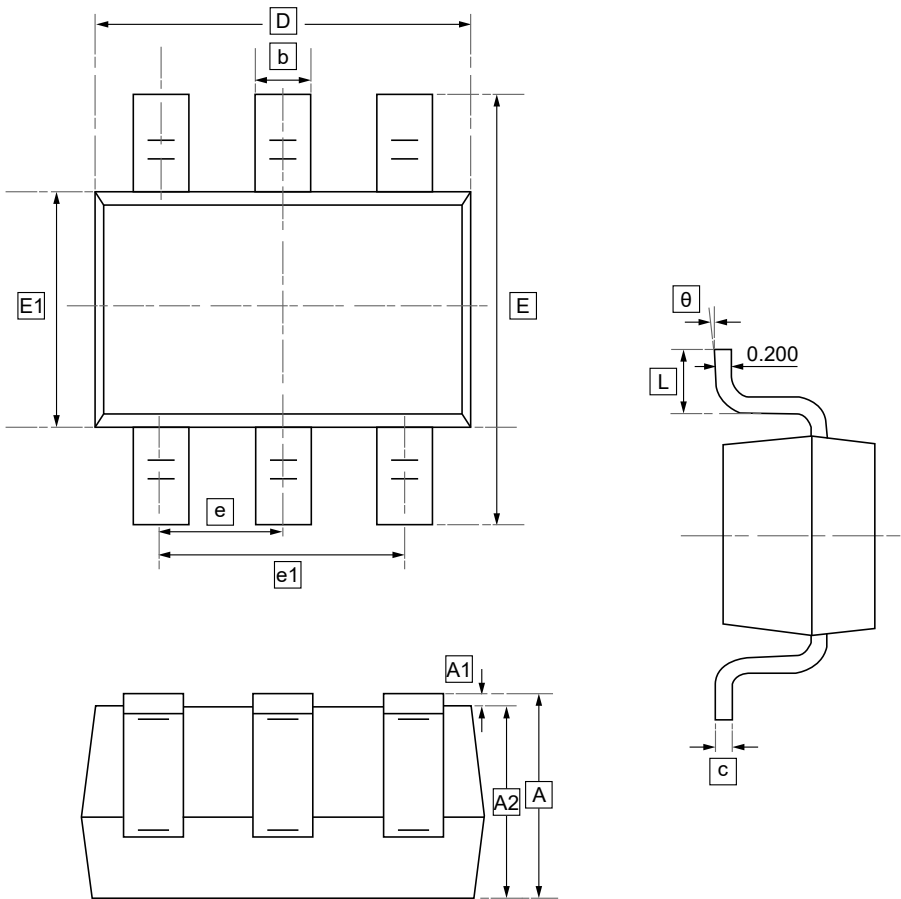


6. Typical Characteristics





7.SOT-23 Package Outline Dimensions

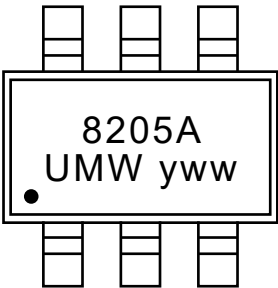


DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	b	c	D	E1	E	e	e1	L	θ
Min	1.050	0.000	1.050	0.300	0.100	2.820	1.500	2.650	0.950	1.800	0.300	0°
Max	1.250	0.100	1.150	0.500	0.200	3.020	1.700	2.950	BSC	2.000	0.600	8°



8.Ordering information



y: Year Code
ww: Week Code

Order Code	Package	Base QTY	Delivery Mode
UMW 8205A	SOT-23	3000	Tape and reel



9.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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