

1.Features

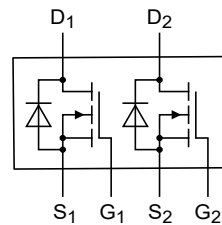
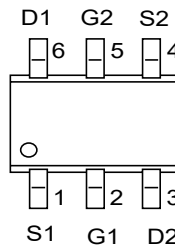
- $V_{DS(V)}=60V$
- $R_{DS(ON)}<2\Omega(V_{GS}=10V)$
- $R_{DS(ON)}<2.2\Omega(V_{GS}=4.5V)$

2.Application

- Notebook
- Load Switch
- Networking
- Hand-held Instruments

2.Pinning information

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



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

Parameter		Symbol	Rating	Units
Drain-Source Voltage		V_{OS}	60	V
Gate-Source Voltage		V_{GS}	± 20	
Continuous Drain Current ($T_A = 150^\circ C$)	$T_A = 25^\circ C$	I_D	0.3	A
	$T_A = 100^\circ C$		0.19	
Drain Current-Pulsed		I_{DM}	0.8	A
Maximum Power Dissipation		P_D	0.35	W
Storage Temperature Range		T_J, T_{STG}	-55 to 150	$^\circ C$
Thermal Resistance.Junction-to-Ambient		$R_{\theta JA}$	350	$^\circ C/W$



4. Electrical Characteristic ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Off Characteristics						
Drain-source breakdown voltage	BV_{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_{GSS}	$V_{GS}=\pm 10V, V_{DS}=0V$			± 1	μA
		$V_{GS}=\pm 20V, V_{DS}=0V$			± 10	μA
On Characteristics						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1	1.6		
Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=0.3A$			2	Ω
		$V_{GS}=4.5V, I_D=0.2A$			2.2	Ω
Forward Transconductance	g_{FS}	$V_{DS}=10V, I_D=0.2A$	0.1			S
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS}=30V, V_{GS}=0V, f=1MHz$		27		pF
Output Capacitance	C_{oss}			18		pF
Reverse Transfer Capacitance	C_{rss}			2		pF
Switching Characteristics						
Turn-on Delay Time	$t_{D(on)}$	$V_{DS}=30V, I_D=0.2A$ $V_{GS}=10V, R_{GEN}=10\Omega$		10		ns
Turn-on Rise Time	t_r			50		ns
Turn-Off Delay Time	$t_{D(off)}$			17		ns
Turn-Off Fall Time	t_f			10		ns
Total Gate Charge	Q_g			1.7	3	nC
Drain-Source Diode Characteristics						
Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_S=0.2A$			1.2	V
Diode Forward Current	I_S				0.3	A



5.1 Typical characteristic

Figure 1: Output Characteristics	Figure 2: On-Resistance Variation with Gate Voltage and Drain Current
Figure 3: On-Resistance Variation with Temperature	Figure 4: On-Resistance Variation with Drain Current and Temperature
Figure 5: Transfer Characteristics	Figure 6: Gate Threshold Variation with Temperature



5.2 Typical characteristic

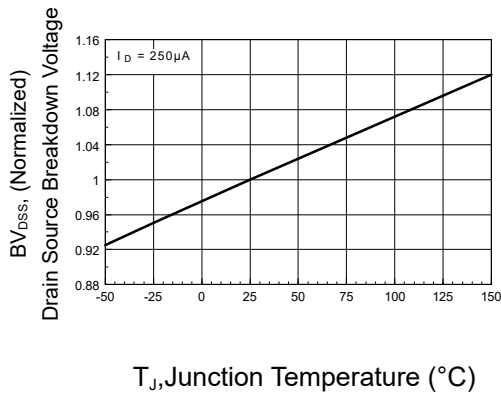


Figure 7: Breakdown Voltage Variation with Temperature

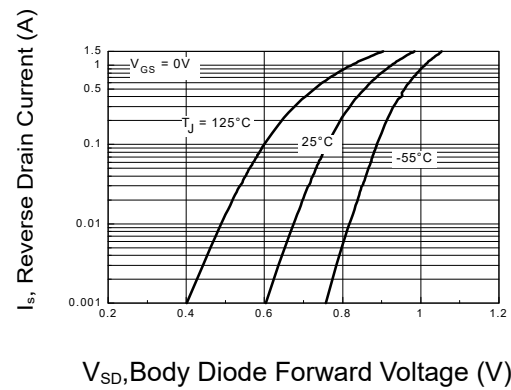


Figure 8: Body Diode Forward Voltage Variation with Current and Temperature

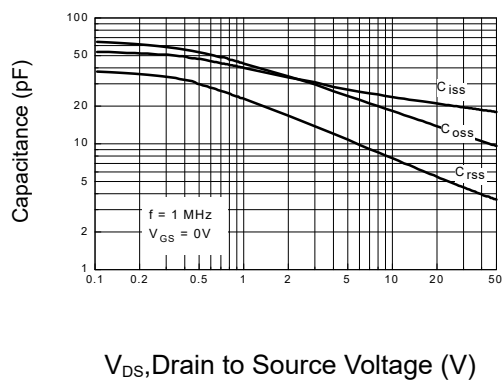


Figure 9: Capacitance Characteristics

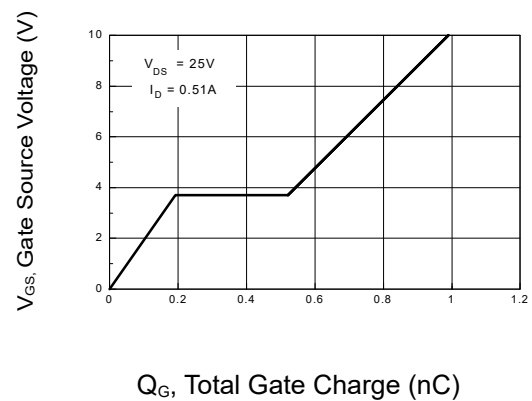


Figure 10: Gate Charge Characteristics

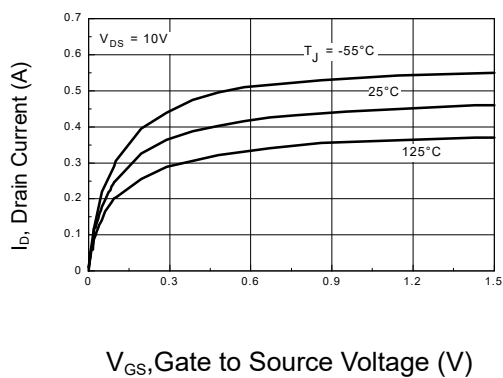


Figure 11: Transconductance Variation with Drain Current and Temperature

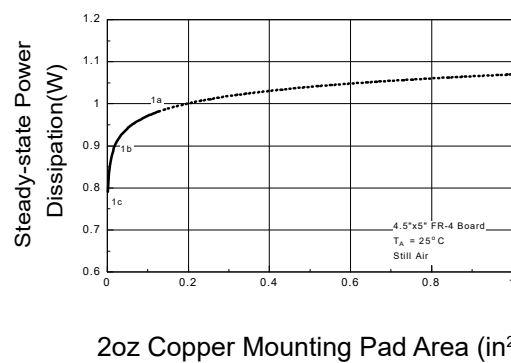
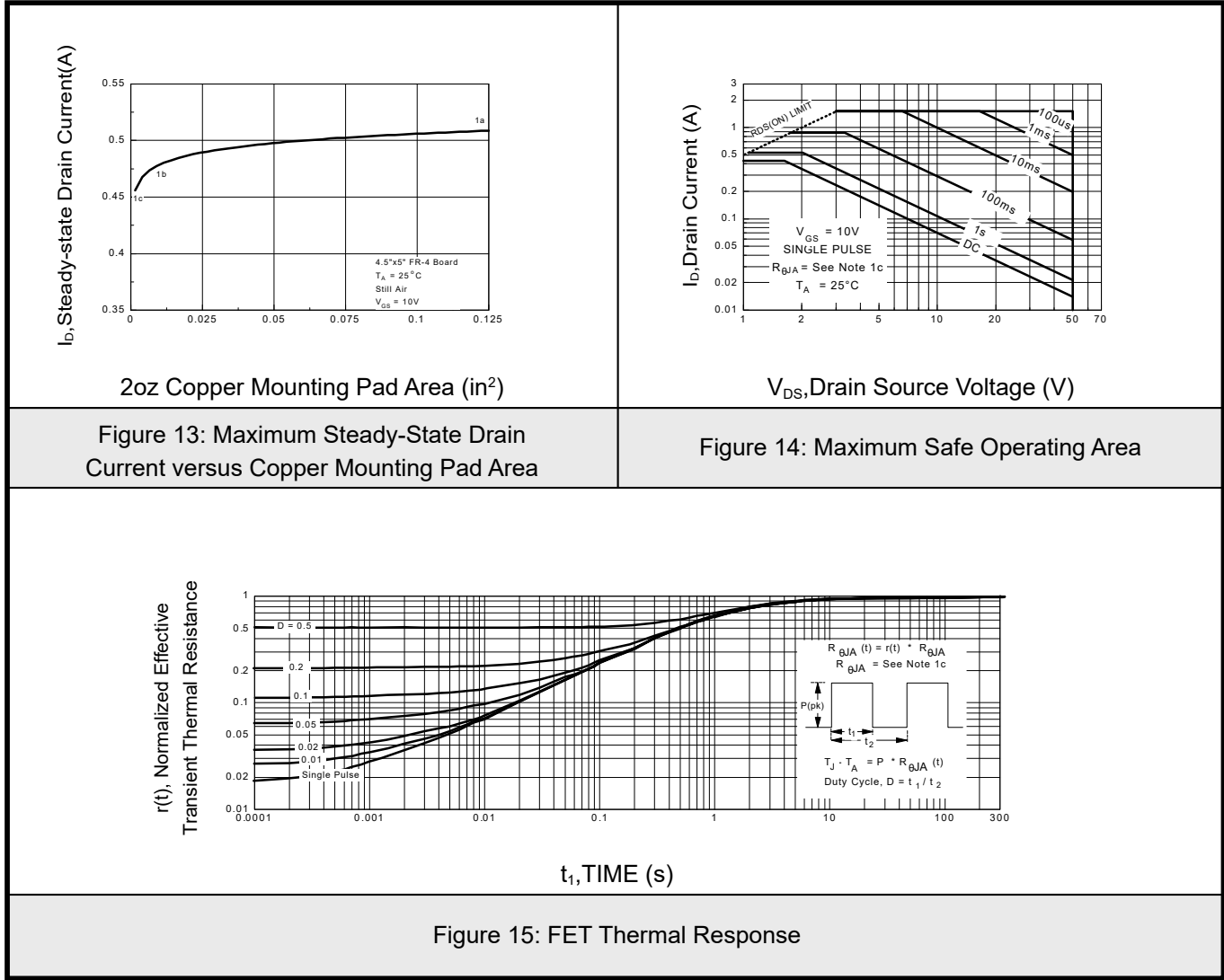


Figure 12: SOT23-6 Dual Package Maximum

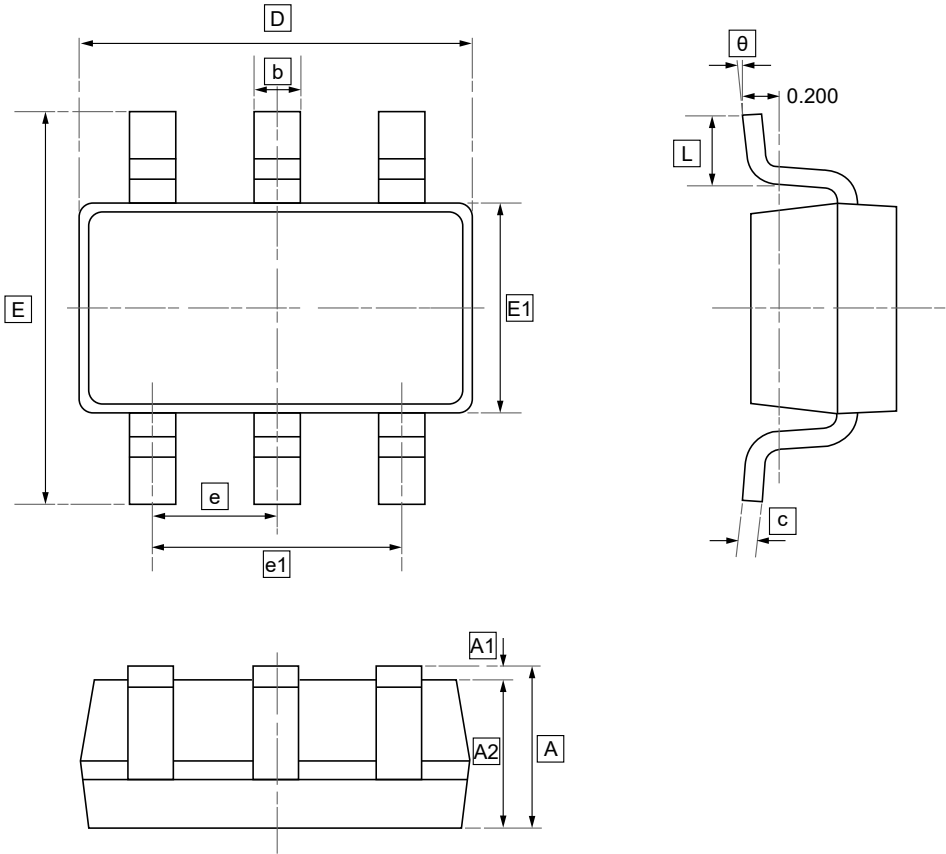


5.2Typical characteristic





6.SOT23-6 Package Outline Dimensions

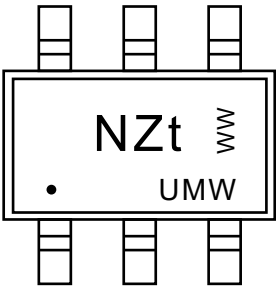


DIMENSIONS (mm are the original dimensions)

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°



7.Ordering information



ww: Week Code

Order Code	Package	Base QTY	Delivery Mode
UMW BSS138PS	SOT23-6	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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