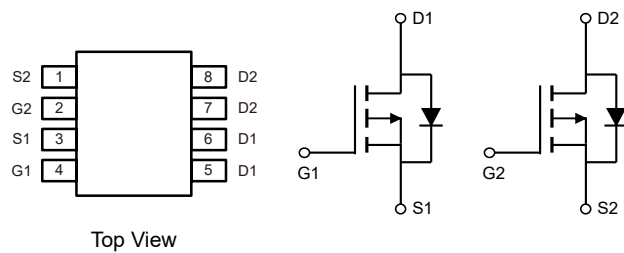


1.Features

- $V_{DS(V)} = -30V$
- $I_D = -5.3A$
- $R_{DS(ON)} < 38m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 59m\Omega (V_{GS} = -4.5V)$

2.Pinning Information

Pin	Symbol	Description
1,3	S2,S1	SOURCE
2,4	G2,G1	GATE
5,6,7,8	D2,D1	DRAIN



3.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	
Drain Current (Continuous)	I_D	-5.3	A
Drain Current (Pulsed) ^a	I_{DM}	-20	
Total Power Dissipation @ $T_A = 25^\circ C$	P_D	2	W
Maximum Diode Forward Current	I_S	-1.9	A
Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ C$
Thermal Resistance Junction to Ambient (PCB mounted) ^b	$R_{\theta JA}$	50	$^\circ C/W$

Notes:

a: Repetitive Rating: Pulse width limited by the maximum junction temperature.

b: 1-in² 2oz Cu PCB board.



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}	$V_{GS}=0V, I_D=-250\mu A$	-30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-24V, V_{GS}=0V$			-1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$			± 100	nA
On Characteristics ^b						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1	-1.5	-2.5	V
Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS}=-10V, I_D=-5.3A$		38	41	m Ω
		$V_{GS}=-4.5V, I_D=-3.9A$		59	75	m Ω
Forward Transconductance	g_{FS}	$V_{DS}=-10V, I_D=-5.3A$		11		S
Dynamic Characteristics ^c						
Input Capacitance	C_{iss}	$V_{DS}=-15V, V_{GS}=0V, f=1MHz$		504		pF
Output Capacitance	C_{oss}			68		pF
Reverse Transfer Capacitance	C_{rss}			56		pF
Switching Characteristics ^c						
Total Gate Charge	Q_g	$V_{DS}=-15V, I_D=-3.6A$ $V_{GS}=-10V$		12		nC
Gate-Source Charge	Q_{gs}			2.3		nC
Gate-Drain Charge	Q_{gd}			1.4		nC
Turn-on Delay Time	$t_{D(on)}$	$V_{DD}=-15V, R_L=5\Omega, I_D=-3A$ $V_{GEN}=-10\Omega, R_G=6\Omega$		8.1		ns
Turn-on Rise Time	t_r			3.3		ns
Turn-Off Delay Time	$t_{D(off)}$			29.3		ns
Turn-Off Fall Time	t_f			5.6		ns
Drain-Source Diode Characteristics						
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_S=-1.9A$			-1.3	V

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



5.1Typical Characteristic

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



5.2Typical Characteristic

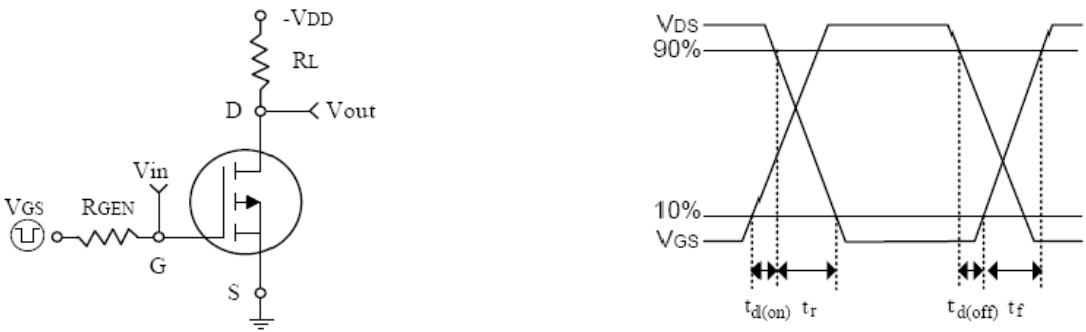
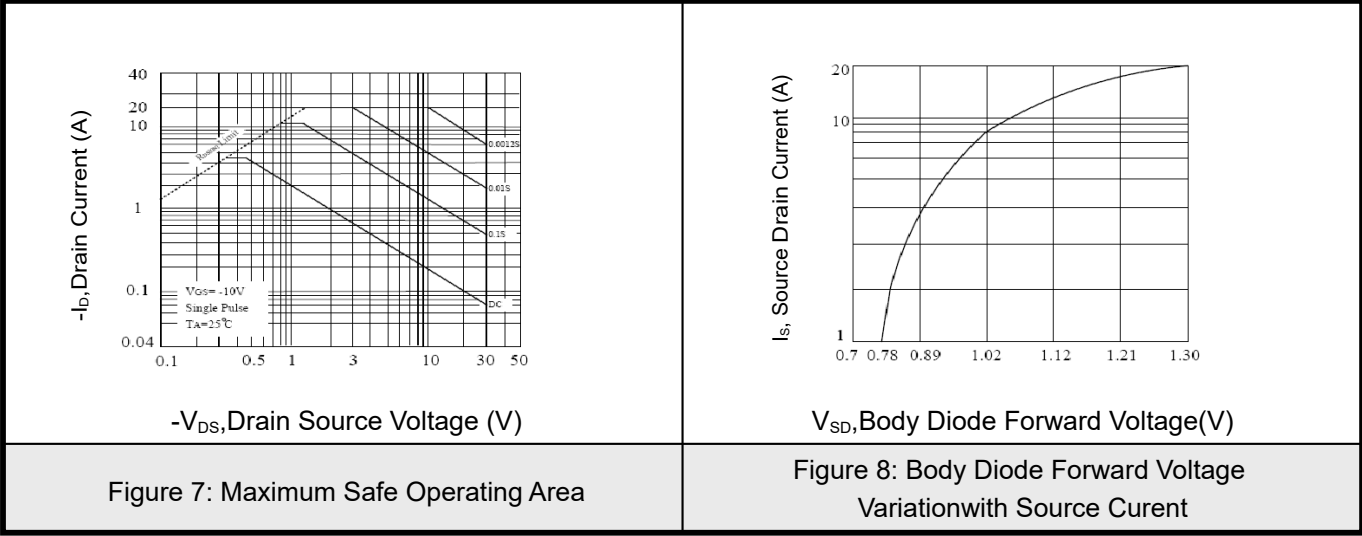
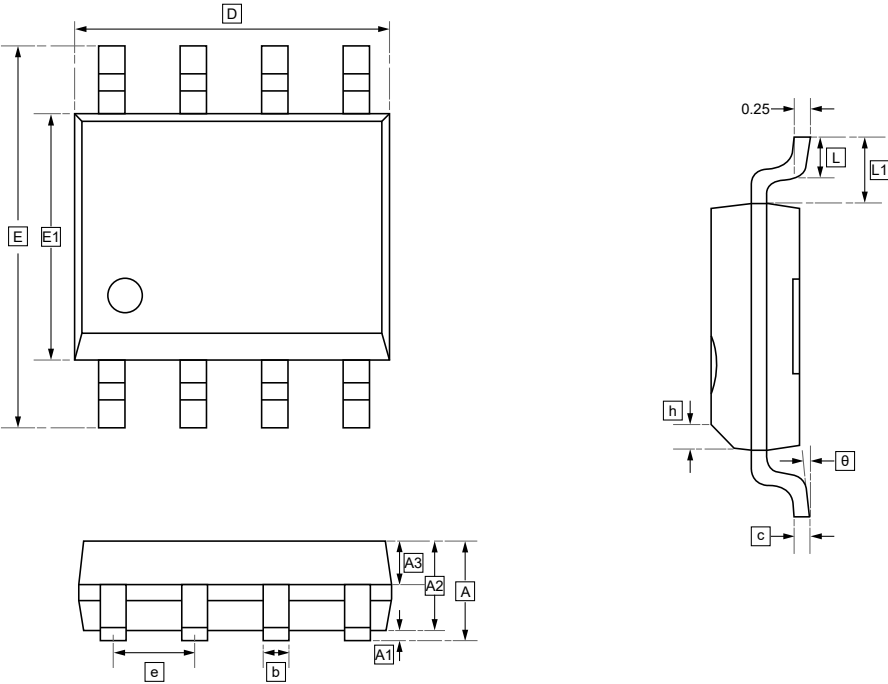


Figure 9: Switching Test Circuit and Switching Waveforms



6.SOP-8 Package Outline Dimensions



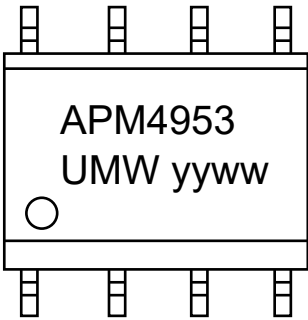
DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	A3	b	c	D	E	E1	e	h	L
Min	-	0.05	1.30	0.60	0.39	0.20	4.80	5.80	3.80	1.24	0.30	0.50
Max	1.75	0.20	1.50	0.70	0.47	0.24	5.00	6.20	4.00	1.30	0.50	0.80

Symbol	L1	θ
Min	1.00	0°
Max	1.10	8°



7.Ordering Information



yy: Year Code
ww: Week Code

Order Code	Package	Base QTY	Delivery Mode
UMW APM4953	SOP-8	3000	Tape and reel



8.Disclaimer

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