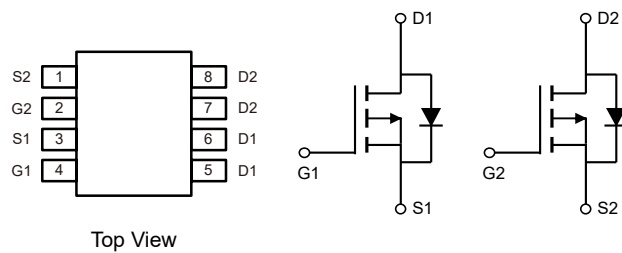


1.Features

- $V_{DS(V)} = -30V$
- $I_D = -5.3A (V_{GS} = 10V)$
- $R_{DS(ON)} < 41m\Omega (V_{GS} = -10V)$
- $R_{DS(ON)} < 75m\Omega (V_{GS} = -4.5V)$

2.Pinning information

Pin	Symbol	Description
1,3	S	SOURCE
2,4	G	GATE
5,6,7,8	D	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 =-250μA	-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} =±20V, V _{DS} =0V			±100	nA
On Characteristics ^b						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-1	-1.5	-2.5	V
Drain-Source On-State Resistance	R _{DS(ON)}	V _{GS} =-10V, I _D =-5.3A		38	41	mΩ
		V _{GS} =-4.5V, I _D =-3.9A		59	75	mΩ
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 =5Ω, I _D =-3A V _{GEN} =-10Ω, R _G =6Ω		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 $\leq 2\%$.



5.1 Typical characteristic

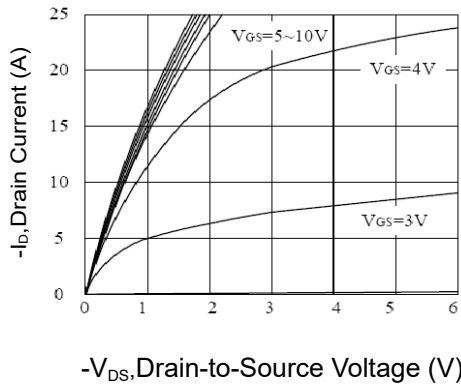


Figure 1: Output Characteristics

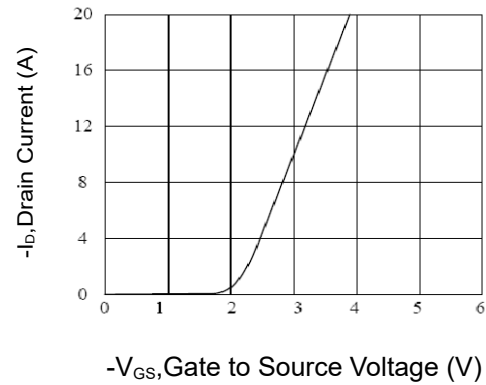


Figure 2: Transfer Characteristics

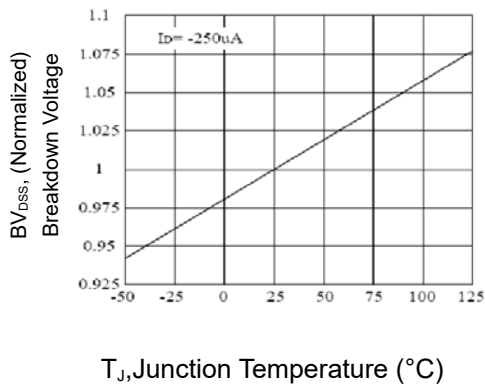


Figure 3: Breakdown Voltage Variation with Temperature

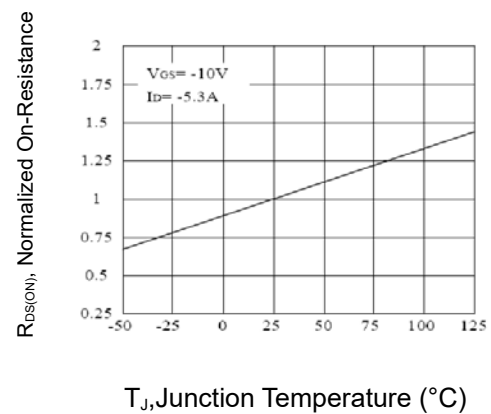


Figure 4: On-Resistance Variation with Temperature

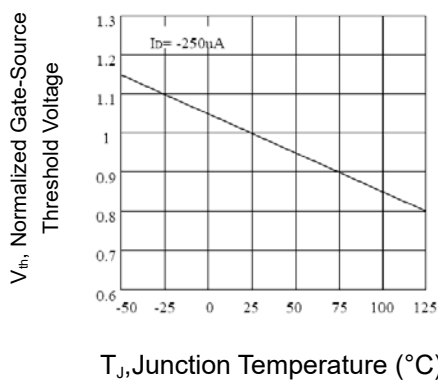


Figure 5: Gate Threshold Variation with Temperature

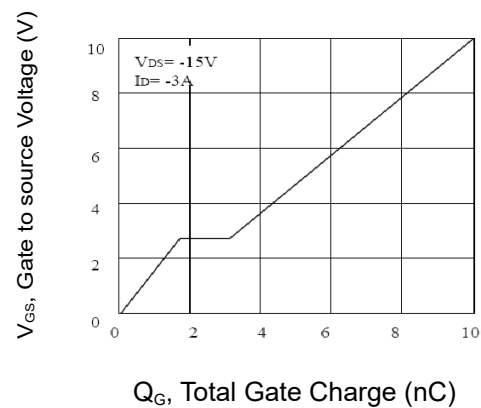


Figure 6: Gate Charge



5.2Typical characteristic

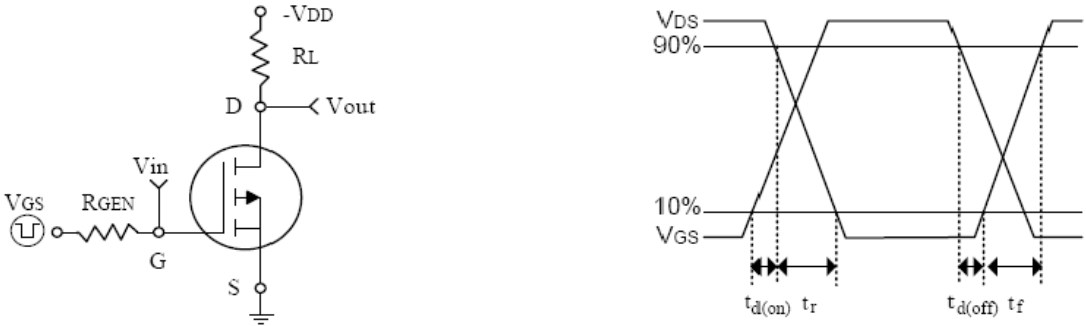
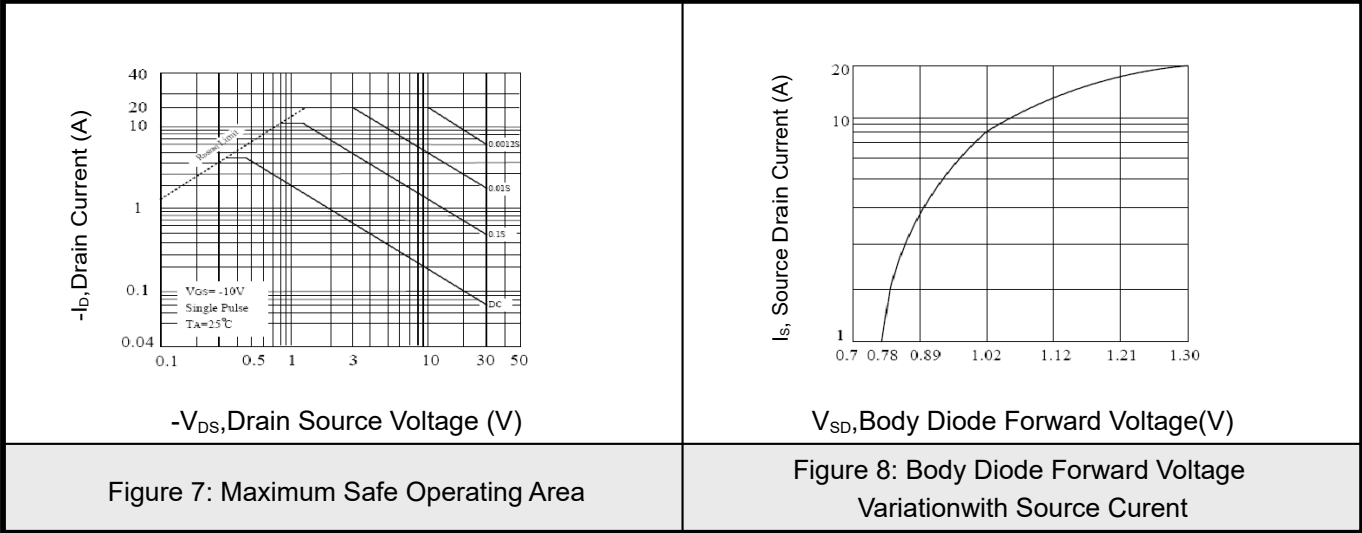
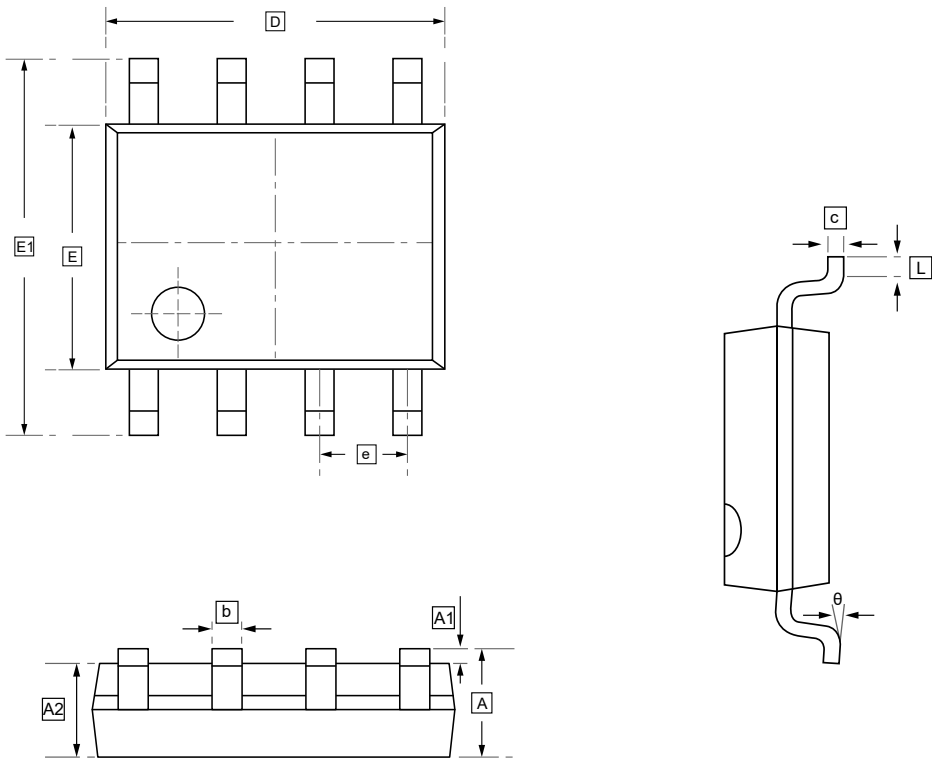


Figure 9: Switching Test Circuit and Switching Waveforms



6.SOP-8 Package Outline Dimensions

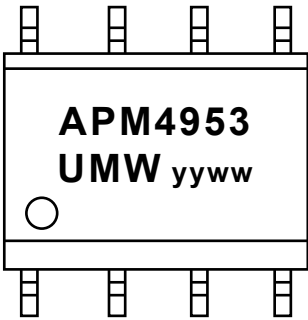


DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	b	c	D	E	E1	e	L	θ
Min	1.350	0.000	1.350	0.330	0.170	4.700	3.800	5.800	1.270	0.400	0°
Max	1.750	0.100	1.550	0.510	0.250	5.100	4.000	6.200	BSC	1.270	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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