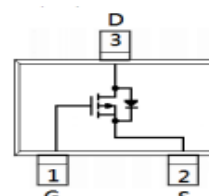
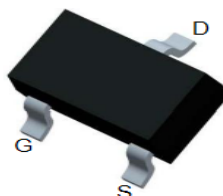


-30V_{DS}/±12V_{GS} P-Channel Enhancement Mode MOSFET

Features

- V_{DS}=-30V, I_D=-4.2A
- R_{DS(ON)}=55mΩ (TYP.) V_{GS}=10V
- Reliable and Rugged
- Avalanche Rated
- Low On-Resistance

SOT23-3L



Applications

- Load Switch
- Power management in portable/desktop PCs
- DC/DC conversion

Ordering Information

Device	package	Device Marking	Package Qty.
PW3401	SOT-23-3L	**	3000/PCS

Absolute Maximum Ratings (T_C=25°C, unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	-30	V
Gate-Source Voltage	V _{GS}	±12	V
Continuous Drain Current	I _D	-4.2	A
Pulsed Drain Current	I _{DM}	-16	A
Maximum Power Dissipation	P _D	1.25	W
Thermal Resistance, Junction-to-Ambient	R _{θJA}	100	°C/W
Operating, Storage Temperature Range	T _J , T _{STG}	-55~150	°C

Electrical Characteristics

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
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 -Source Leakage Current	I _{GSS}	V _{GS} =±12V, V _{DS} =0V	-	-	±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =250μA	0.6	0.9	1.3	V
Drain-Source On-stage Resistance	R _{DS(ON)}	V _{GS} =10V, I _D =4.2A	-	43	55	mΩ
		V _{GS} =4.5V, I _D =4A	-	54	68	
Body Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _{SD} =1A	-	-	1.2	V

Dynamic Characteristics

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Input capacitance	C_{iss}	$V_{DS}=15V$ $V_{GS}=0V$ $f=1MHz$	-	780	-	pF
Output capacitance	C_{oss}		-	75	-	
Reverse transfer capacitance	C_{rss}		-	40	-	
Gate Resistance	R_g	$f=1MHz$	-	7.8	-	Ω
Total Gate Charge	Q_g	$V_{DS}=15V$ $V_{GS}=4.5V$ $I_D=5.8A$	-	16	-	nC
Gate Source Charge	Q_{gs}		-	2	-	
Gate Drain Charge	Q_{gd}		-	1.9	-	
Turn-on delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=15V$ $R_L=2.7\Omega$ $R_G=3\Omega$	-	7	-	ns
Rise time	t_r		-	3	-	
Turn-off delay Time	$t_{d(off)}$		-	27	-	
Fall time	t_f		-	12	-	
Reverse Recovery Time	t_{rr}	$V_{GS}=0V, I_{SD}=5A$ $dI/dt=100A/\mu s$	-	11	-	ns
Reverse Recovery Charge	Q_{rr}		-	3.5	-	nC

Electrical Characteristics Diagrames

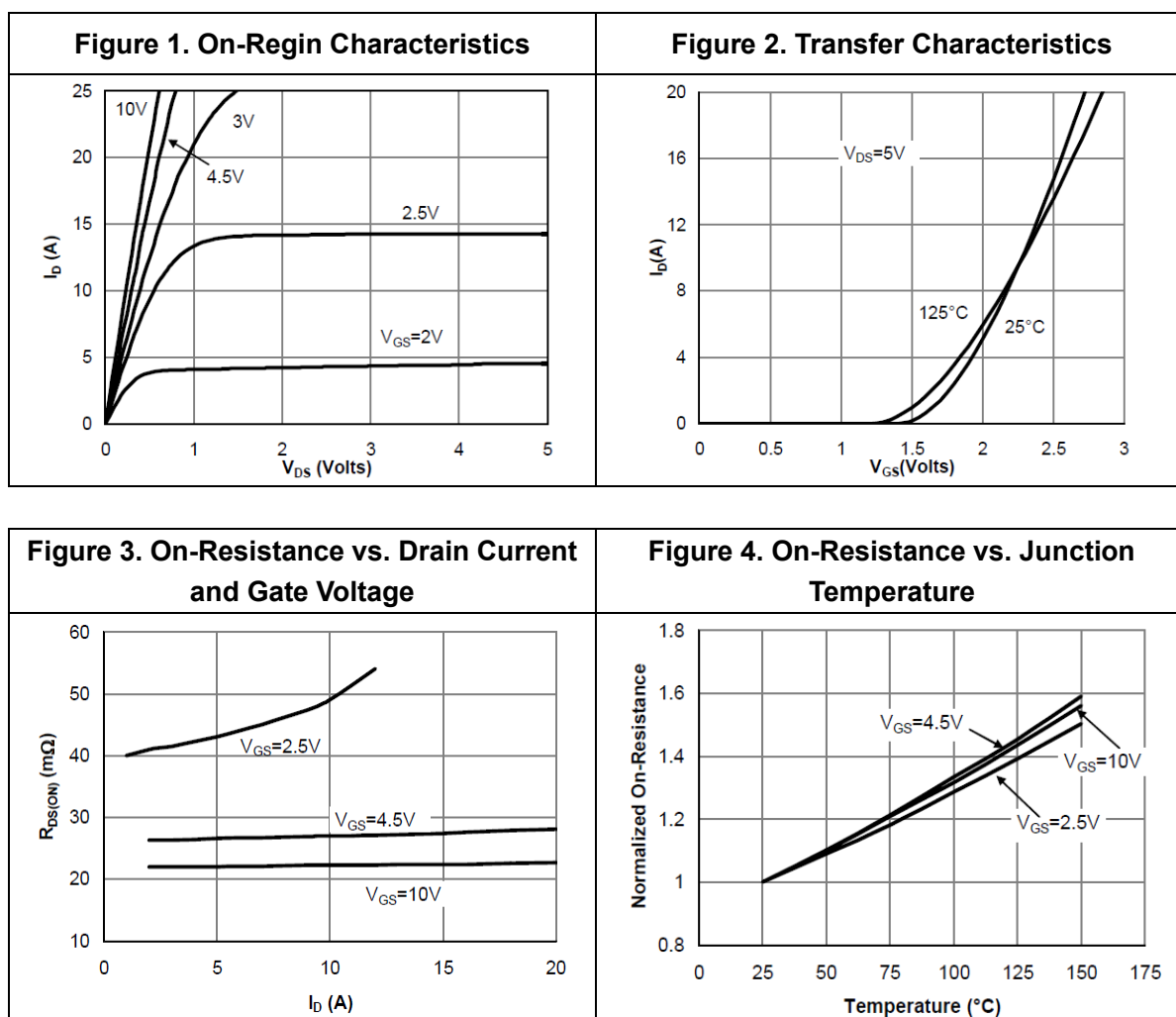
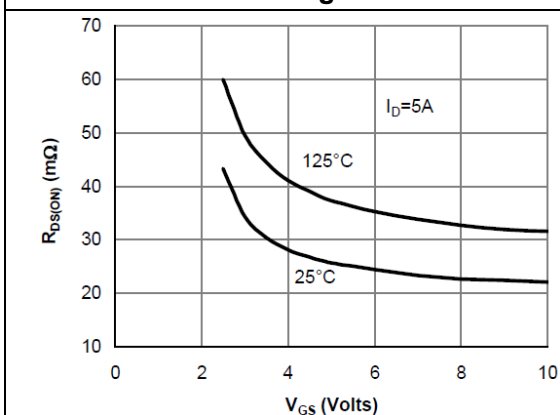
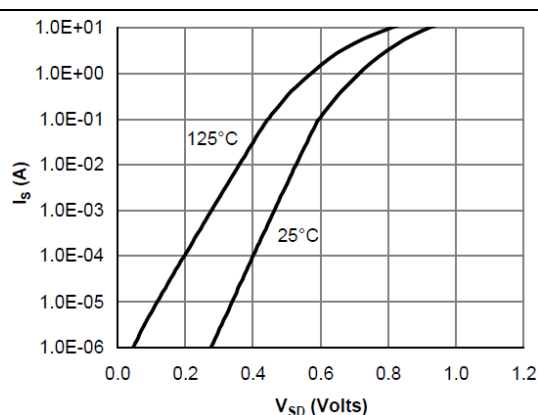
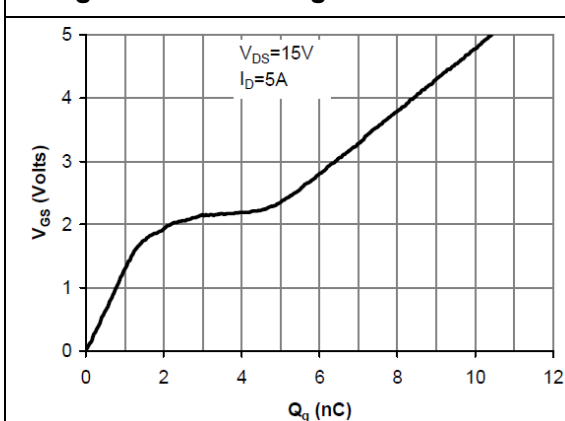
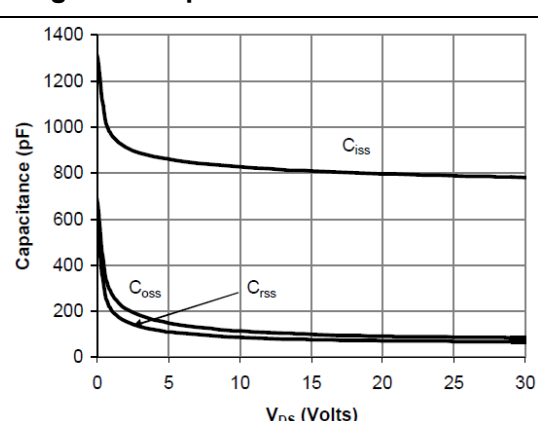
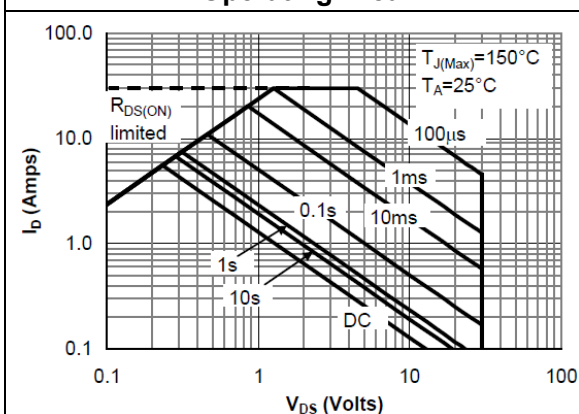
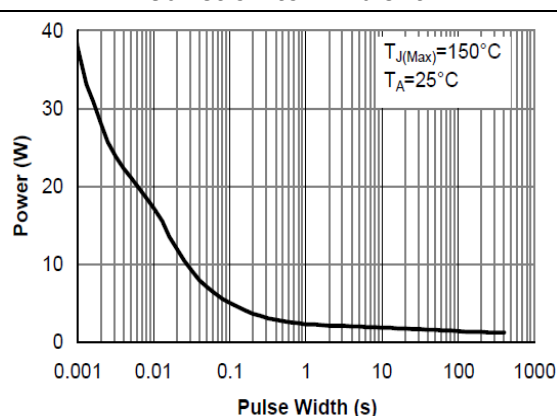


Figure 5. On-Resistance vs. Gate-Source Voltage

Figure 6. Body-Diode Characteristics

Figure 7. Gate-Charge Characteristics

Figure 8. Capacitance Characteristics

Figure 9. Maximum Forward Biased Safe Operating Area

Figure 10. Single Pulse Power Rating Junction-to-Ambient


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