



产品规格书

PWE2012A(TSSOP-8)

Datasheet of PWE2012A(TSSOP-8)

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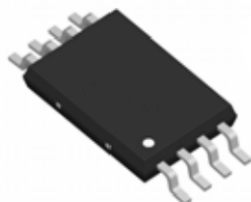
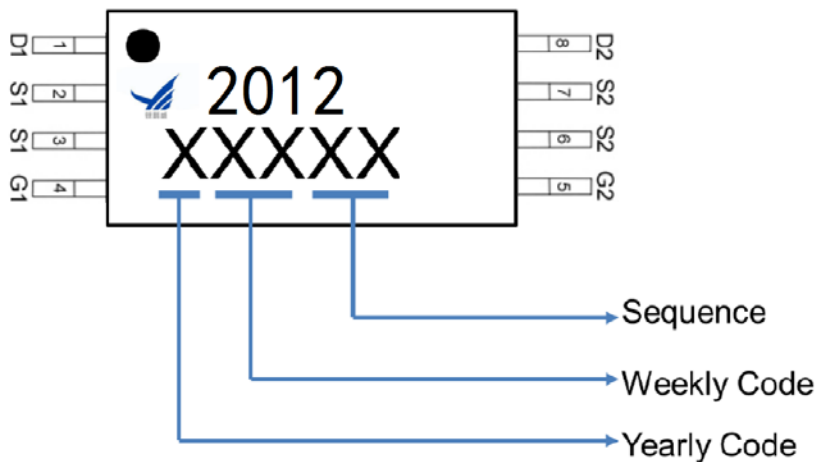
Dual N-Channel Enhancement-Mode MOSFET(24V, 12A)

PRODUCT SUMMARY

V_{DS}	I_D	$R_{DS(on)}$ (m-ohm) Max
24V	12A	10mΩ @ $V_{GS} = 4.5V$, $I_D=4.5A$
		15mΩ @ $V_{GS} = 2.5V$, $I_D=3.5A$

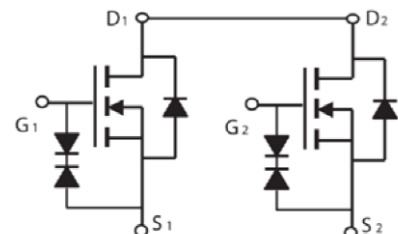
◆ Features

1. High density cell design for ultra low On-Resistance.
2. Advanced trench process technology.
3. RoHS Compliant.
4. ESD Protected



TSSOP-8

Pin 1/8: Drain1/ Drain2
Pin 2/3: Source1
Pin 4: Gate1
Pin 5: Gate2
Pin 6 / 7 : Source2





◆ Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	24	V
V_{GS}	Gate-Source Voltage	± 12	V
I_D	Drain Current (Continuous) ^a	12	A
I_{DM}	Drain Current (Pulsed) ^b	32	A
P_D	Total Power Dissipation @ $T_A=25^{\circ}\text{C}$	2	W
T_j, T_{stg}	Operating Junction and Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$
$R_{\theta JA}$	Thermal Resistance Junction to Ambient (PCB mounted) ^c	100	$^{\circ}\text{C/W}$

a: Fused current that based on wire numbers and diameter

b: Repetitive Rating: Pulse width limited by the maximum junction temperature

c: 1-in² 2oz Cu PCB board

◆ Electrical Characteristics ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

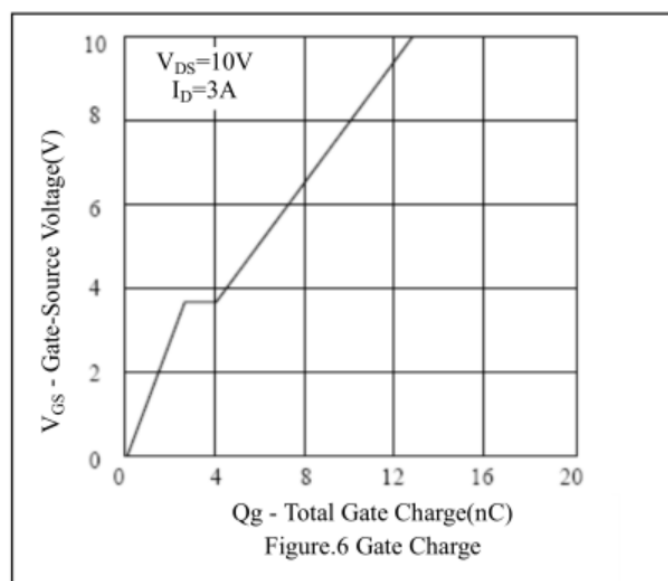
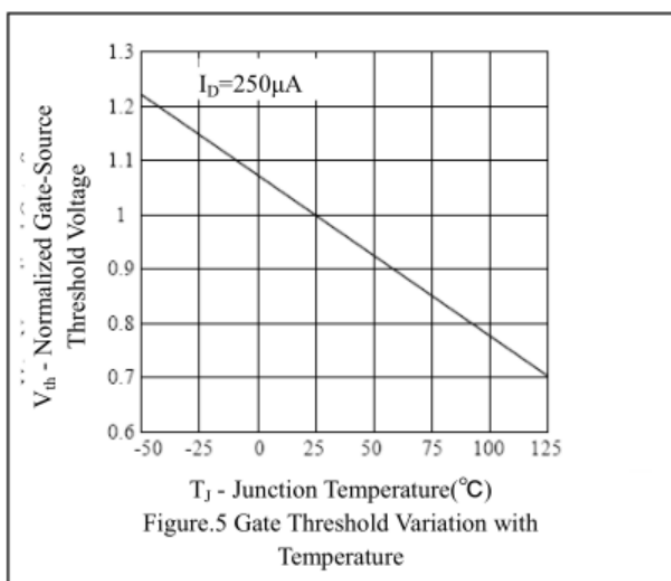
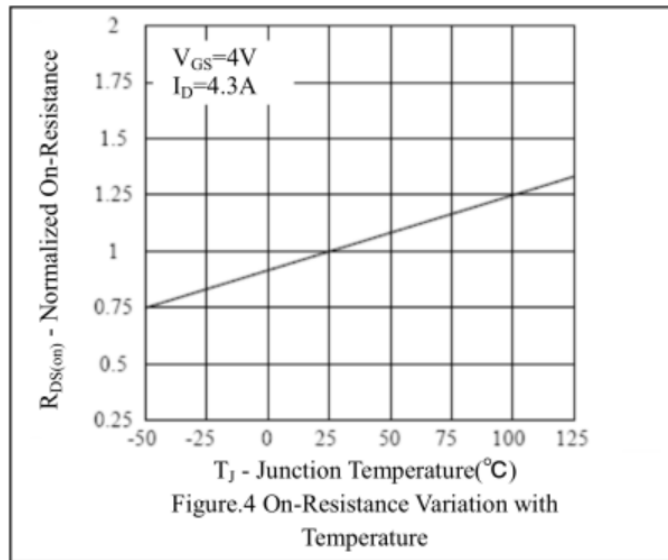
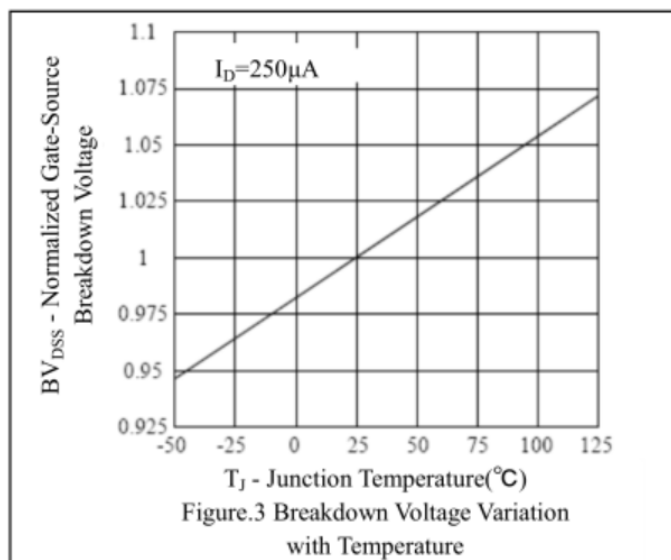
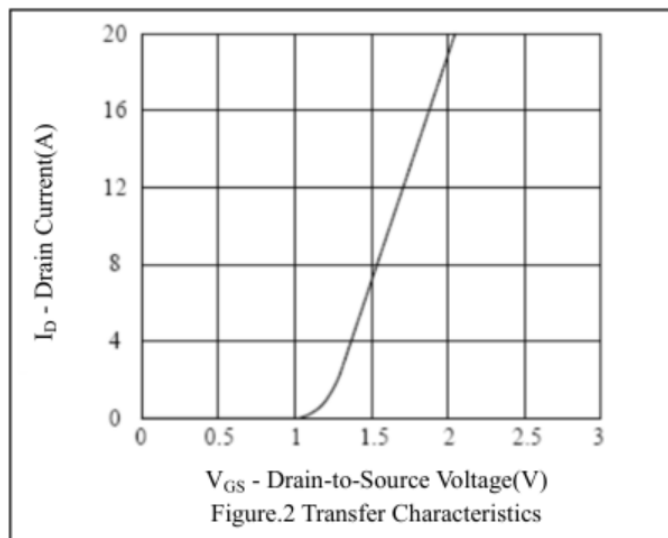
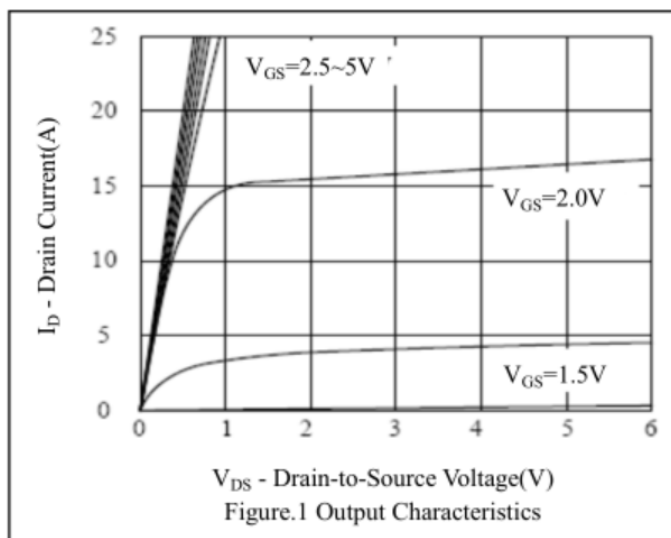
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
• Off Characteristics						
B _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =250uA	24	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =15V, V _{GS} =0V	-	-	1	uA
I _{GSS}	Gate-Body Leakage Current	V _{GS} =±10V, V _{DS} =0V	-	-	±10	uA
• On Characteristics						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =250uA	0.5	-	1.1	V
R _{DS(on)}	Drain-Source On-State Resistance	V _{GS} =4.5V, I _D =4.5A	-	9	10	mΩ
		V _{GS} =2.5V, I _D =3.5A	-	13	15	
• Dynamic Characteristics ^d						
C _{iss}	Input Capacitance	V _{DS} =10V, V _{GS} =0V, f=1MHz	-	950	-	pF
C _{oss}	Output Capacitance		-	450	-	
C _{rss}	Reverse Transfer Capacitance		-	135	-	
• Switching Characteristics ^d						
Q _g	Total Gate Charge	V _{DS} =10V, I _D =3A, V _{GS} =4.5V	-	9.2	-	nC
Q _{gs}	Gate-Source Charge		-	2.7	-	
Q _{gd}	Gate-Drain Charge		-	3.7	-	
t _{d(on)}	Turn-on Delay Time	V _{DD} =10V, I _D =1A, V _{GEN} =4.5V, R _G =6Ω	-	10	-	nS
t _r	Turn-on Rise Time		-	14	-	
t _{d(off)}	Turn-off Delay Time		-	39	-	
t _f	Turn-off Fall Time		-	26	-	
• Drain-Source Diode Characteristics						
I _S	Maximum Diode Forward Current		-	-	1.7	A
V _{SD}	Drain-Source Diode Forward Voltage	V _{GS} =0V, I _S =1.7A	-	-	1.2	V

Note: Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycles $\leq 2\%$

d: Guaranteed by design: not subject to production testing



◆ Characteristics Curve





◆ Characteristics Curve

