

8 i U`B!7\ 100J : UghGk jHW jbl `ACG: 9Hg`

DfcXi WiGi a a UfmÁ



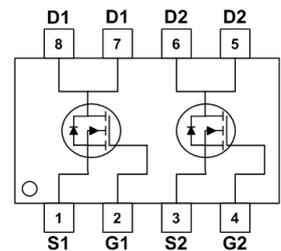
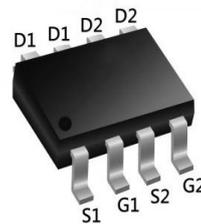
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 The XR4892S meet the RoHS and Green Product

GCD, `Djb`7 cbZ[i fUjcb`



5 Vgc`i ÁY`AU j a i a `FUjbl g (T_A = 25°C, unless otherwise noted)

Parameter	Symbol	Value _Á	Unit
Drain-Source Voltage	V _{DS}	100	V
Gate-Source Voltage	V _{GS}	±20	V
Continuous Drain Current	I _D	T _A =25°C	10
		T _A =100°C	3.5
Pulsed Drain Current ¹	I _{DM}	16	A
Single Pulse Avalanche Energy ²	EAS	3.2	mJ
Total Power Dissipation	P _D	3.1	W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to 150	°C

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance from Junction-to-Ambient ³	R _{θJA}	40.3	°C/W

Electrical Characteristics (T_J = 25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit	
Static Characteristics							
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	100	-	-	V	
Gate-Body Leakage Current	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V	-	-	±100	nA	
Zero Gate Voltage Drain Current	T _J =25°C	I _{DSS}	V _{DS} = 100V, V _{GS} = 0V	-	-	1	μA
	T _J =100°C			-	-	100	
Gate-Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1	1.7	3	V	
Drain-Source on-Resistance ⁴	R _{DS(on)}	V _{GS} = 10V, I _D = 4A	-	68	100	mΩ	
		V _{GS} = 4.5V, I _D = 2A	-	78	110		
Forward Transconductance ⁴	g _{fs}	V _{DS} =10V, I _D =4A	-	11	-	S	
Dynamic Characteristics⁵							
Input Capacitance	C _{iss}	V _{DS} = 50V, V _{GS} = 0V, f = 1MHz	-	1233	-	pF	
Output Capacitance	C _{oss}		-	32	-		
Reverse Transfer Capacitance	C _{rss}		-	26	-		
Gate Resistance	R _g	f = 1MHz	-	1.4	-	Ω	
Switching Characteristics⁵							
Total Gate Charge	Q _g	V _{GS} = 10V, V _{DS} = 50V, I _D =4A	-	12	-	nC	
Gate-Source Charge	Q _{gs}		-	2.9	-		
Gate-Drain Charge	Q _{gd}		-	1.8	-		
Turn-on Delay Time	t _{d(on)}	V _{GS} = 10V, V _{DD} = 50V, R _G = 3Ω, I _D = 4A	-	3.9	-	ns	
Rise Time	t _r		-	26	-		
Turn-off Delay Time	t _{d(off)}		-	16.2	-		
Fall Time	t _f		-	8.9	-		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 4A, dI/dt=100A/μs	-	40	-	ns	
Body Diode Reverse Recovery Charge	Q _{rr}		-	43	-	nC	
Drain-Source Body Diode Characteristics							
Diode Forward Voltage ⁴	V _{SD}	I _S = 1A, V _{GS} = 0V	-	-	1.2	V	
Continuous Source Current	I _S	T _A =25°C	-	-	10	A	

Notes:

1. Repetitive rating, pulse width limited by junction temperature T_{J(MAX)}=150°C.
2. The EAS data shows Max. rating . The test condition is V_{DD}=25V, V_{GS}=10V, L=0.1mH, I_{AS}= 8A .
3. The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper, The value in any given application depends on the user's specific board design.
4. The data tested by pulsed , pulse width ≤ 300us , duty cycle ≤ 2%.
5. This value is guaranteed by design hence it is not included in the production test..

Typical Characteristics

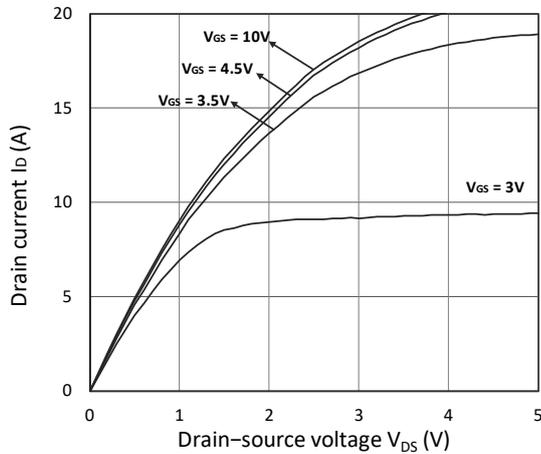


Figure 1. Output Characteristics

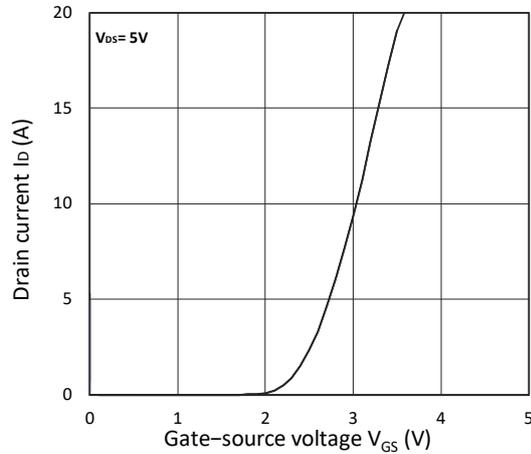


Figure 2. Transfer Characteristics

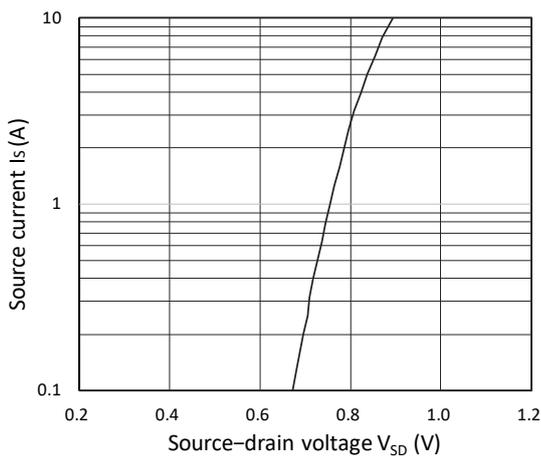


Figure 3. Forward Characteristics of Reverse

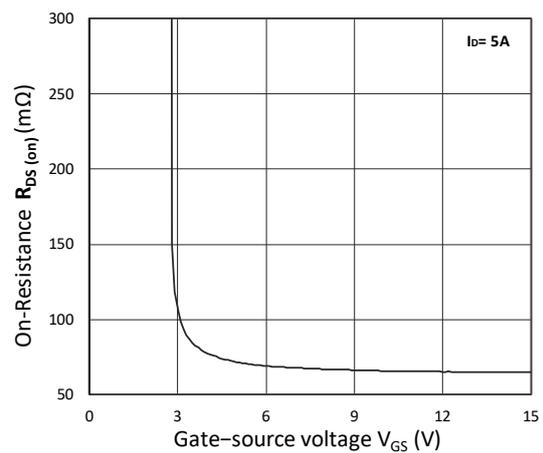


Figure 4. $R_{DS(on)}$ vs. V_{GS}

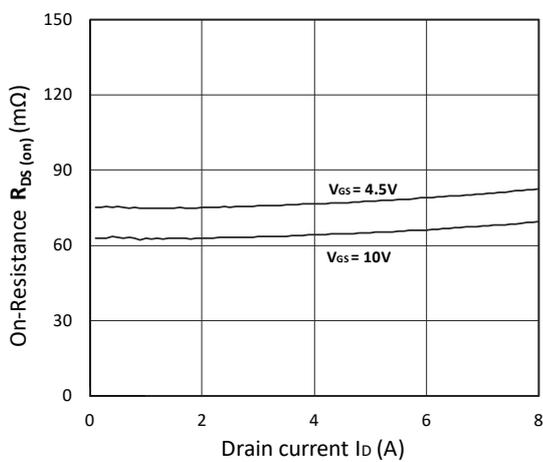


Figure 5. $R_{DS(on)}$ vs. I_D

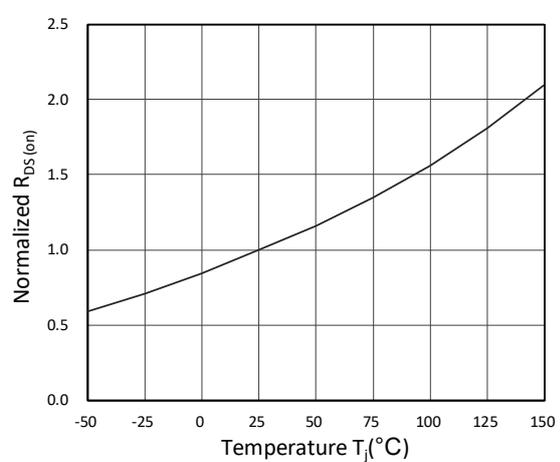


Figure 6. Normalized $R_{DS(on)}$ vs. Temperature

8 i U'B!7\ 100J': UghGk jHW]b['ACG: 9Hg'

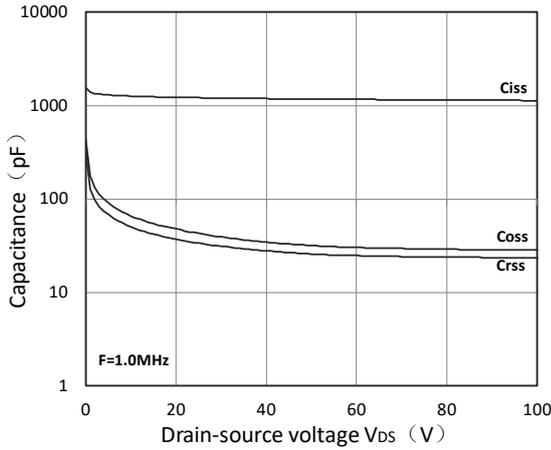


Figure 7. Capacitance Characteristics

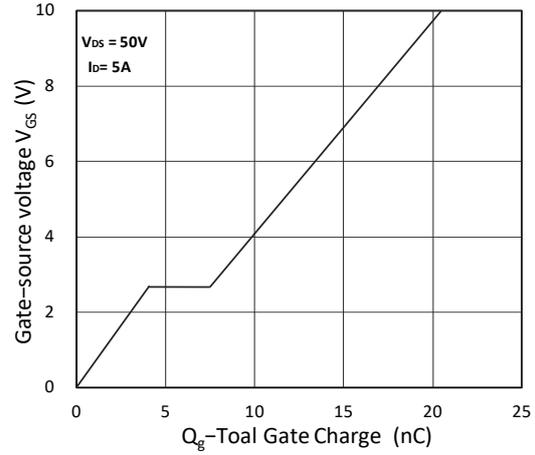


Figure 8. Gate Charge Characteristics

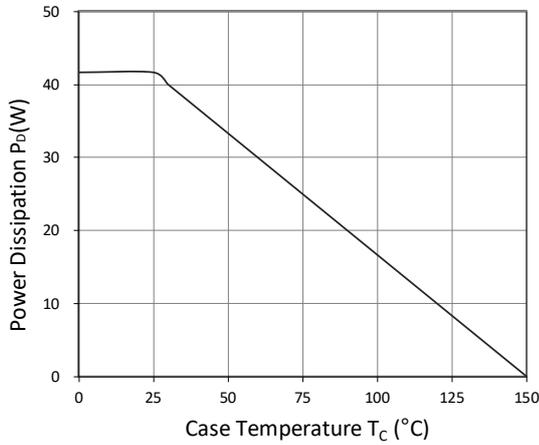


Figure 9. Power Dissipation

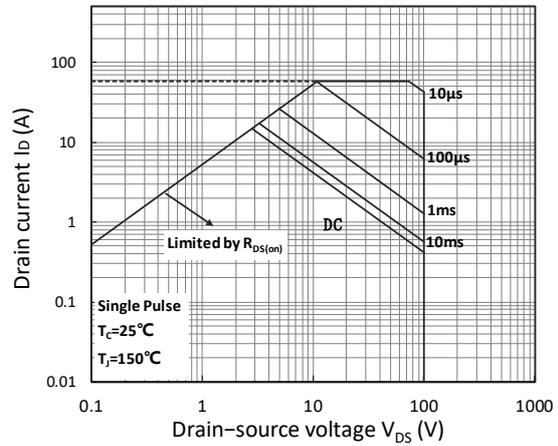


Figure 10. Safe Operating Area

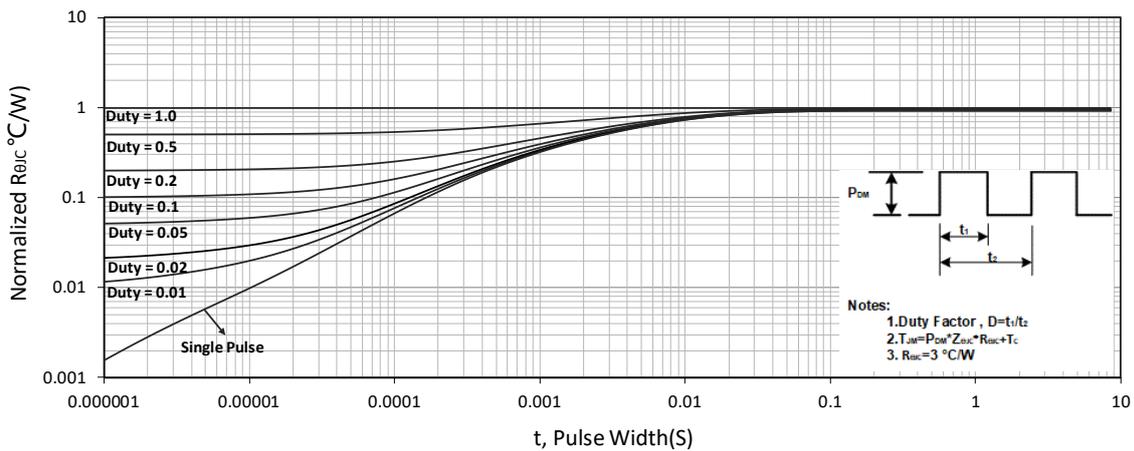
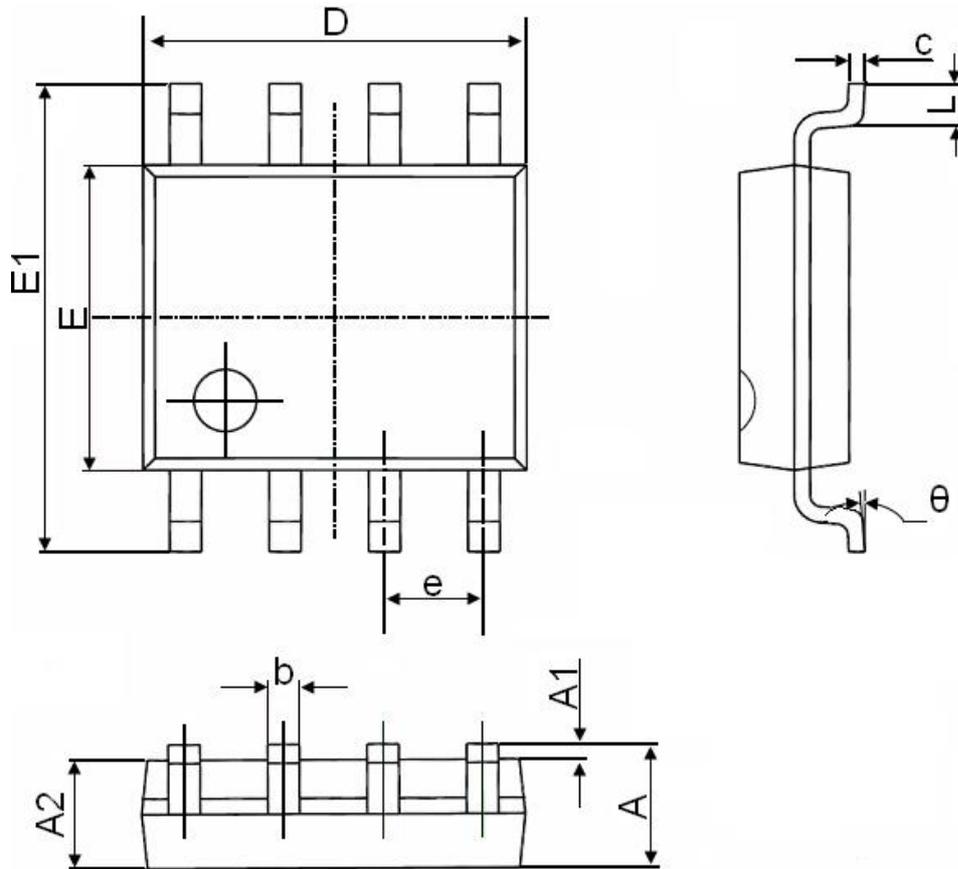


Figure 11. Normalized Maximum Transient Thermal Impedance

SOP-8 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.270(BSC)		0.050(BSC)	
L	0.400	1.270	0.016	0.050
theta	0°	8°	0°	8°