



ER4803A

-30V Dual P-Channel MOSFET

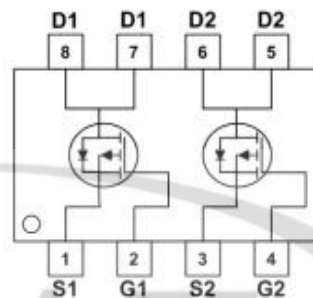
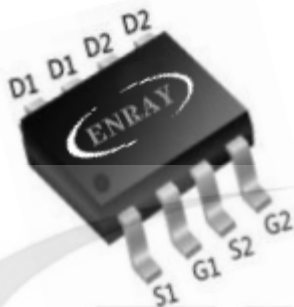
Features

The ER4803A is the high cell density trench P-ch MOSFETs, which provide excellent RDSON and gate charge for most of the synchronous buck converter applications.
The ER4803A meet the RoHS and Green Product

Product Summary

V _{DS}	-30V
I _D	-5.3A
R _{DS(ON)} (at V _{GS} =-10V)	<60mΩ
R _{DS(ON)} (at V _{GS} =-4.5V)	< 90mΩ

Dual SOP-8



Maximum Ratings(Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	-30	V
Gate-Source Voltage	V _{GS}	±20	
Continuous Drain Current V _{GS} @ 10V ¹	I _{D@TA=25°C}	-5.3	A
Continuous Drain Current V _{GS} @ 10V ¹	I _{D@TA=70°C}	-4.3	
Pulsed Drain Current ²	I _{DM}	-20	
Single Pulse Avalanche Energy	E _{AS}	-	mJ
Avalanche Current	I _{AS}	-	
Total Power Dissipation	P _{D@TA=25°C}	2	W
Storage Temperature Range	T _{STG}	-55 to 150	°C
Operating Junction Temperature Range	T _J	-55 to 150	

Thermal Data

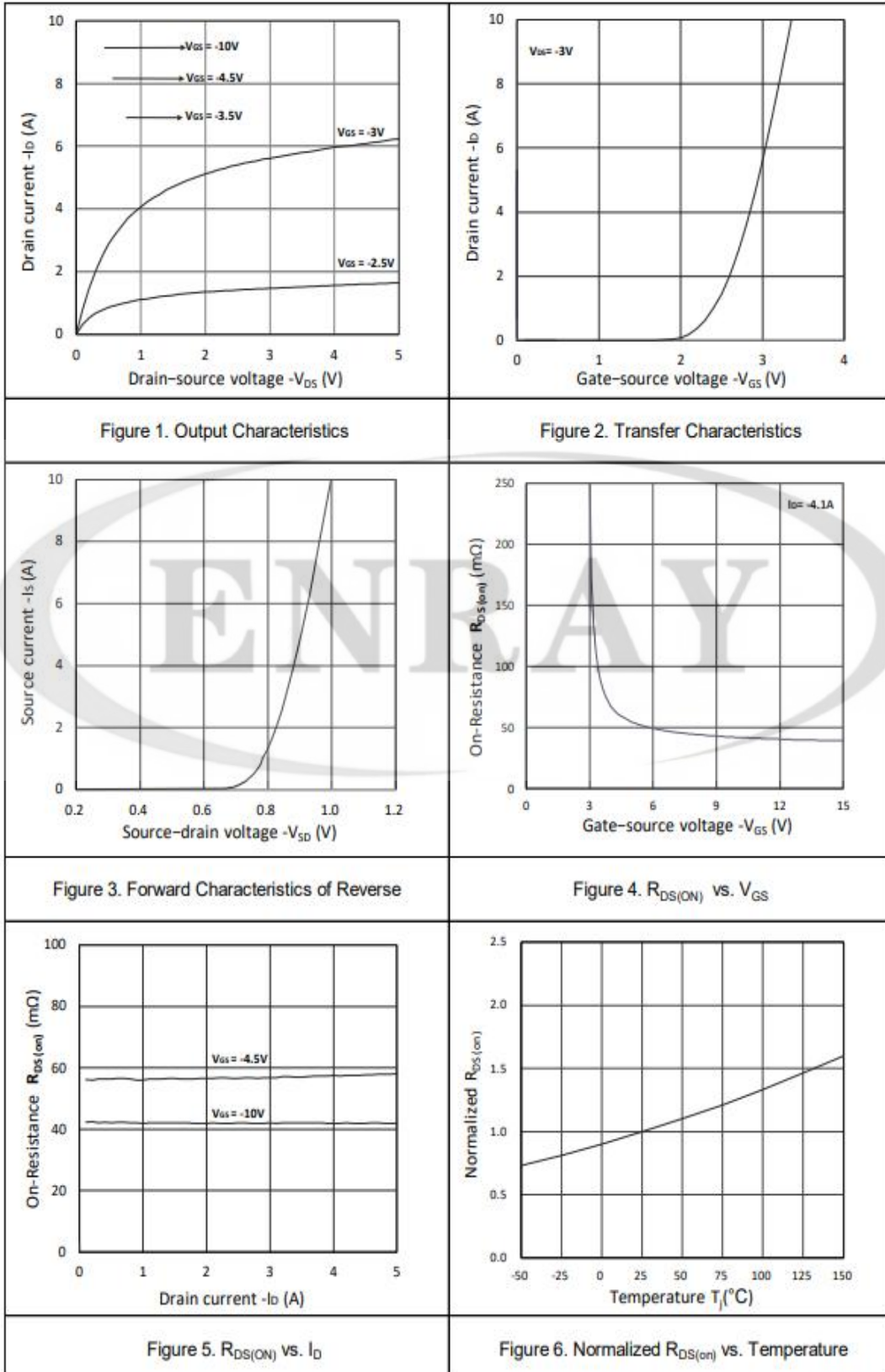
Parameter	Symbol	Max.	Unit
Thermal Resistance Junction-ambient	R _{θJA}	100	°C/W



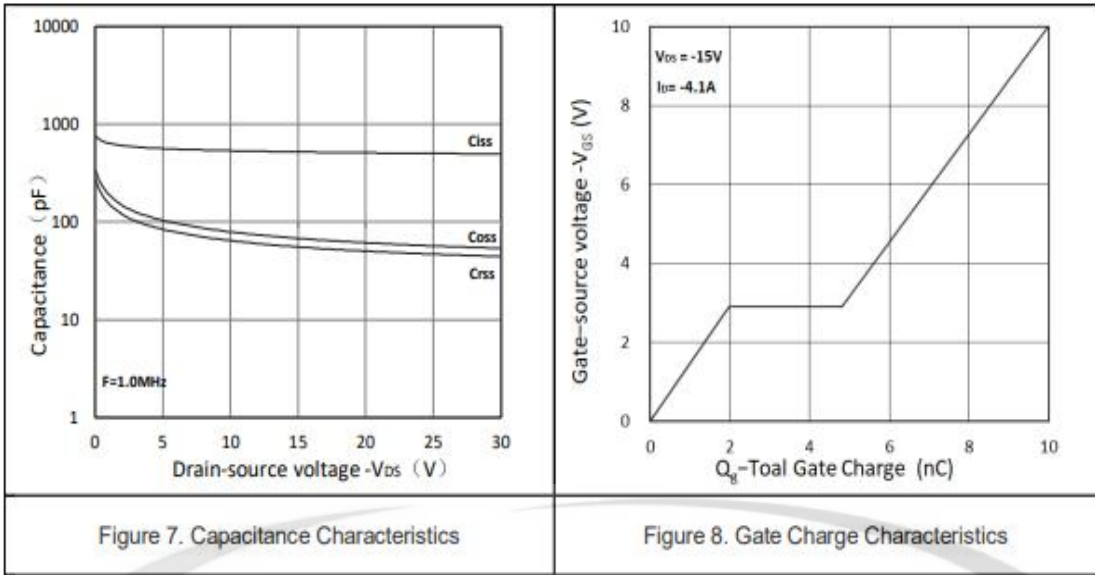
Electrical Characteristics(T_J=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static Parameters ③						
Drain-Source Breakdown Voltage	BVDSS	VGS = 0V, ID = -250μA	-30			V
Gate Threshold Voltage	VGS(th)	VDS = VGS, ID = -250μA	-1.0	-1.5	-2.1	V
Gate-Body leakage Current	IGSS	VDS = 0V, VGS = ±20V			±100	nA
Zero Gate Voltage Drain Current	IDSS	VDS = -30V, VGS = 0V			-1	μA
Static Drain-Source On-Resistance	RDS(on)	VGS = -10V, ID = -4.1A		35	60	mΩ
		VGS = -4.5V, ID = -3A		52	90	mΩ
Dynamic Parameters ④						
Input Capacitance	Ciss	VDS = -15V, VGS = 0V, f = 1MHz		530		pF
Output Capacitance	Coss			70		pF
Reverse Transfer Capacitance	Crss			56		pF
Total Gate Charge	Qg	VGS = -10V, ID = -4.1A, VDS = -15V		10		nC
Gate Source Charge	Qgs			2		nC
Gate Drain Charge	Qgd			2.8		nC
Switching Parameters ④						
Turn-On DelayTime	td(on)	VGS = -10V, VDD = -15V, ,RGEN = 6Ω, ID = -4.1A,		6.9		ns
Turn-On Rise Time	tr			12		ns
Turn-Off DelayTime	td(off)			19		ns
Turn-Off Fall Time	tf			7.5		ns
Drain-Source Diode Characteristics and Maximum Ratings						
Continuous Source Current ^{1,4}	IS				-1.2	A
Diode Forward Voltage ³	VSD	IS = -1.7A, VGS = 0V			-5.3	A
Note :						
1. Repetitive Rating : Pulse width limited by maximum junction temperature.						
2. Surface Mounted on FR4 Board, t < 5 sec.						
3. Pulse Test : Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.						
4. Guaranteed by design, not subject to production testing.						

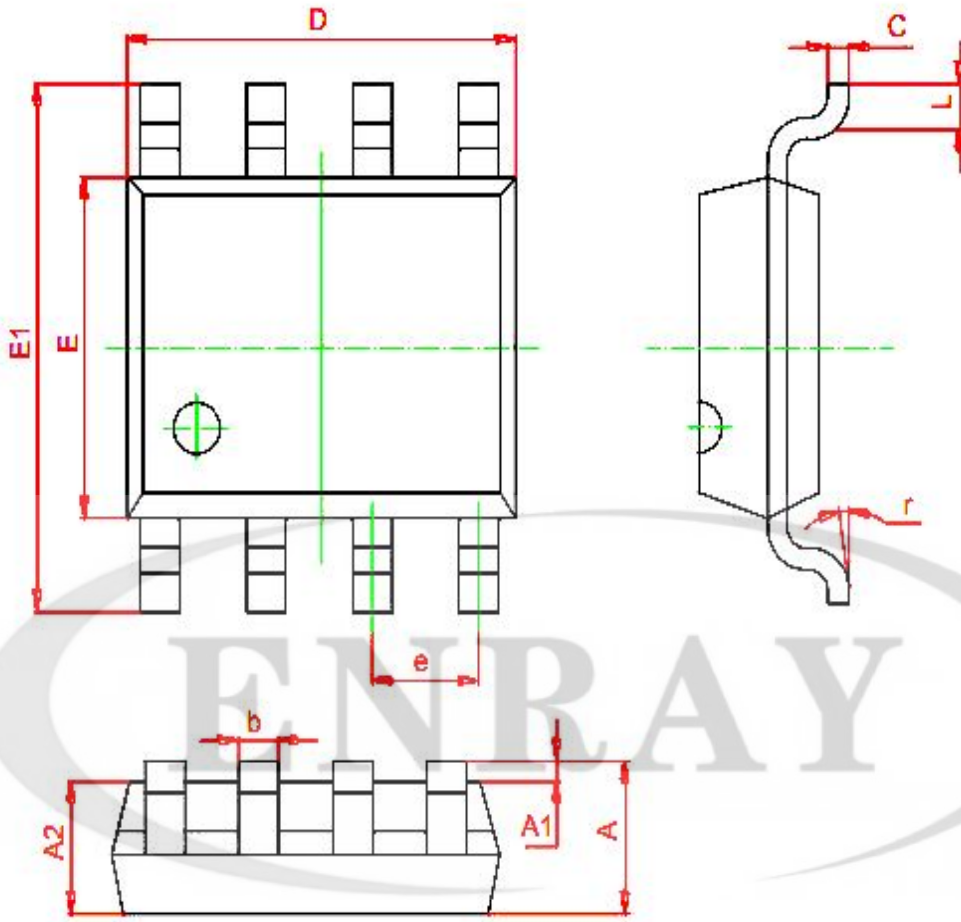
Typical Electrical and Thermal Characteristics



Typical Electrical and Thermal Characteristics



Dual SOP-8 Package Outline Dimensions



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
θ	0°	8°	0°	8°