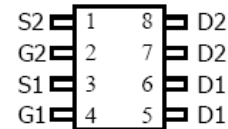


Features

- $V_{DS} = -30V$ / $V_{GS} = \pm 20V$ / $I_D = 5A$
- $R_{DS(ON)} = 60m\Omega$ (max.) @ $V_{GS} = -10V$
- $R_{DS(ON)} = 95m\Omega$ (max.) @ $V_{GS} = -4.5V$
- Reliable and Rugged
- Avalanche Rated
- Advanced Trench Process Technology
- High Density Cell Design for Ultra Low On-Resistance

Dimensions SOP-8

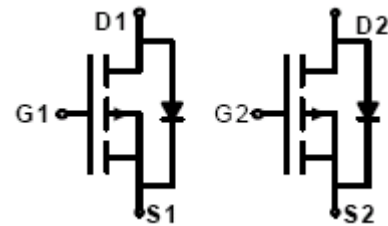


SOIC-8

Applications

- Power Management
- Synchronous Rectification
- DC-DC Converters

Pin Configuration



Mechanical Characteristics

- Package: SOIC-8
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 2,500 pcs
- Reel Size: 13 inch

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

Parameter	Symbol	Maximum	Units
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current ^A	I_D	TA=25° C	-5
		TA=70° C	-3
Pulsed Drain Current ^B	I_{DM}	-20	A
Power Dissipation ^A	P_D	TA=25° C	2
		TA=70° C	1.2
Junction-to-Ambient ^A	Steady-State	$R_{\theta JA}$	100 ° C/W
Junction and Storage Temperature	T_J, T_{STG}	-55 to 150	° C

Electrical Characteristics(TA=25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ	Max.	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250uA	-30			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-24V, V _{GS} =0V			1	μ A
		T _J =85 °C			30	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _D =250uA	-1	-1.4	-3	V
BVGSO	Gate-Source Breakdown Voltage	V _{DS} =0V, I _G =±250uA	±20			V
I _{GSS}	Gate Leakage Current	V _{DS} =0V, V _{GS} =±25V			100	nA
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =-10V, I _D =-4A		55	60	mΩ
		V _{GS} =-4.5V, I _D =-3A		80	95	
V _{SD}	Diode Forward Voltage	I _{SD} =-1A, V _{GS} =0V			-1.2	V
I _S	Maximum Body-Diode Continuous Current				-2	A
Dynamic Parameters						
C _{iss}	Input Capacitance	V _{GS} =0V, V _{DS} =-15V, f=1MHz		980		pF
C _{oss}	Output Capacitance			360		pF
C _{rss}	Reverse Transfer Capacitance			146		pF
R _G	Gate Resistance	V _{GS} =0V, V _{DS} =0V, f=1MHz		6		Ω
Switching Parameters						
Q _g	Total Gate Charge	I _D =-4A, V _{DS} =-15V, V _{GS} =-10V		13		nC
Q _{gs}	Gate Source Charge			2.5		nC
Q _{gd}	Gate Drain Charge			2.9		nC
t _{D(on)}	Turn-On DelayTime	V _{GS} =-4.5V, V _{DD} =-15V, R _G =6Ω		16		ns
t _r	Turn-On Rise Time			12		ns
t _{D(off)}	Turn-Off DelayTime			56		ns
t _f	Turn-Off Fall Time			25		ns
t _{rr}	Body Diode Reverse Recovery Time	I _F =-4A, dI/dt=100A/μs		13		ns
Q _{rr}	Body Diode Reverse Recovery Charge	I _F =-4A, dI/dt=100A/μs		7		nC

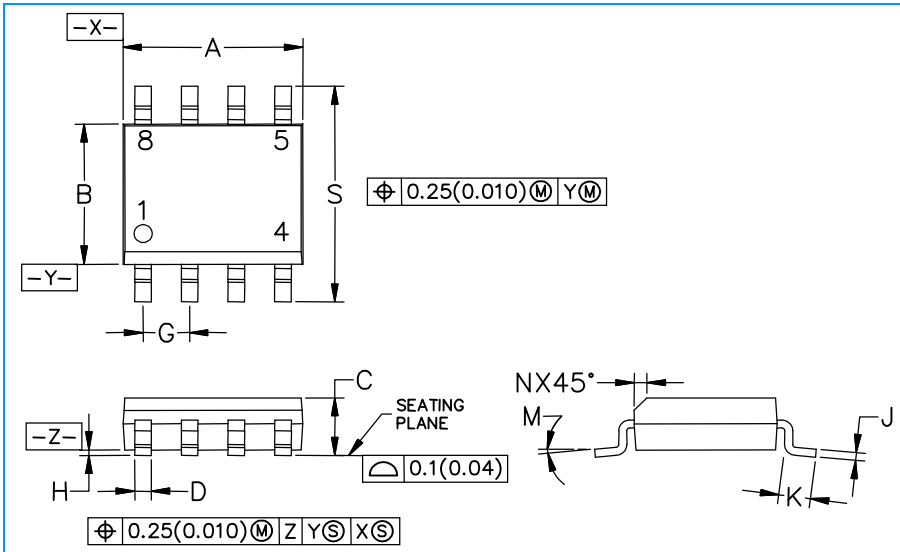
A: The value of R_{θJA} is measured in a still air environment with T_A =25 °C. The value in any given application depends on the user's specific board design.

B: Repetitive rating, pulse width limited by junction temperature.

C: Pulse test: pulse width ≤ 300ns, duty cycle ≤ 2%.

D: Guaranteed by design, not subject to production testing.

SOIC-08 Package Outline & Dimensions



DIM	Millimeters		Inches	
	Min	Max	Min	Max
A	4.80	5.00	0.189	0.197
B	3.80	4.00	0.150	0.157
C	1.35	1.75	0.053	0.069
D	0.35	0.51	0.013	0.020
G	1.27BSC		0.050BSC	
H	0.10	0.25	0.004	0.010
J	0.19	0.25	0.007	0.010
K	0.40	1.27	0.016	0.050
M	0°	8°	0°	8°
N	0.25	0.50	0.010	0.020
S	5.80	6.20	0.228	0.244