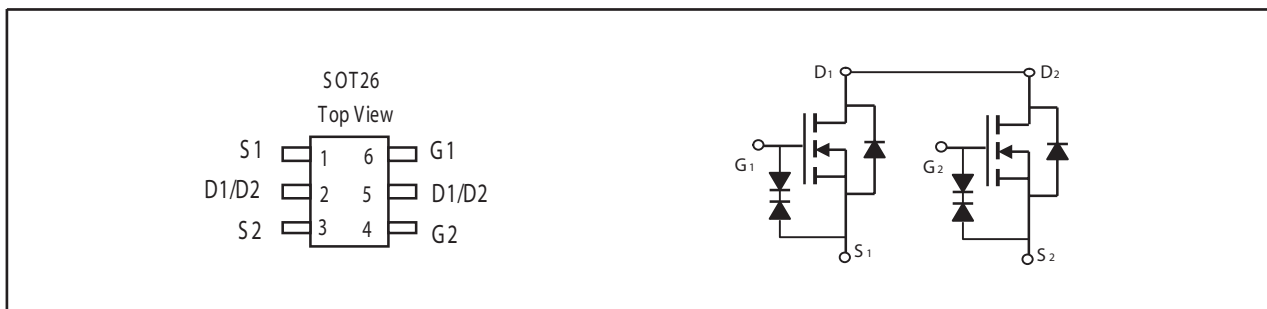


STS8235

PRODUCT SUMMARY		
V _{DSS}	I _D	R _{DS(ON)} (mΩ) Max
30V	4.5A	36 @ V _{GS} =4.5V
		46 @ V _{GS} =2.5V

FEATURES

- Super high dense cell design for low R_{DS(ON)}.
- Rugged and reliable.
- Surface Mount Package.
- ESD Protected.



ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Limit	Units
V _{DS}	Drain-Source Voltage	30	V
V _{GS}	Gate-Source Voltage	±10	V
I _D	Drain Current-Continuous ^a	T _A =25°C	4.5
		T _A =70°C	3.6
I _{DM}	-Pulsed ^b	18	A
P _D	Maximum Power Dissipation ^a	T _A =25°C	1.25
		T _A =70°C	0.8
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 to 150	°C

THERMAL CHARACTERISTICS

R _{θJA}	Thermal Resistance, Junction-to-Ambient ^a	100	°C/W
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STS8235

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
OFF 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	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	0.7	1.5	V
R _{DS(ON)}	Drain-Source On-State Resistance	V _{GS} =4.5V , I _D =4.5A		30	36	m ohm
		V _{GS} =2.5V , I _D =4A		36	46	m ohm
g _{FS}	Forward Transconductance	V _{DS} =5V , I _D =4.5A		15		S
DYNAMIC CHARACTERISTICS ^c						
C _{ISS}	Input Capacitance	V _{DS} =15V, V _{GS} =0V f=1.0MHz		440		pF
C _{OSS}	Output Capacitance			80		pF
C _{RSS}	Reverse Transfer Capacitance			56		pF
SWITCHING CHARACTERISTICS ^c						
t _{D(ON)}	Turn-On Delay Time	V _{DD} =15V I _D =1A V _{GS} =4.5V R _{GEN} =10 ohm		10		ns
t _r	Rise Time			12.5		ns
t _{D(OFF)}	Turn-Off Delay Time			15.5		ns
t _f	Fall Time			30		ns
Q _g	Total Gate Charge	V _{DS} =15V, I _D =4.5A, V _{GS} =4.5V		6.7		nC
		V _{DS} =15V, I _D =4.5A, V _{GS} =2.5V		4.6		nC
Q _{gs}	Gate-Source Charge	V _{DS} =15V, I _D =4.5A,		1.5		nC
Q _{gd}	Gate-Drain Charge	V _{GS} =4.5V		2.2		nC
DRAIN-SOURCE DIODE CHARACTERISTICS AND MAXIMUM RATINGS						
I _S	Maximum Continuous Drain-Source Diode Forward Current				1.25	A
V _{SD}	Diode Forward Voltage ^b	V _{GS} =0V, I _S =1.25A		0.78	1.2	V

Notes

- a. Surface Mounted on FR4 Board, t ≤ 10sec.
- b. Pulse Test: Pulse Width ≤ 300us, Duty Cycle ≤ 2%.
- c. Guaranteed by design, not subject to production testing.