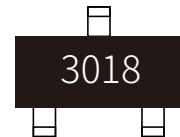


FEATURES

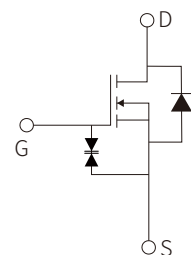
- | $V_{DS}=30V, I_D=0.6A$
- | $R_{DS(ON) Typ} = 474m\Omega @ V_{GS} = 10V$
- | $R_{DS(ON) Typ} = 643m\Omega @ V_{GS} = 4.5V$
- | Advanced Trench Technology
- | Excellent $R_{DS(ON)}$ and Low Gate Charge
- | ESD Protected: 2KV



SOT-323



Marking



Schematic Symbol

APPLICATION

- | Load Switch
- | PWM Application
- | Power Management

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}C$)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Continuous Drain Current	I_D	0.6	A
		0.36	
Pulsed Drain Current ¹	I_{DM}	2.4	A
Gate Source Voltage	V_{GS}	± 20	V
Total Power Dissipation ² $T_A=25^{\circ}C$	P_D	0.35	W
Thermal Resistance Junction-ambient ²	$R_{\theta JA}$	357	$^{\circ}C/W$
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS (T_A=25°C)

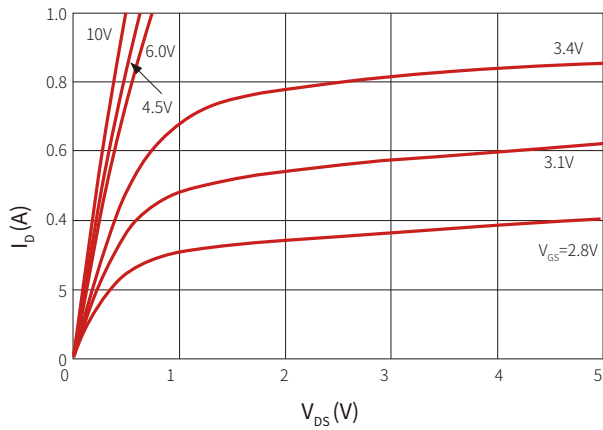
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =250μA	30			V
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±10	μA
Drain-to-Source Leakage Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1	μA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.9	1.2	1.7	V
Static Drain-Source On-Resistance ⁽¹⁾	R _{DS(on)}	V _{GS} =10V, I _D =0.2A		474	569	mΩ
		V _{GS} =4.5V, I _D =0.15A		643	772	mΩ
Dynamic Characteristics						
Input capacitance	C _{iss}	V _{DS} =15V,V _{GS} =0V,f=1MHz		18		pF
Output capacitance	C _{oss}			7		pF
Reverse transfer capacitance	C _{rss}			3		pF
Total gate charge	Q _g	V _{GS} =0V to 10V V _{DS} =15V,I _D =0.3A		1.7		nC
Gate-source charge	Q _{gs}			0.5		nC
Gate-drain charge	Q _{gd}			0.7		nC
Switching Characteristics						
Turn-on delay time	t _{d(on)}	V _{DD} =10V, I _D =0.2A R _{GEN} =10Ω,V _{GS} =10V		1.7		ns
Rise Time	t _r			10		ns
Turn-Off Delay Time	t _{d(off)}			10		ns
Fall yime	t _f			22		ns
Drain-Source Diode Characteristics and Maximum Ratings						
Maximum Continuous Drain to Source Diode Forward Current	I _S				0.6	A
Maximum Pulsed Drain to Source Diode Forward Current	I _{SM}				2.4	A
Drain to Source Diode Forward Voltage	V _{SD}	V _{GS} =0V,I _S =0.2A			1.2	V

Notes:

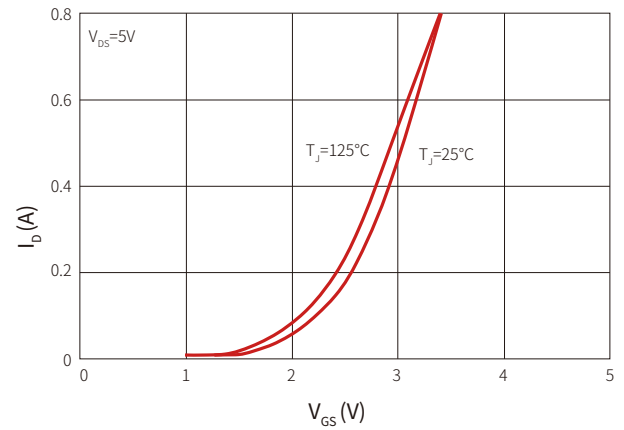
1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature.
2. R_{θJA} is measured with the device mounted on a 1inch² pad of 2oz copper FR4 PCB
3. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 0.5%.

CHARACTERISTIC CURVES

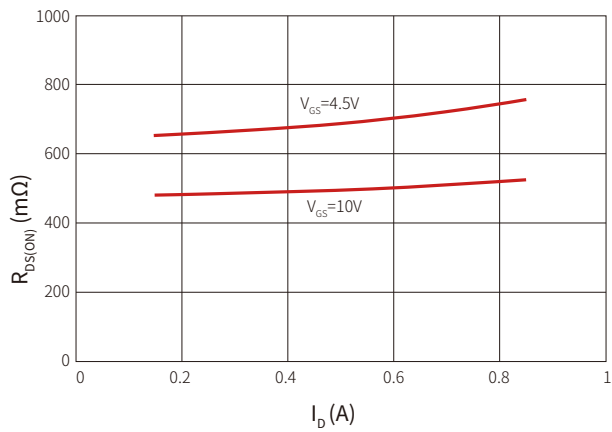
Output Characteristics



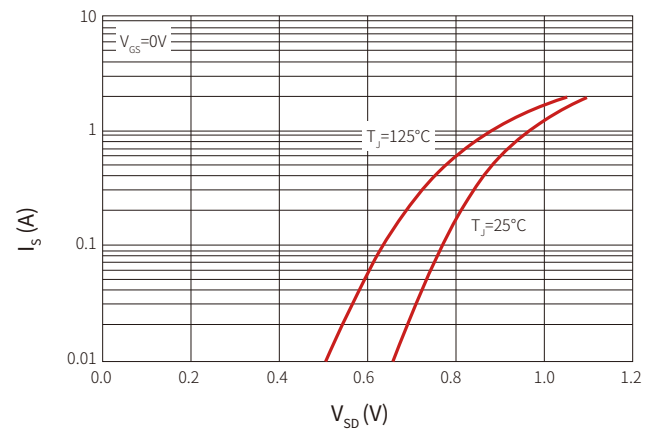
Typical Transfer Characteristics

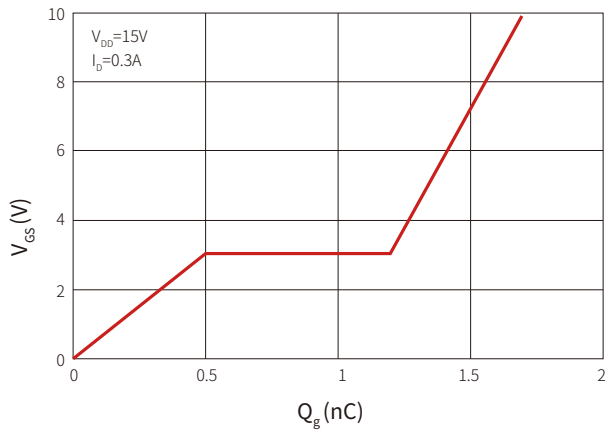
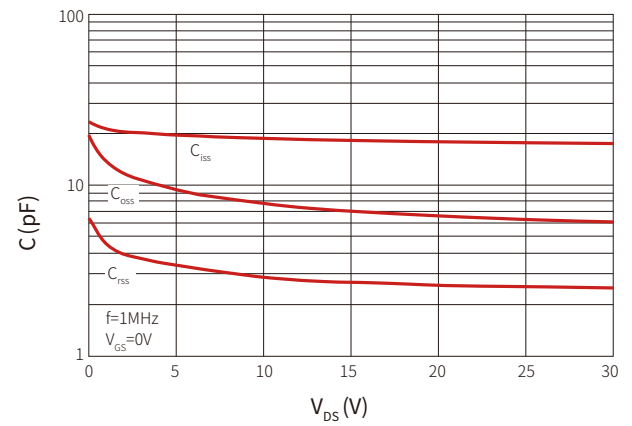
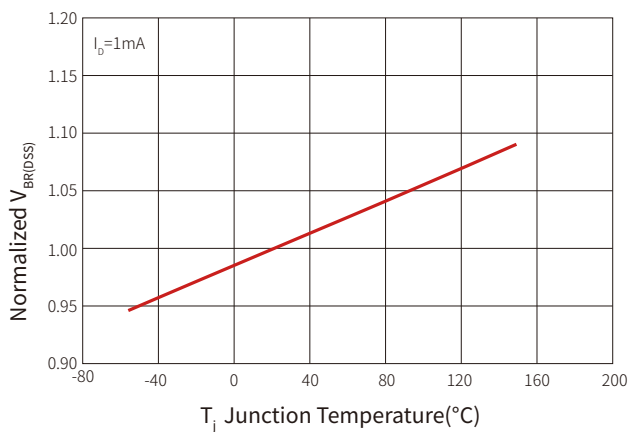
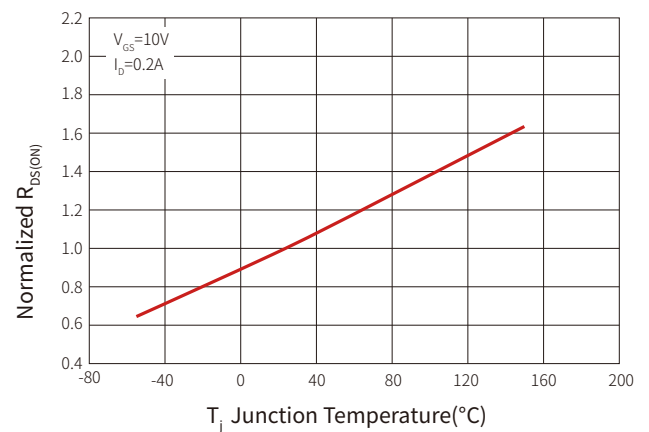
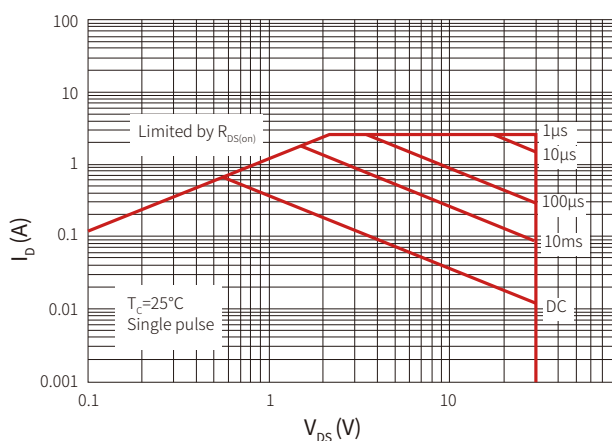
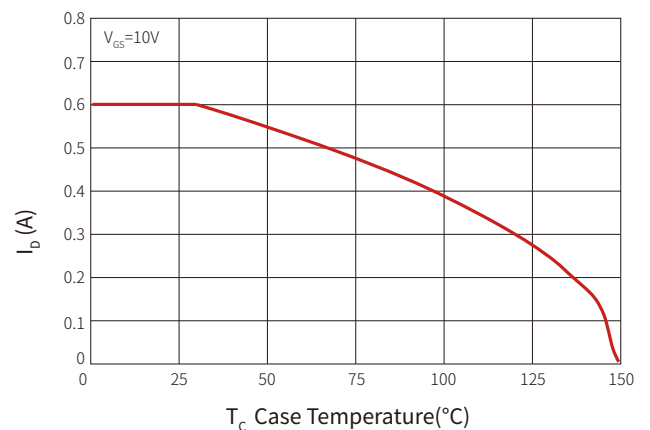


On-resistance vs. Drain Current

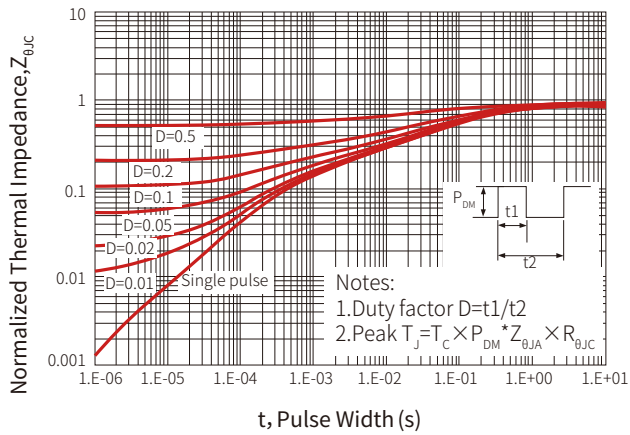


Body Diode Characteristics

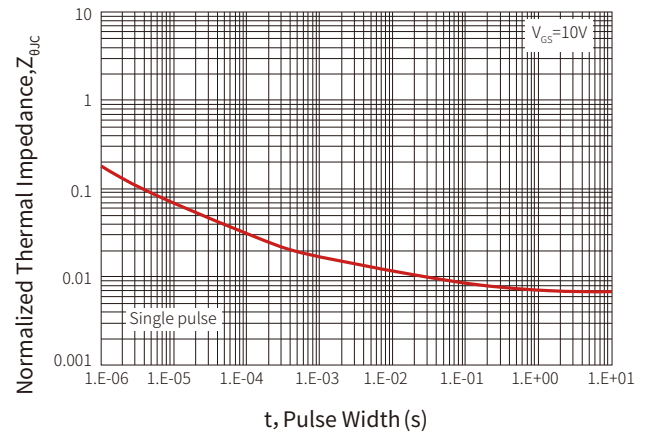


Gate Charge Characteristics

Capacitance Characteristics

Normalized Breakdown Voltage vs. Junction Temperature

Normalized on Resistance vs. Junction Temperature

Maximum Safe Operating Area

Maximum Continuous Drain Current vs. Ambient Temperature


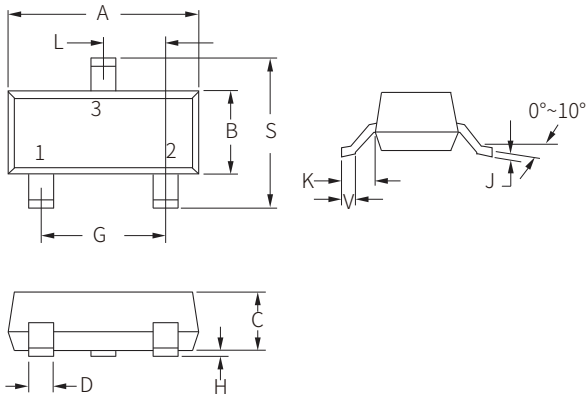
Maximum Effective Transient Thermal Impedance, Junction-to-Ambient



Peak Current Capacity

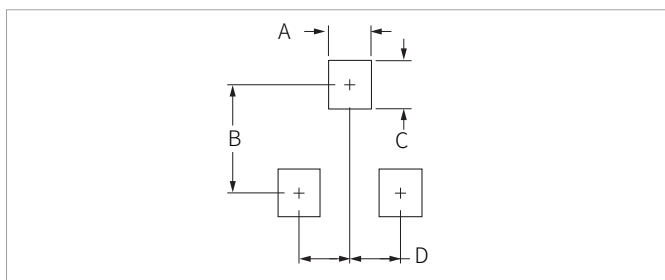


SOT-323 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.00	2.20	0.079	0.087
B	1.15	1.35	0.045	0.053
C	0.80	1.10	0.031	0.043
D	0.20	0.40	0.008	0.016
G	1.20	1.40	0.047	0.055
H	0.00	0.10	0.000	0.004
J	0.08	0.15	0.003	0.006
K	0.525REF		0.021REF	
L	0.650TYP		0.026TYP	
S	2.15	2.45	0.085	0.096
V	0.26	0.46	0.010	0.018

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
	NOR	NOR
A	0.50	0.020
B	2.20	0.087
C	0.80	0.031
D	1.30	0.051

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SNM3018W	SOT-323	3000PCS	7"

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By QR Code

Website



Wechat

To find your local partner within Semiware's global website: www.semiware.com

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