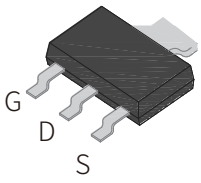
FEATURES

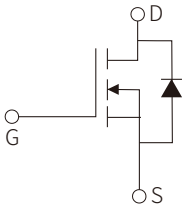
- Advanced trench process technology
- High Density Cell Design For Ultra Low On-Resistance



SOT-89

APPLICATIONS

- Low Side Load Switch
- Battery Switch
- Optimized for Power Management Applications for Portable Products, such as Aeromodelling, Power bank, Brushless motor, Main board , and Others



Schematic Symbol

APPROVALS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

Parameter	Symbol	Value	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	30	V
Continuous Drain current T_A =25°C	I_D	5.8	A
Pulse Drain Current Tested (Sillicon Limit) (Note1) T_A =25°C	I_{DM}	30	A
Gate-Source Voltage	V_{GS}	±12	V
Maximum Power Dissipation T_A =25°C	P_D	1.4	W
Thermal Resistance Junction—to—Ambient (Note2)	$R_{\theta JA}$	89.2	°C/W
Diode Continuous Forward Current T_A =25°C	I_S	1.6	A
Junction temperature	T_J	-55 ~ +150	°C
Storage temperature	T_{STG}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS(T_a=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Off Characteristics						
Drain-source Breakdown Voltage	BV_{DSS}	V_{GS}=0V,I_D=250μA	30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=24V,V_{GS}=0V			1	μA
Gate–Body Leakage	I_{GSS}	V_{GS}=±12V,V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=250μA	0.7		1.4	V
Drain-Source On–Resistance(Note3)	$R_{DS(on)}$	V_{GS}=10V,I_D=5.8A		22	28	mΩ
		V_{GS}=4.5V,I_D=5A		25	33	
		V_{GS}=2.5V,I_D=4A		33	52	
Dynamic Electrical Characteristics @T,= 25°C (unless otherwise stated) (Note4)						
Input Capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0V,f=1MHz		340		pF
Output Capacitance	C_{oss}			115		
Reverse Transfer Capacitance	C_{rss}			33		
Total Gate Charge	Q_g	V_{GS}=4.5V,V_{DS}=15V,I_D=5.8A		11		nC
Gate Source Charge	Q_{gs}			1.6		
Gate Drain Charge	Q_{gd}			2.8		
Switching Characteristics (Note4)						
Turn–On Delay Time	$t_{d(on)}$	V_{DD}=15V,R_L=2.7Ω R_G=3Ω,V_{GS}=10V I_D=1A		7		ns
Turn–On Rise Time	t_r			15		
Turn–Off Delay Time	$t_{d(off)}$			38		
Turn–Off Fall Time	t_f			3		
Drain-Source Diode Characteristics						
Forward on voltage	V_{SD}	I_S=2.5A,V_{GS}=0V			1.3	V

Note:
1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t ⩽ 10 sec
3. Pulse Test: pulse width ⩽ 300 us, duty cycle ⩽ 2%.
4. Guaranteed by design, not subject to production testing.

PARAMETER CHARACTERISTIC CURVE

Fig 1:

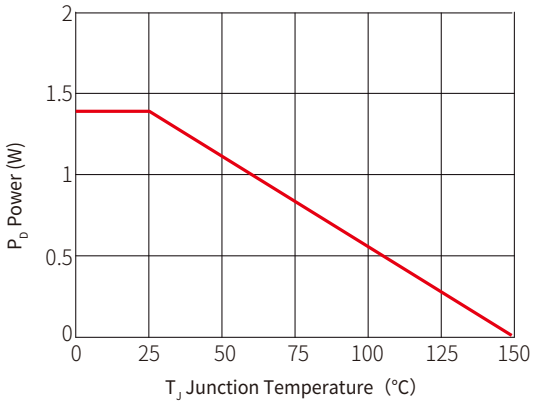


Figure 2:

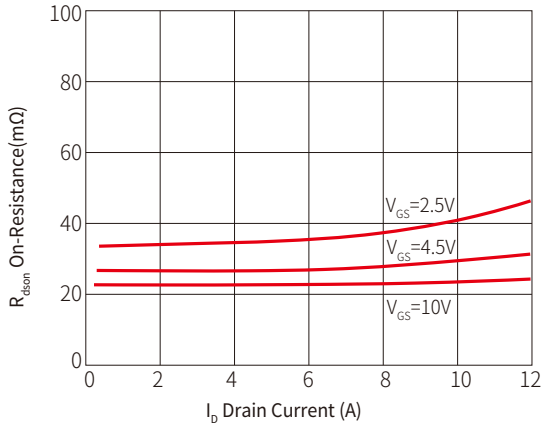


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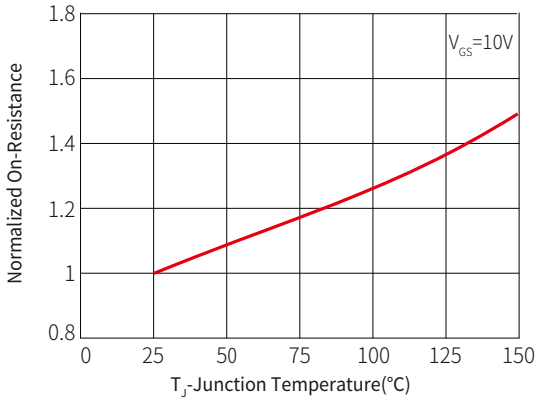


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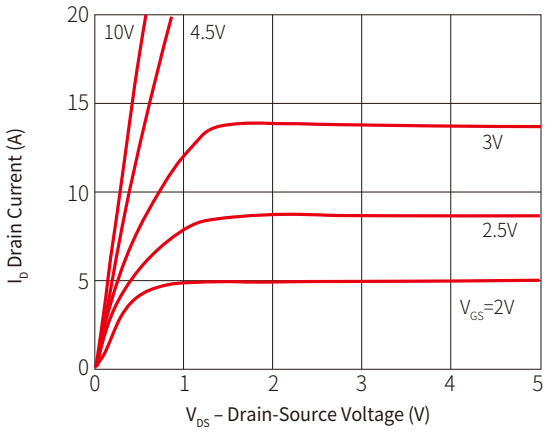


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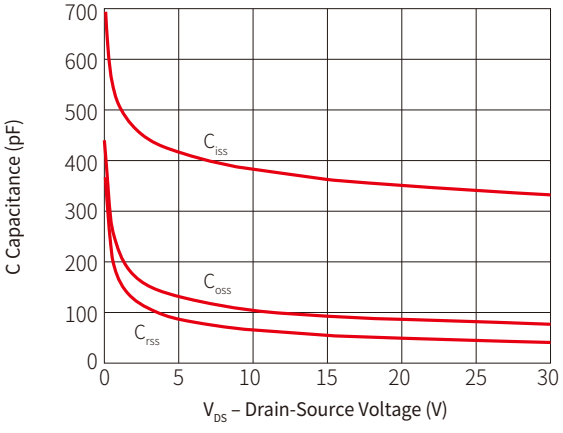


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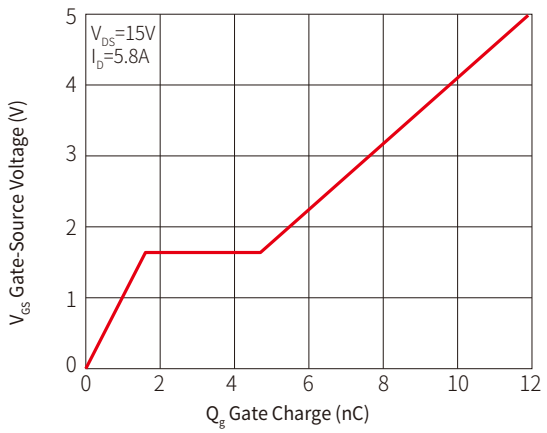


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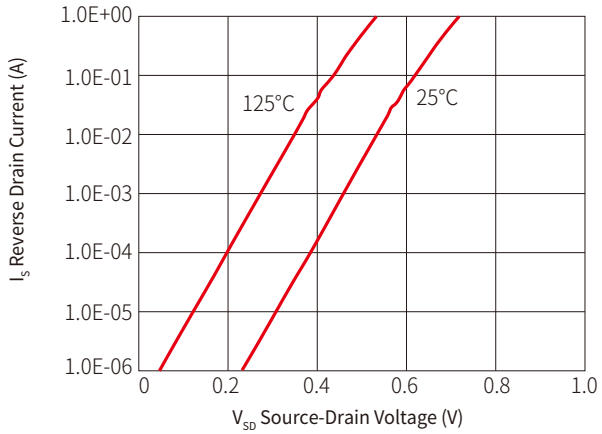


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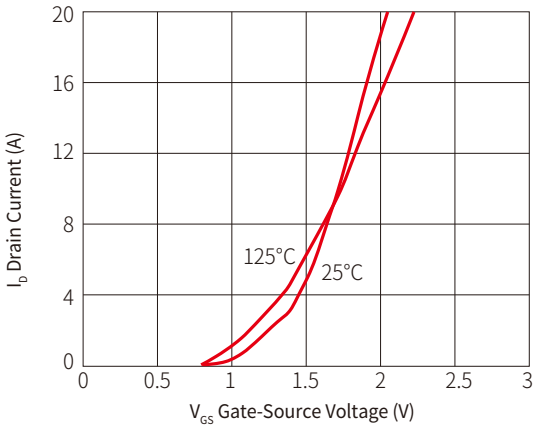


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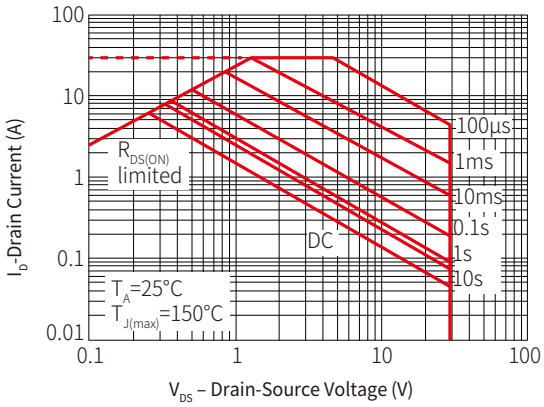
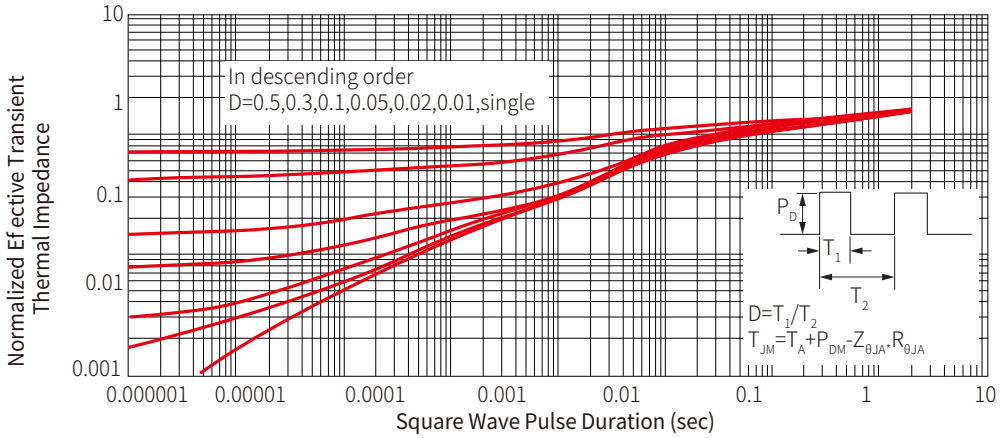
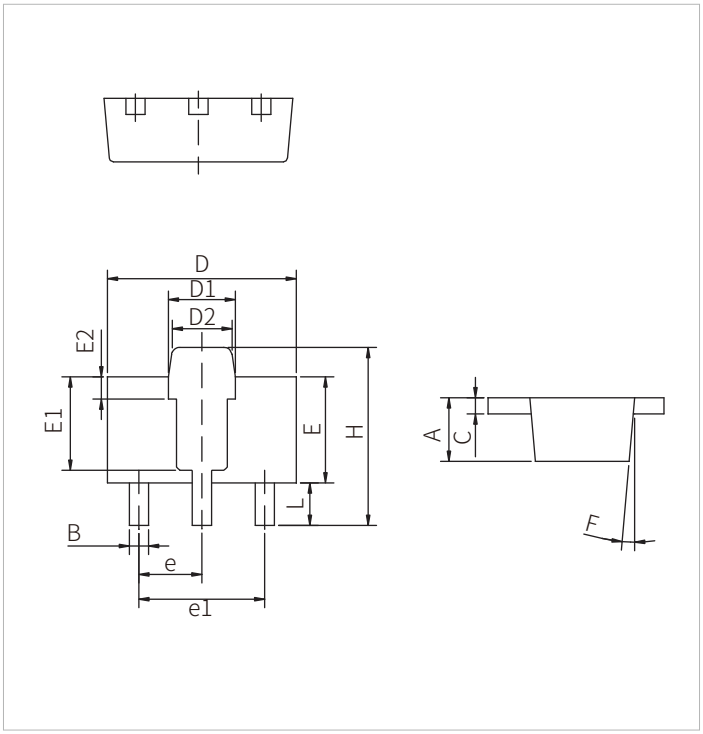


Figure 10:



SOT-89 PACKAGE DIMENSIONS



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	1.40		1.60	0.055		0.063
B	0.40		0.52	0.016		0.020
C	0.35		0.41	0.014		0.016
D	4.40		4.60	0.173		0.181
D1	1.50		1.70	0.059		0.067
D2	1.30		1.50	0.051		0.059
E	2.40		2.60	0.094		0.102
E1		2.20			0.087	
E2		0.52			0.020	
e		1.50			0.059	
e1		3.00			0.118	
F		5.00			5.000	
H	4.05		4.25	0.159		0.167
L	0.89		1.20	0.035		0.047

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SPM3400C	SOT-89	1000PCS	7”

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Wechat

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