

FEATURES

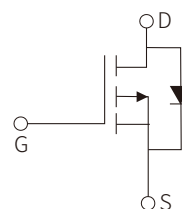
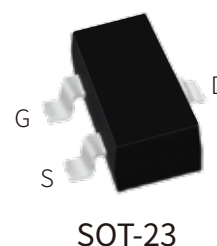
- | Lead free product is acquired
- | Surface mount package

APPLICATIONS

- | Low Switch
- | DC/DC converters

APPROVALS

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



Schematic Symbol

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

Parameter	Symbol	Value	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	-60	V
Continuous drain current $T_A=25^{\circ}\text{C}$	I_D	-2	A
Pulse Drain Current (Silicon Limit) (Note1) $T_A=25^{\circ}\text{C}$	I_{DM}	-8	A
Gate-Source Voltage	V_{GS}	± 20	V
Maximum Power Dissipation $T_A=25^{\circ}\text{C}$	P_D	1.4	W
Diode Continuous Forward Current $T_A=25^{\circ}\text{C}$	I_S	-2	A
Thermal Resistance Junction—to—Ambient (Note2)	$R_{\theta JA}$	104	$^{\circ}\text{C/W}$
Junction temperature	T_J	-55 ~ +150	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Static Electrical Characteristics @TJ= 25°C (unless otherwise stated)						
Drain-source Breakdown Voltage	BV _{DSS}	V _{GS} =0V,I _D =-250μA	-60			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V,V _{GS} =0V			-1	μA
Gate–Body Leakage	I _{GSS}	V _{GS} =±20V,V _{DS} =0V			±100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} ,I _D =-250μA	-1	-1.6	-2.5	V
Drain-Source On–Resistance(Note3)	R _{DS(on)}	V _{GS} =-10V,I _D =-2A		168	208	mΩ
		V _{GS} =-4.5V,I _D =-1A		195	240	
Dynamic Electrical Characteristics @T _J = 25°C (unless otherwise stated) (Note4)						
Input Capacitance	C _{iss}	V _{DS} =-30V,V _{GS} =0V,f=1MHz		540		pF
Output Capacitance	C _{oss}			25		
Reverse Transfer Capacitance	C _{rss}			20		
Total Gate Charge	Q _g	V _{GS} =-10V,V _{DS} =-30V,I _D =-1A		10.5		nC
Gate Source Charge	Q _{gs}			2.5		
Gate Drain Charge	Q _{gd}			1.3		
Switching Characteristics (Note4)						
Turn–On Delay Time	t _{d(on)}	V _{DD} =-30V,R _G =3Ω,I _D =-1A		38		ns
Turn–On Rise Time	t _r			32		
Turn–Off Delay Time	t _{d(off)}			12		
Turn–Off Fall Time	t _f			10		
Source- Drain Diode Characteristics@TJ= 25°C (unless otherwise stated)						
Diode forward voltage(Note 1)	V _{SD}	I _S =-1A,V _{GS} =0V			-1.2	V

Note:

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

PARAMETER CHARACTERISTIC CURVE

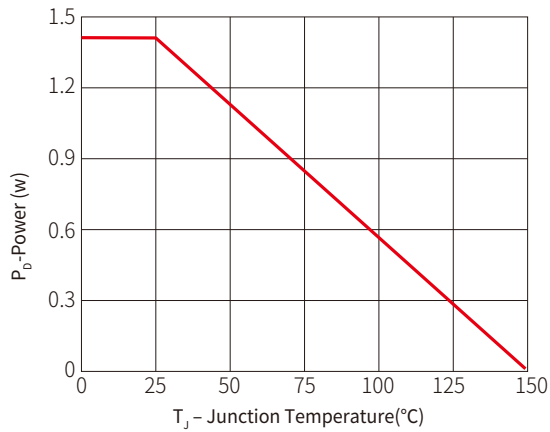
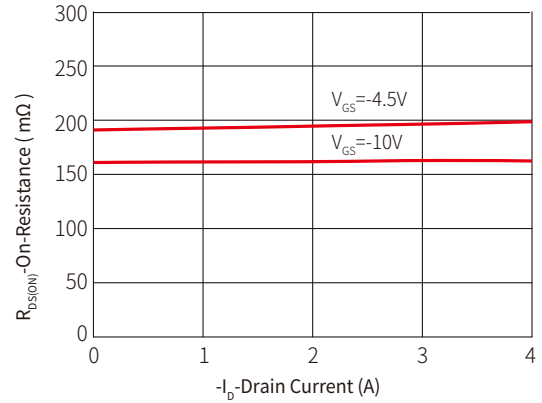
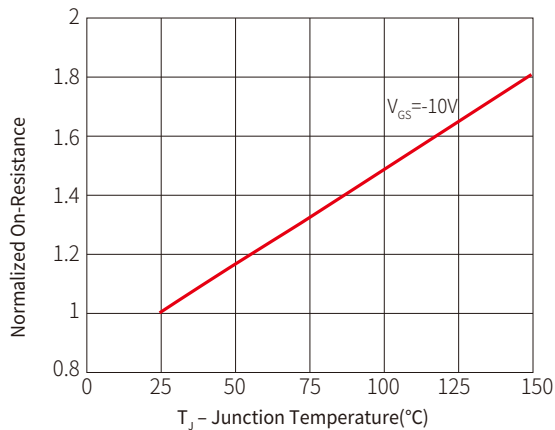
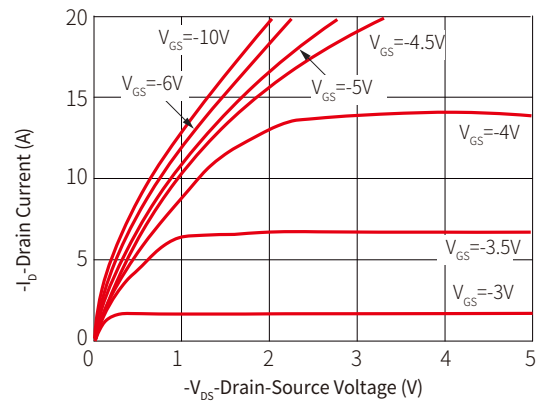
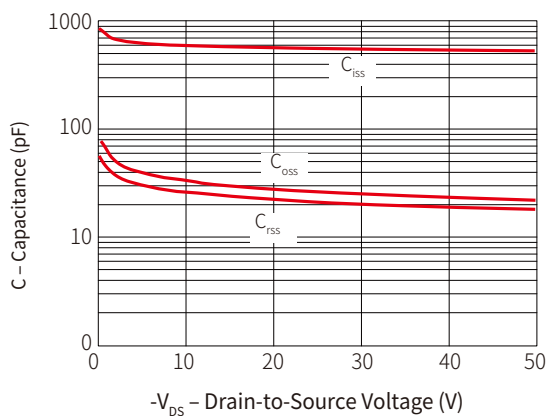
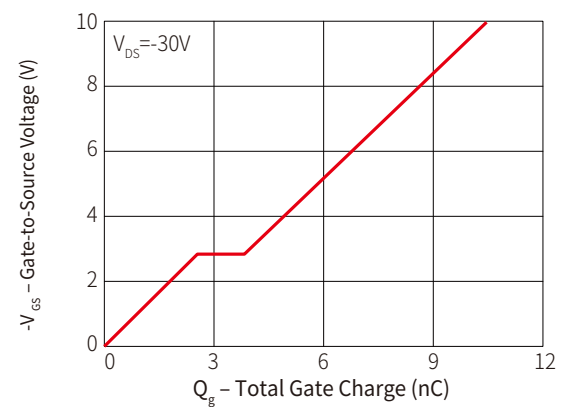
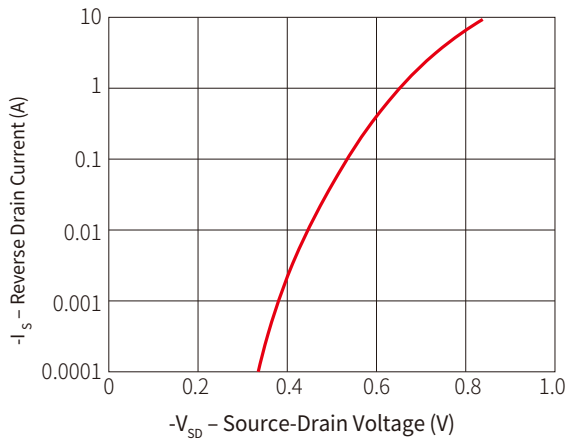
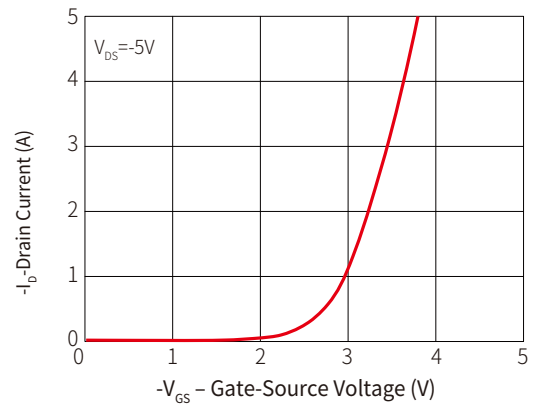
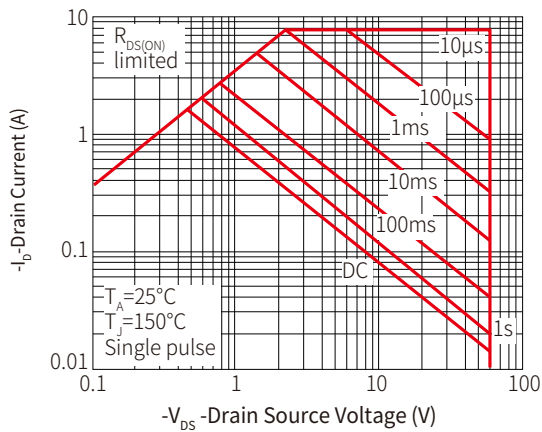
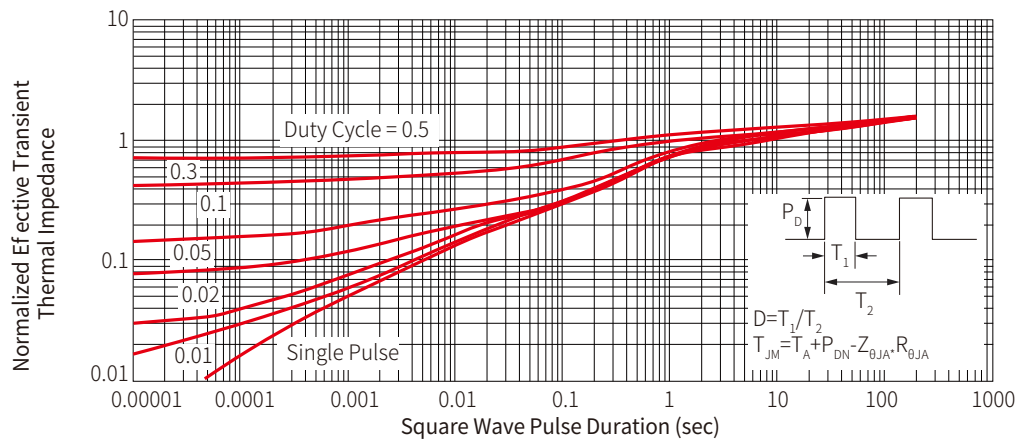
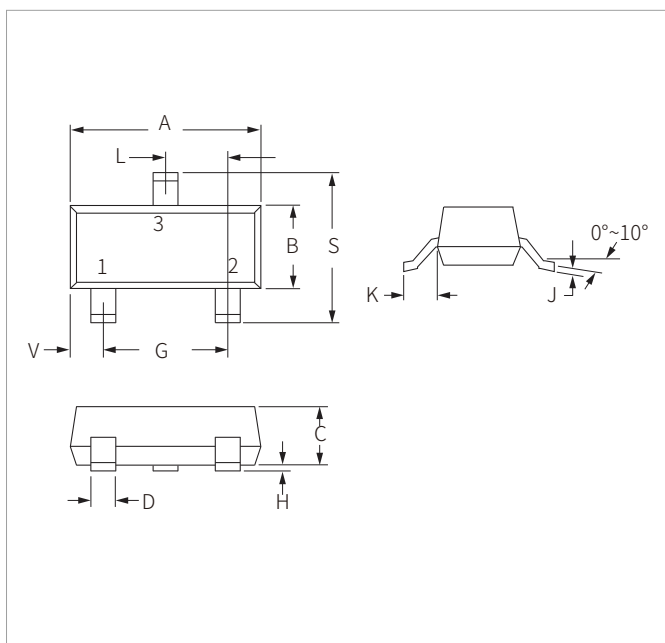
Fig 1:

Figure 2:

Figure 3:

Figure 4:

Figure 5:

Figure 6:


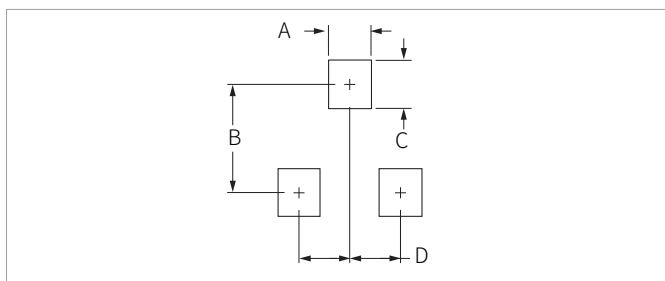
Figure 7:

Figure 8:

Figure 9:

Figure 10:


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.65	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SPM2P06S	SOT-23	3000PCS	7"

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By QR Code

Website



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