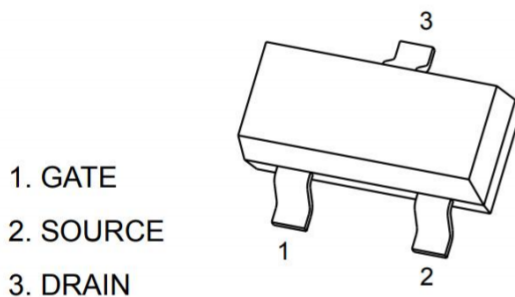


Product Summary

- V_{DS} 200 V
- I_{DS} ($V_{GS}=10V$) 1.0 A
- $R_{DS(ON)}$ ($V_{GS}=10V$) $\leq 1.7\Omega$ (Typ)

Package and Pin Configuration

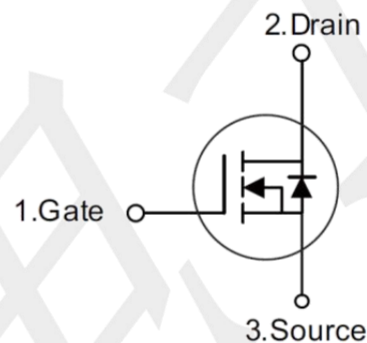


SOT23

Application

- Interfacing Switching
- DC-DC Converters
- Power management functions

Circuit diagram



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNIT
Drain-Source Voltage	V_{DS}	200	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current $T_A=25^\circ\text{C}$	I_D	1.0	A
Continuous Drain Current $T_A=70^\circ\text{C}$	I_D	0.7	A
Pulsed Drain Current ($t = 100 \mu\text{s}$)	I_{DM}	4.0	A
Maximum Power Dissipation	P_D	$T_A=25^\circ\text{C}$ 1.0	W
		$T_A=70^\circ\text{C}$ 0.8	W
Operating Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

Thermal Characteristic

PARAMETER	Symbol	Value	Unit
Thermal Resistance from Junction to Ambient($t \leq 10\text{s}$)	$R_{\theta JA}$	125	$^\circ\text{C/W}$

Note : When mounted on 1" square PCB (FR4 material).

Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	UNIT
Characteristics						
Drain-Source Breakdown Voltage	V _{GS} =0V, I _D = 250μA	BV _{DSS}	200	--	--	V
Gate-Source Threshold Voltage	V _{DS} =V _{GS} , I _D = 250μA	V _{GS(th)}	1.0	1.7	2.0	V
Gate-Source Leakage	V _{DS} =0V, V _{GS} = ±20V	I _{GSS}	--	--	±100	nA
Zero Gate Voltage Drain Current	V _{DS} = 200V, V _{GS} =0V	I _{DSS}	--	--	1.0	μA
Drain-Source On-State Resistance (Note 1)	V _{GS} = 10V, I _D =0.8A	R _{DS(on)}	--	1.7	2.0	Ω
	V _{GS} = 5V, I _D = 0.5A		--	1.9	2.4	
Forward Transconductance (Note 2)	V _{DS} = 2V, I _D =1A	g _{fs}	--	5	--	S
Dynamic (Note 2)						
Input Capacitance	V _{DS} = 25V, V _{GS} = 0V, F= 1.0MHz	C _{iss}	--	150	--	pF
Output Capacitance		C _{oss}	--	85	--	
Reverse Transfer Capacitance		C _{rss}	--	3.0	--	
Switching						
Turn-On Delay Time (Note 3)	V _{DS} = 100V, V _{GS} = 10V, I _D = 1.0A, R _G = 1Ω.	t _{d(on)}	--	9.0	--	nS
Rise Time (Note 3)		t _r	--	12	--	
Turn-Off Delay Time (Note 3)		t _{d(off)}	--	14	--	
Fall Time (Note 3)		t _f	--	13	--	
Total Gate Charge	V _{DS} = 100V, I _D = 1A, V _{GS} = 10V	Q _g	--	5.6	--	nC
Gate Source Charge		Q _{gs}	--	0.8	--	
Gate Drain Charge		Q _{gd}	--	1.9	--	
Source-Drain Diode Ratings and Characteristics (Note 2)						
Forward Voltage	V _{GS} = 0V, I _F = 0.1A	V _{SD}	--	0.8	1.2	V
Continuous Source Current	Integral reverse diode in the MOSFET	I _S	--	--	1.0	A
Pulsed Current (Note 1)		I _{SM}	--	--	4.0	A

Notes:

1. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.
2. Guaranteed by design, not subject to production testing.
3. Independent of operating temperature

TYPICAL CHARACTERISTICS (25 °C, unless otherwise noted)

Figure 1. Output Characteristics

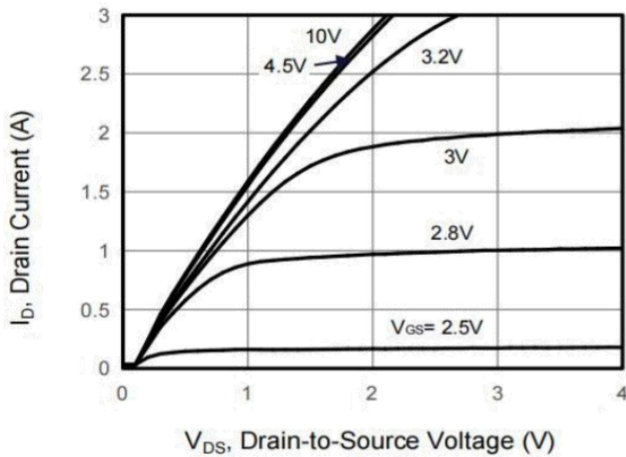


Figure 2. Transfer Characteristics

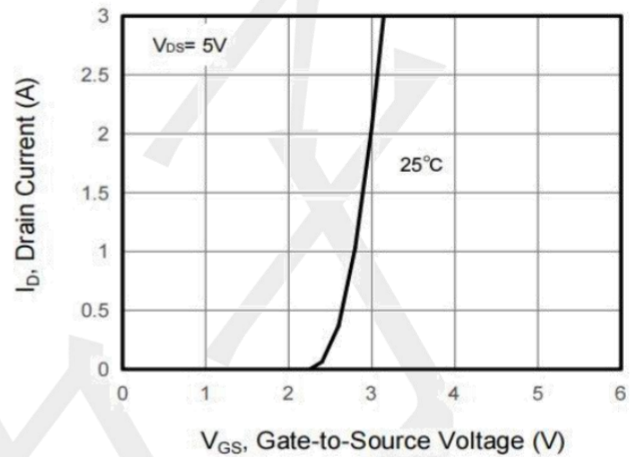


Figure 3. Drain Source On Resistance

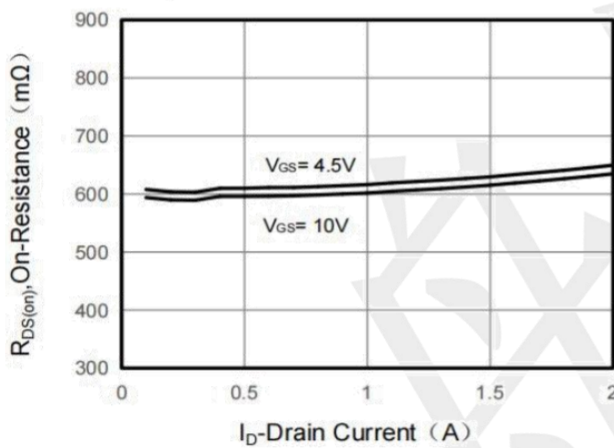


Figure 4. Gate Charge

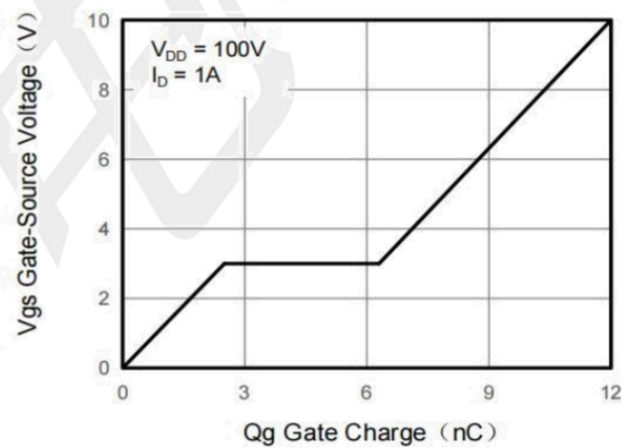


Figure 5. Capacitance

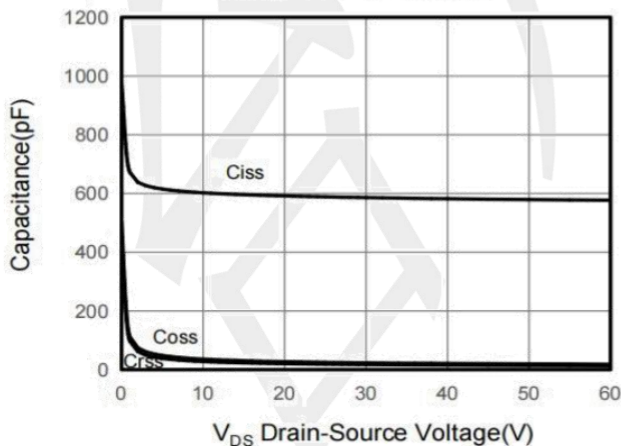
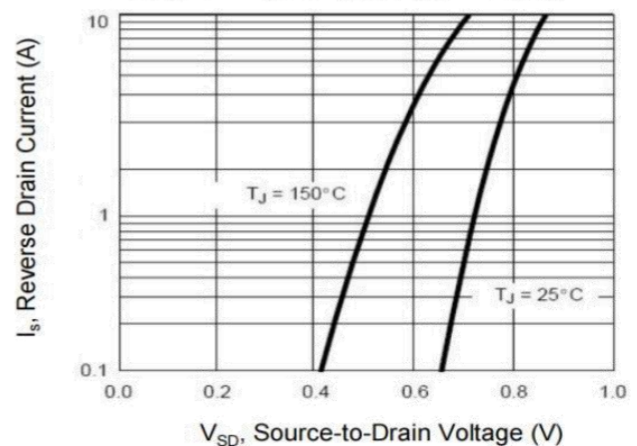
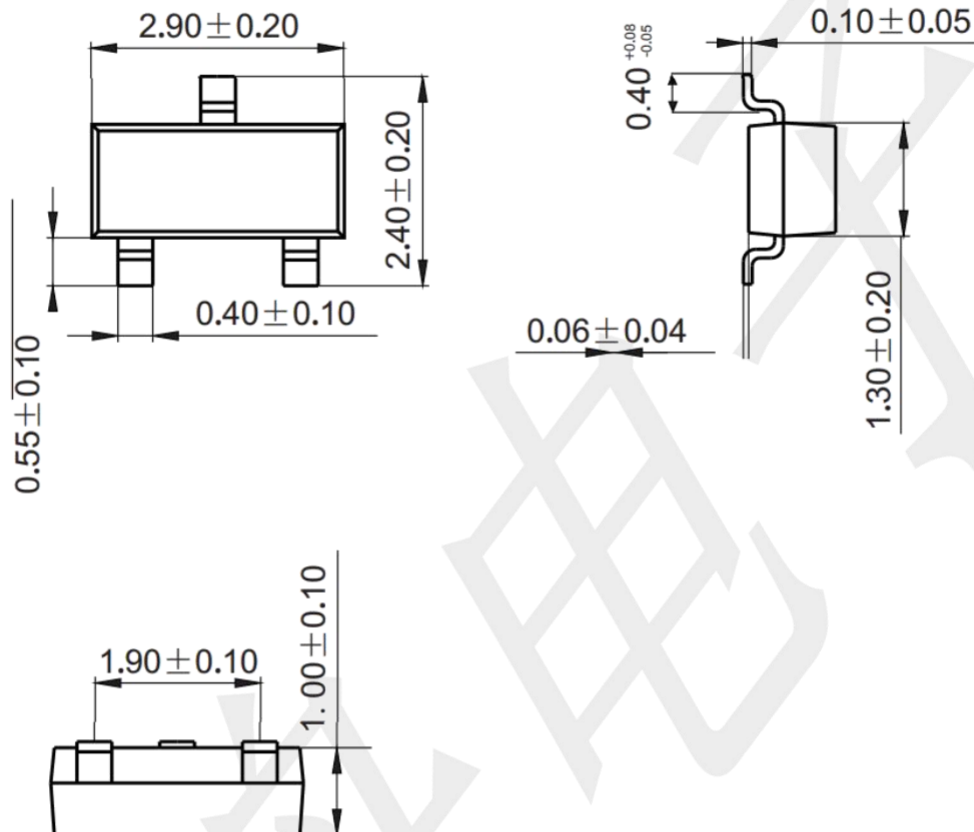


Figure 6. Source-Drain Diode Forward



Package Outline Dimensions (unit: mm)

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Mounting Pad Layout (unit: mm)

