

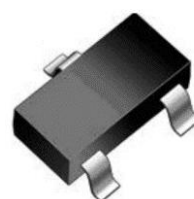
100V_{DS} N-Channel Enhancement Mode

MOSFET

Features

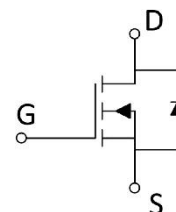
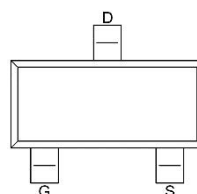
- $V_{DS}=100V, I_D=2A$
- $R_{DS(ON)}=234m\Omega$ (TYP.) $V_{GS}=10V$
- Reliable and Rugged
- Avalanche Rated
- Low On-Resistance

SOT23



Applications

- Load Switch
- Power management in portable/desktop PCs
- DC/DC conversion



Ordering Information

Device	Package		Marking	Package Qty.
AS2324	SOT-23	Pb-Free	S24	3000pcs/Reel

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

Parameter	Symbol	Value	Unit
Drain-Source Voltage ($V_{GS}=0V$)	V_{DS}	100	V
Gate-Source Voltage ($V_{GS}=0V$, static)	V_{GS}	± 20	V
Continuous Drain Current ($T_C=25^{\circ}C$)	I_D	2	A
Continuous Drain Current ($T_C=100^{\circ}C$)		0.62	A
Maximum Power Dissipation ($T_C=25^{\circ}C$)	P_D	0.35	W
Operating, Storage Temperature Range	T_J, T_{STG}	-55~150	$^{\circ}C$

Thermal Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	-	60	-	$^{\circ}\text{C} / \text{W}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	-	375	-	$^{\circ}\text{C} / \text{W}$

Electrical Characteristics

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A$	100	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=24V, V_{GS}=0V$	-	-	1	μA
Gate -Source Leakage Current	I_{GSS}	$V_{GS}=\pm 12V, V_{DS}=0V$	-	-	± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1.2	-	2.8	V
Drain-Source On-stage Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=2.8A$	-	195	248	m Ω
		$V_{GS}=4.5V, I_D=2.5A$	-	200	266	

Dynamic Characteristics

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Input capacitance	C_{iss}	$V_{DS}=15V$	-	305	-	pF
Output capacitance	C_{oss}	$V_{GS}=0V$	-	65	-	
Reverse transfer capacitance	C_{rss}	$f=1\text{MHz}$	-	29	-	
Total Gate Charge	Q_g	$V_{DS}=15V$	-	-	5.8	nC
Gate Source Charge	Q_{gs}	$V_{GS}=4.5V$	-	0.75	-	
Gate Drain Charge	Q_{gd}	$I_D=5.8A$	-	1.4	-	
Turn-on delay Time	$t_{d(on)}$	$V_{GS}=10V$	-	-	45	ns
Rise time	t_r	$V_{DS}=15V$	-	-	39	
Turn-off delay Time	$t_{d(off)}$	$R_L=2.7\Omega$	-	-	26	
Fall time	t_f	$R_G=3\Omega$	-	-	20	

Reverse Diode Characteristics

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Body Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_{SD}=1A$	-	0.8	1.2	V
Reverse Recovery Time	t_{rr}	$V_{GS}=0V, I_{SD}=5A$	-	16	-	ns
Reverse Recovery Charge	Q_{rr}	$d_i/d_t=100A/\mu s$	-	9	-	nC

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