● General Description

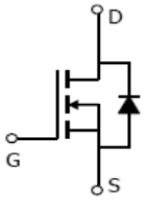
This device is suitable for use as a load switch or in PWM applications.

● Product Summary

V_{DS} =30V

$R_{DS(ON)}$=27.3mΩ

I_D =5.8A



● Features

■Low $R_{DS(ON)}$ to minimize conductive loss

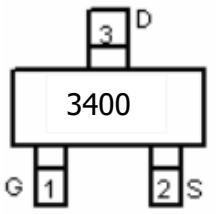
■Low Gate Charge for fast switching

●Application

■ PWM

■SMPS 2nd Synchronous Rectifer

■BLDC Motor driver



SOT-23

●Ordering Information:

Part NO.	ZM3400
Marking	ZM3400
Packing Information	REEL TAPE
Basic ordering unit (pcs)	3000

●Absolute Maximum Ratings (T_C =25℃)

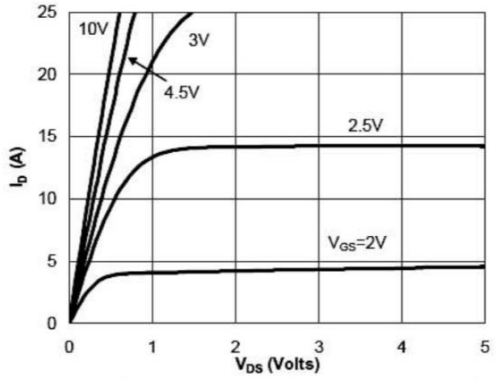
Parameter	**Symbol**	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current	$I_{D@}$TC=25℃	5.8	A
	$I_{D@}$TC=70℃	4.9	A
	$I_{D@}$TC=75℃	4.4	A
	$I_{D@}$TC=100℃	3.65	A
Pulsed Drain Current	I_{DM}	30	A
Total Power Dissipation(TA=25℃)	P_D@TA=25℃	1.4	W
Total Power Dissipation(TA=25℃)	P_D@TA=70℃	1.0	W
Operating Junction Temperature	T_J	-55 to 150	℃
Storage Temperature	T_{STG}	-55 to 150	℃

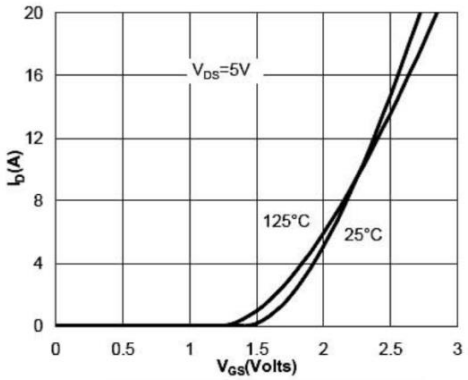
●Electronic Characteristics

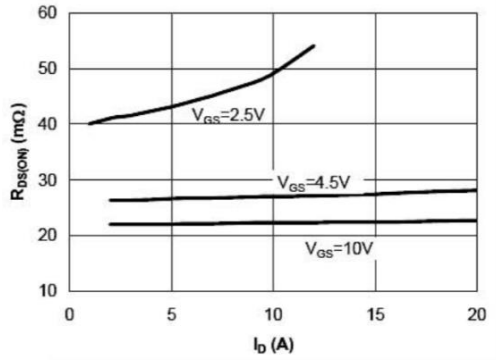
Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} =0V,I_D =-250uA	30			V
Gate Threshold Voltage	$V_{GS(TH)}$	V_{GS} =V_{DS}, I_D =250uA	0.7	1.1	1.4	V
Drain-Source Leakage Current	I_{DSS}	V_{DS}=24V, V_{GS} =0V			1.0	uA
		V_{DS}=24V, V_{GS} =0V T_J =55℃			5.0	uA
Gate- Source Leakage Current	I_{GSS}	V_{GS}=±12V ,V_{DS} =0V			±100	nA
Static Drain-source On Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=5.8A		22.8	28	mΩ
		V_{GS}=10V, I_D=5.8A T_J=125℃		32	39	mΩ
		V_{GS}=4.5V, I_D=5.0A		27.3	33	mΩ
		V_{GS}=2.5V, I_D=4.0A		43.3	52	mΩ
Forward Transconductance	g_{FS}	V_{DS} =5V, I_D=5A	10	15		S
Source-Drain Voltage	V_{SD}	I_S =5.8A			1.28	V

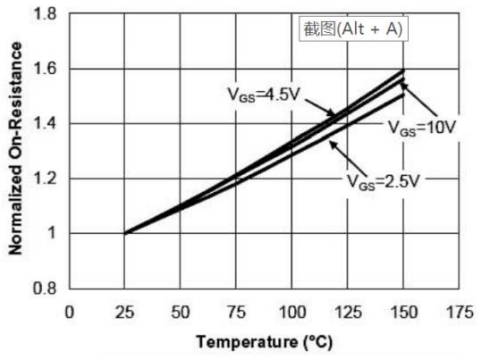
●Electronic Characteristics

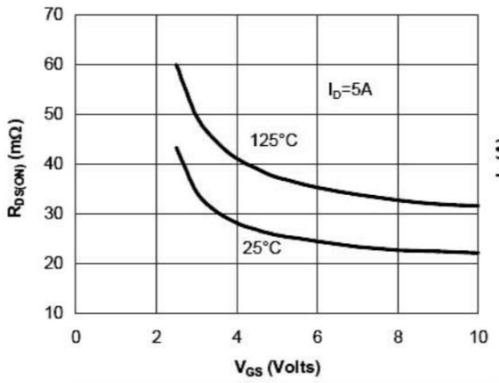
Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	Ciss	V_{GS} = 0V	-	823	1030	pF
Output capacitance	Coss	V_{DS} =15V	-	99	-	
Reverse transfer capacitance	Crss	f = 1MHz	-	77	-	
Turn – on delay time	$t_{d(on)}$	V_{GS} =10V		3.3		ns
Rise Time	tr	R_L =2.7Ω		4.8		ns
Turn - off delay time	$t_{d(off)}$	V_{DS} =15V		26.3	40	ns
Fall time	t_f	R_{GEN} =3Ω		4.1	6	ns

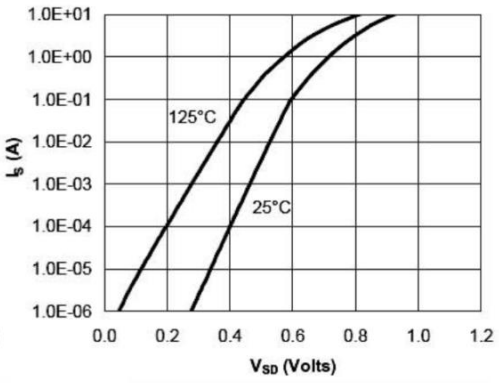

10V
3V
4.5V
2.5V
VGS=2V
ID (A)
VDS (Volts)

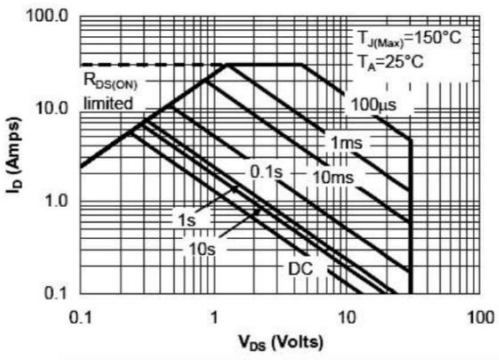

VDS=5V
125°C
25°C
ID(A)
VGS(Volts)

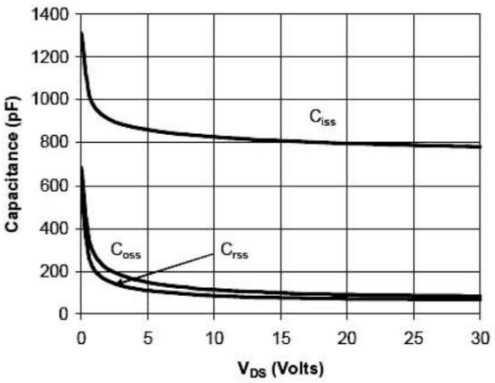

VGS=2.5V
VGS=4.5V
VGS=10V
RDS(ON) (mΩ)
ID (A)


截图(Alt + A)
VGS=4.5V
VGS=10V
VGS=2.5V
Normalized On-Resistance
Temperature (°C)


ID=5A
125°C
25°C
RDS(ON) (mΩ)
VGS (Volts)

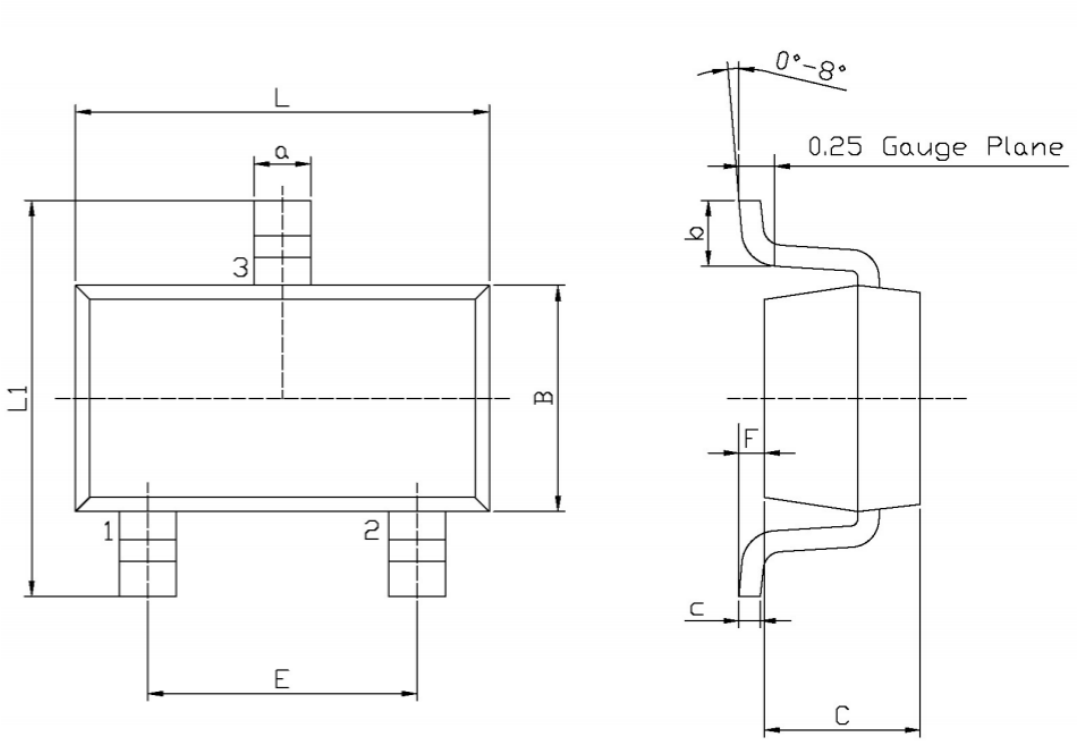

125°C
25°C
IS (A)
VSD (Volts)


TJ(Max)=150°C
TA=25°C
RDS(ON)
limited
100µs
1ms
0.1s
10ms
1s
10s
DC
ID (Amps)
VDS (Volts)


Ciss
Coss
Crss
Capacitance (pF)
VDS (Volts)

●Dimensions(SOT23)

Unit：mm



Unit: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.82	3.02	a	0.35	0.50
B	1.50	1.70	c	0.10	0.20
C	0.90	1.30	b	0.35	0.55
L1	2.60	3.00	F	0	0.15
E	1.80	2.00			