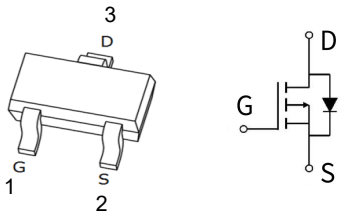
-16V/-6.8A P-Channel MOSFET

BVDSS	-16.0	V
ID	-6.8	A
RDSON@VGS=-4.5V	18.0	mΩ
RDSON@VGS=-2.5V	22.0	mΩ



SOT23

General Description

It combines trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$.

Features

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

■High GOX reliability

■Low Thermal resistance

Application

■BLDC Motor driver

■DC-DC

■Load Switch

Ordering Information:

Product	Package	Marking	Packing
AM20DP068T	SOT23	2305B	3000PCS/Reel

Absolute Maximum Ratings (T_C=25℃)

Symbol	Parameter	Max.	Units
V_{DS}	Drain-Source Voltage	-16	V
V_{GS}	Gate-Source Voltage	±12	V
I_D	Continuous Drain Current	-6.8	A
I_{DM}	Pulsed Drain Current (t=300μs)	-28	A
P_D	Power Dissipation	3.9	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	125	℃/W
T_J	Junction Temperature	150	℃
T_{STG}	Storage Temperature	-55~ +150	℃

-16V/-6.8A P-Channel MOSFET

Electrical Characteristics (Ta=25℃ unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-16			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-20V,V_{GS} = 0V			-1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±8V, V_{DS} = 0V			100	nA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.4		-1.0	V
Drain-source on-resistance[a]	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-5A		18	22	mΩ
		V_{GS} =-2.5V, I_D =-3.0A		22	27	
Forward tranconductance[a]	g_{FS}	V_{DS} =-5V, I_D =-4.1A	6			S
Dynamic characteristics[b,c]						
Input Capacitance	C_{iss}	V_{DS} =-8V,V_{GS} =0V,f =1MHz		970		pF
Output Capacitance	C_{oss}			196		
Reverse Transfer Capacitance	C_{rss}			132		
Gate resistance	R_g	f =1MHz		16.6		Ω
Total Gate Charge	Q_g	V_{DS} =-8V,V_{GS} =-4.5V,I_D=-2A		11		nC
Gate-Source Charge	Q_{gs}			1.8		
Gate-Drain Charge	Q_{gd}			3.2		
Turn-on delay time	$t_{d(on)}$	V_{DD}=-8V,V_{GEN}=-4.5V,I_D=-2A R_{GEN}=3Ω		13		ns
Turn-on rise time	t_r			35		
Turn-off delay time	$t_{d(off)}$			33		
Turn-off fall time	t_f			11		
Turn-on delay time	$t_{d(on)}$	V_{DD}=-4V,V_{GEN}=-8V,I_D=-3.3A R_L=6Ω,R_{GEN}=1Ω		5	10	
Turn-on rise time	t_r			11	17	
Turn-off delay time	$t_{d(off)}$			22	33	
Turn-off fall time	t_f			16	24	
Source-Drain Diode characteristics						
Diode forward current	I_S	T_C=25℃			-6.8	A
Diode pulsed forward current[a]	I_{SM}				-32	A
Diode Forward voltage	V_{DS}	V_{GS} =0V, I_S=-3.3A			-1.2	V

Note :

a. Pulse Test ; Pulse Width ≤300μs, Duty Cycle ≤2%.

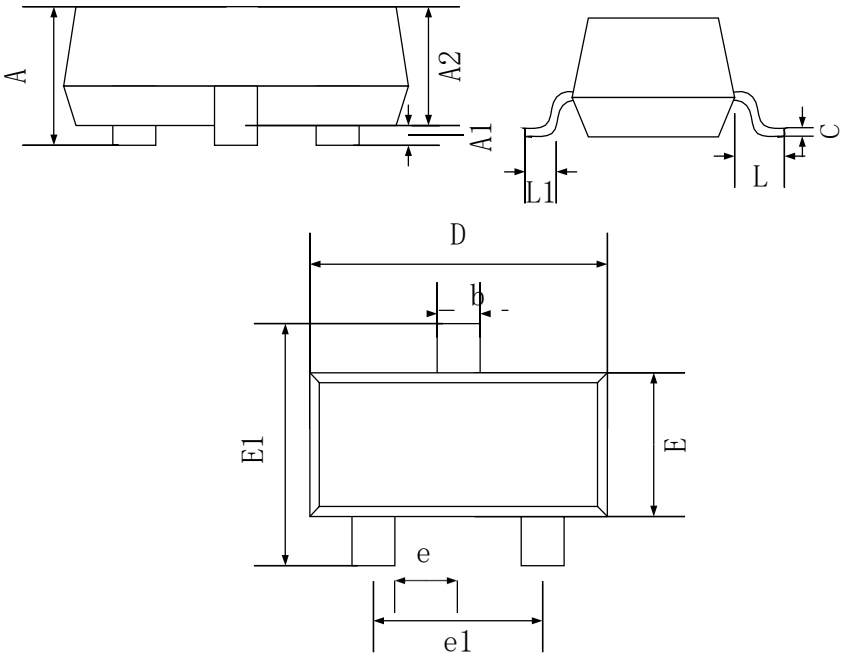
b. Guaranteed by design, not subject to production testing.

c. These parameters have no way to verify.

-16V/-6.8A P-Channel MOSFET

Dimensions

SOT23



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.90	1.15
A1	0.00	0.10
A2	0.90	1.05
b	0.30	0.50
c	0.08	0.15
D	2.80	3.00
E	1.20	1.40
E1	2.25	2.55
e	0.95 REF.	
e1	1.80	2.00
L	0.55 REF.	
L1	0.30	0.50