

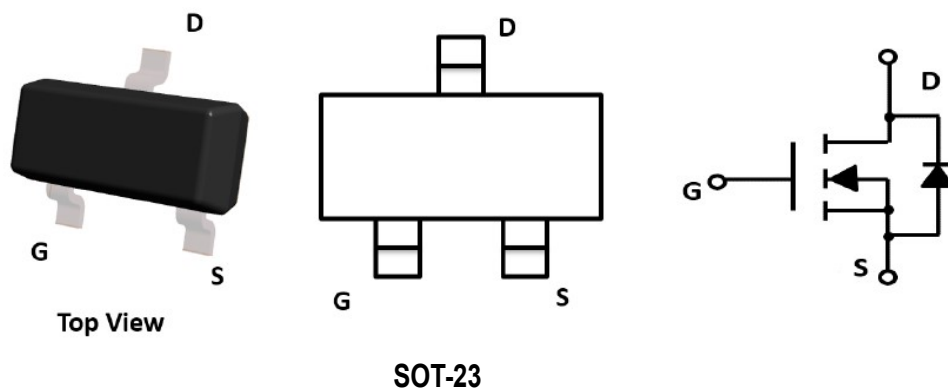


APPLICATIONS

- Load Switch for Portable Devices
- DC/DC Converter

Product Summary

V _{DS}	20	V
R _{DS(on)} , Typ. @ V _{GS} =4.5 V	45	mΩ
I _D	2.3	A



SOT-23

Maximum ratings (T_a=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V _{DS}	20	V
Gate-Source Voltage	V _{GS}	±8	
Continuous Drain Current	I _D	2.3	A
Continuous Source-Drain Current(Diode Conduction)	I _S	0.6	
Power Dissipation	P _D	0.35	W
Thermal Resistance from Junction to Ambient (t≤5s)	R _{θJA}	357	°C/W
Operating Junction	T _J	150	°C
Storage Temperature	T _{STG}	-55 ~+150	

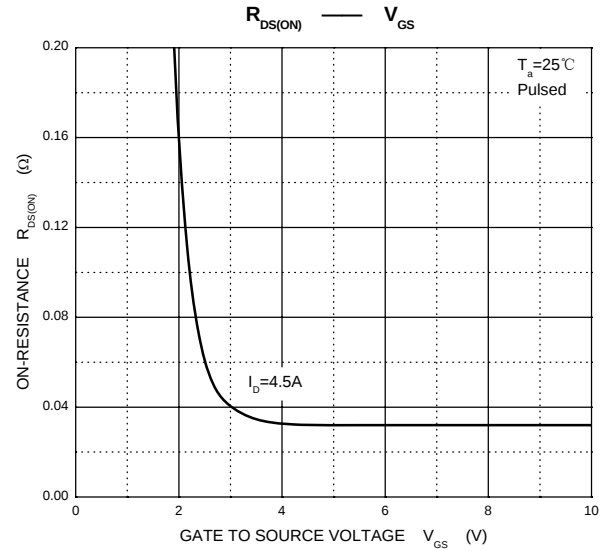
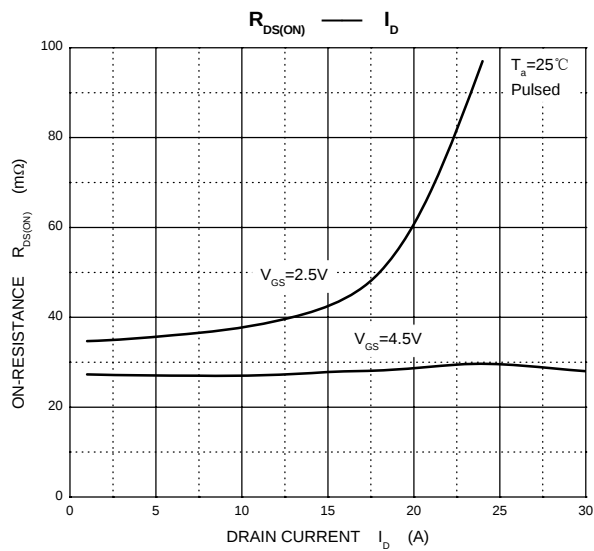
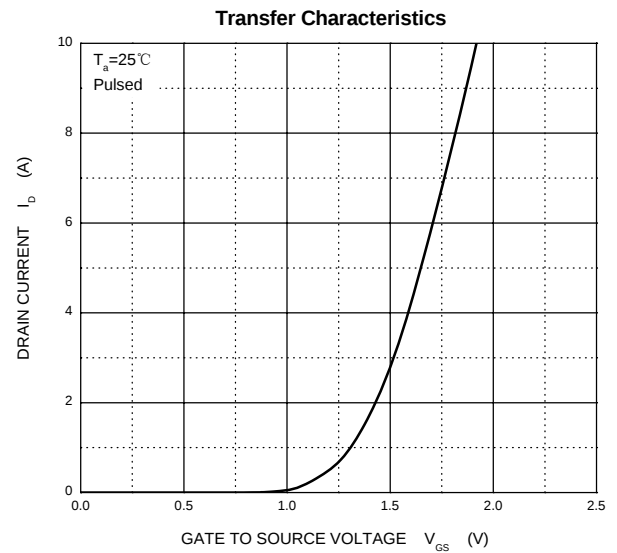
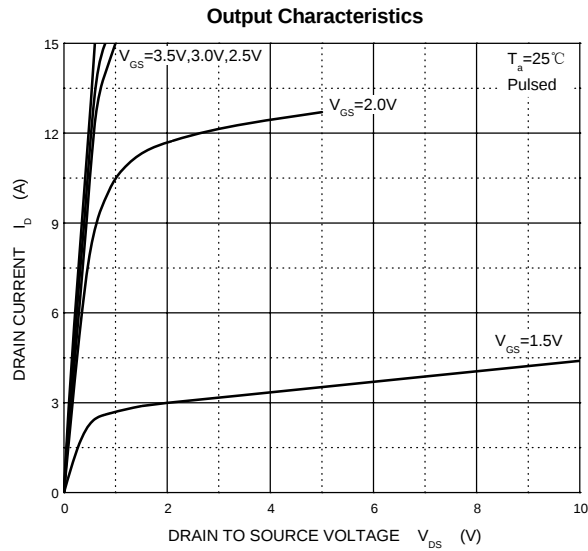
Electrical characteristics ($T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =10μA	20			V
Gate-threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =50μA	0.45	0.65	1.2	
Gate-body leakage	I _{GSS}	V _{DS} =0V, V _{GS} =±8V			±100	nA
Zero gate voltage drain current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	μA
Drain-source on-resistance ^a	R _{DS(on)}	V _{GS} =4.5V, I _D =2.3A		45	60	mΩ
		V _{GS} =2.5V, I _D =2.0A		70	115	
Forward transconductance ^a	g _{fs}	V _{DS} =5V, I _D =3.6A		8		S
Diode forward voltage	V _{SD}	I _S =0.94A,V _{GS} =0V		0.76	1.2	V
Dynamic						
Total gate charge	Q _g	V _{DS} =10V,V _{GS} =4.5V,I _D =3.6A		4.0	10	nC
Gate-source charge	Q _{gs}			0.65		
Gate-drain charge	Q _{gd}			1.5		
Input capacitance ^b	C _{iss}	V _{DS} =10V,V _{GS} =0V,f=1MHz		300		pF
Output capacitance ^b	C _{oss}			120		
Reverse transfer capacitance ^b	C _{rss}			80		
Switching ^b						
Turn-on delay time	t _{d(on)}	V _{DD} =10V, R _L =5.5Ω, I _D ≈3.6A, V _{GEN} =4.5V,R _g =6Ω		7	15	ns
Rise time	t _r			55	80	
Turn-off delay time	t _{d(off)}			16	60	
Fall time	t _f			10	25	

Notes :

- a. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
b. These parameters have no way to verify.

Typical Characteristics



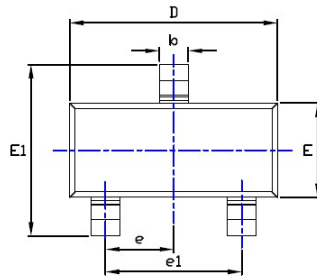
Ordering and Marking Information

Ordering Device No.	Marking	Package	Packing	Quantity
ASDM2302ZA-R	A2ŠHB	SOT-23	Tape&Reel	3000/ Reel

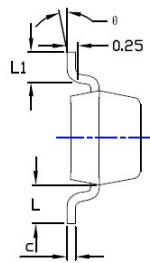
PACKAGE	MARKING
SOT-23	A2ŠHB



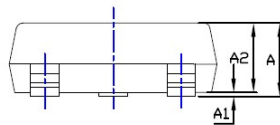
SOT-23 Package information



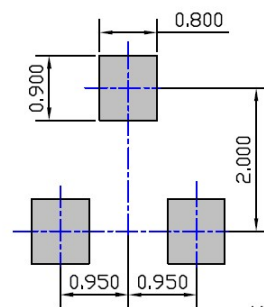
TOP VIEW



SIDE VIEW



SIDE VIEW



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

SYMBOL	DIMENSIONS					
	INCHES			Millimeter		
	MIN.	NDM.	MAX.	MIN.	NDM.	MAX.
A	0.035	----	0.045	0.900	----	1.150
A1	0.000	----	0.004	0.000	----	0.100
A2	0.035	0.038	0.041	0.900	0.975	1.050
b	0.012	0.016	0.020	0.300	0.400	0.500
c	0.004	----	0.008	0.100	----	0.200
D	0.110	0.114	0.118	2.800	2.900	3.000
E	0.047	0.051	0.055	1.200	1.300	1.400
E1	0.089	0.094	0.100	2.250	2.400	2.550
e	0.037TYP			0.950TYP		
e1	0.071	0.075	0.079	1.800	1.900	2.000
L	0.022REF			0.550REF		
L1	0.012	0.016	0.200	0.300	0.400	0.500
θ	0°	----	8°	0°	----	8°

NOTE:

- 1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
- 2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
- 3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

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