

### Features

- High Power and current handing capability
- Lead free product is acquired
- Surface Mount Package
- Available in SOT23-6 Package

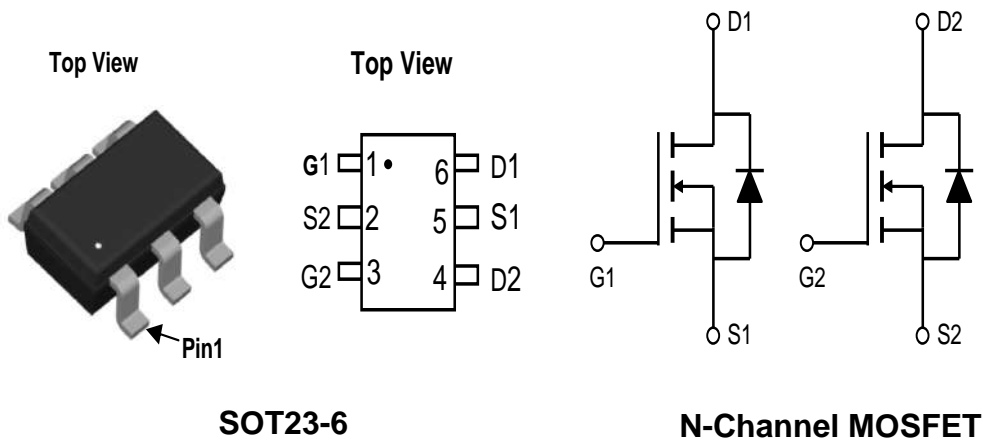
### Applications

- PWM applications
- Load switch
- Power management

### Product Summary



$V_{DS}$	30	V
$R_{DS(on),MAX} @ V_{GS}=10V$	45	mΩ
$I_D$	4.5	A



### Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Drain Current – Continuous	$I_D$	4.5	A
Drain Current- Continuous	$I_D(T_a=70^{\circ}C)$	3.9	A
Pulsed Drain Current	$I_{DM}$	24	A
Gate-Source Voltage	$V_{GS}$	±20	V
Total Power Dissipation	$P_D$	1.2	W
Total Power Dissipation	$P_D(T_a=70^{\circ}C)$	0.8	W
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-55 to 150	°C



## Electrical Characteristics(Ta=25°C)

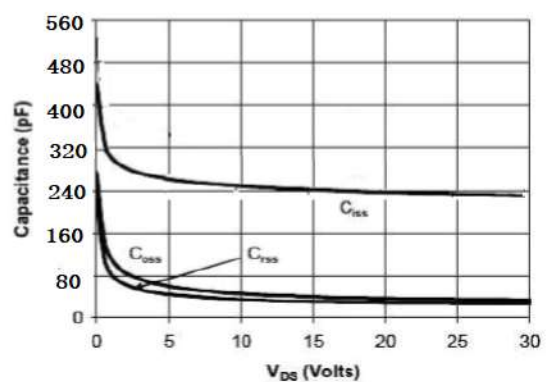
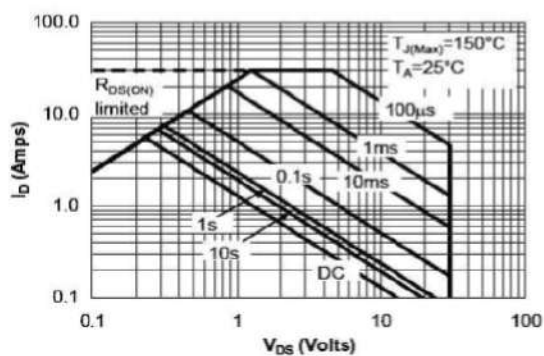
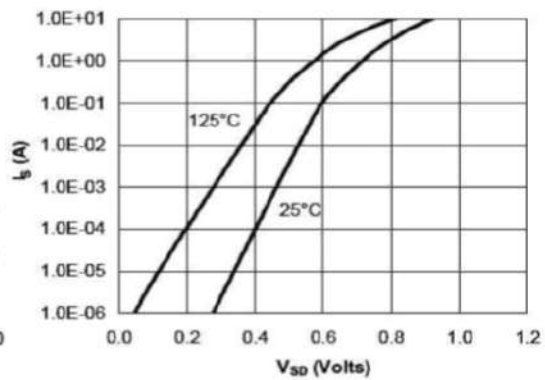
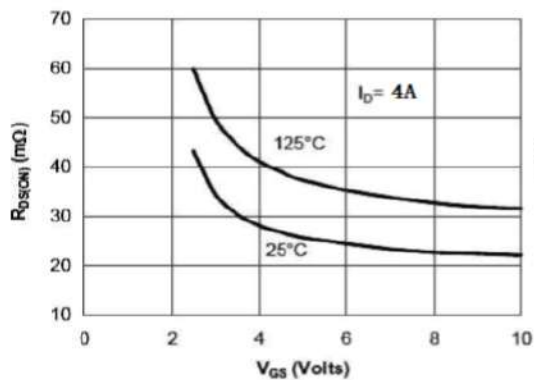
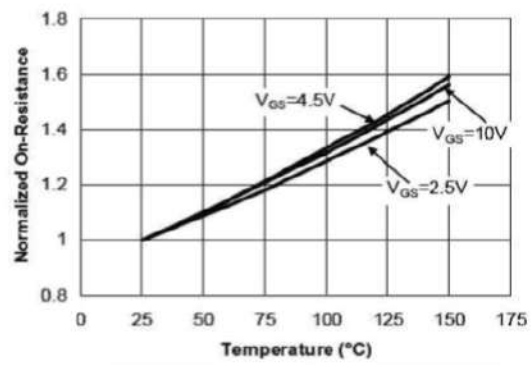
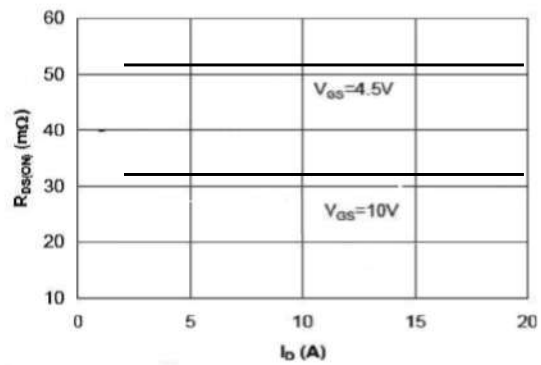
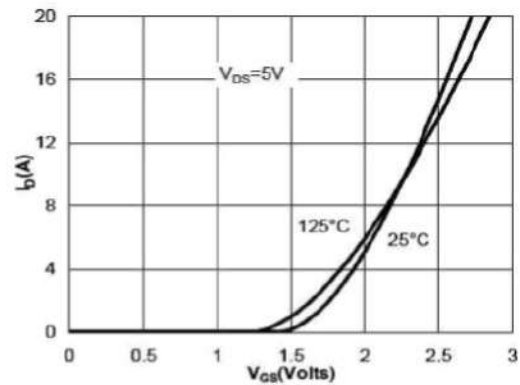
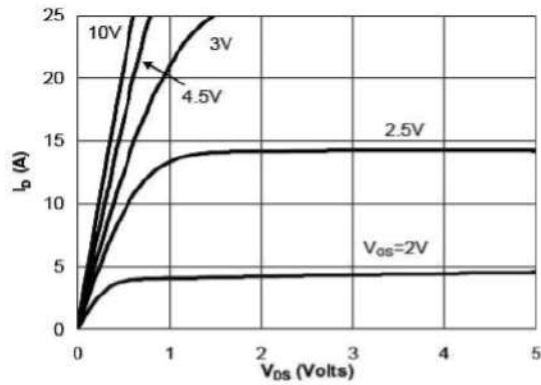
Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V$	$I_D=250\mu A$	30			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=24V$	$V_{GS}=0V$			1	$\mu A$
		$V_{DS}=24V$ $T_J=55^\circ C$	$V_{GS}=0V$			5	$\mu A$
Gate–Body Leakage.	$I_{GSS}$	$V_{GS}=\pm 20V$	$V_{DS}=0V$			$\pm 0.1$	$\mu A$
On–State Drain Current	$I_{D(on)}$	$V_{GS}=4.5V$	$V_{DS}=5V$	25			A
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$	$I_D=250\mu A$	1	1.5	2.5	V
Static Drain–Source On–Resistance	$R_{DS(on)(1)}$	$V_{GS}=10V$	$I_D=4.5A$		33	45	m $\Omega$
	$R_{DS(on)(2)}$	$V_{GS}=10V$ $T_J=125^\circ C$	$I_D=4.5A$			65	
	$R_{DS(on)(3)}$	$V_{GS}=4.5V$	$I_D=4A$		53	75	
Forward Transconductance	$g_{FS}$	$V_{DS}=5V$	$I_D=4A$	8.5			S
Drain–Source Diode Forward Voltage	$V_{SD}$	$V_{GS}=0V$	$I_S=1A$		0.77	1	V
Input Capacitance	$C_{iss}$	$V_{DS}=15V$ $f=1MHz$	$V_{GS}=0V$		245		pF
Output Capacitance	$C_{oss}$				55		
Reverse Transfer Capacitance	$C_{rss}$				32		
Turn–On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=15V$	$R_L=2.7\Omega$ $R_{GEN}=6\Omega$		2.8		ns
Turn–On Rise Time	$t_r$				7.2		
Turn–Off Delay Time	$t_{d(off)}$				15.8		
Turn–Off Fall Time	$t_f$				4.6		

A. The power dissipation  $P_D$  is based on  $T_{J(MAX)}=150^\circ C$ , using  $\leq 10s$  junction-to-ambient thermal resistance.

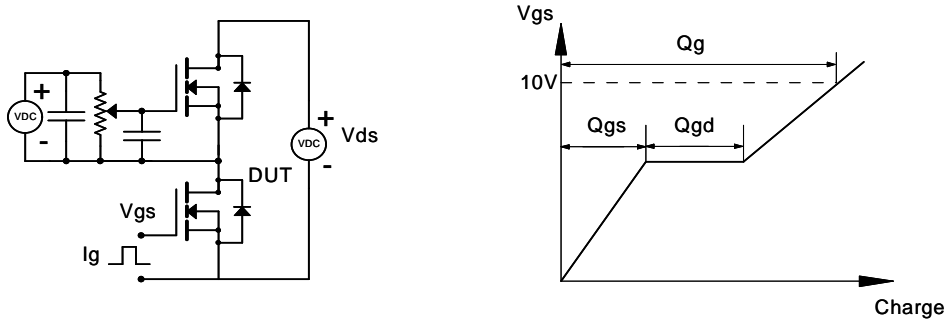
B. Repetitive rating, pulse width limited by junction temperature  $T_{J(MAX)}=150^\circ C$ . Ratings are based on low frequency and duty cycles to keep initial  $T_J=25^\circ C$ .

C. The static characteristics in Figures 1 to 6 are obtained using  $<300\mu s$  pulses, duty cycle 0.5% max.

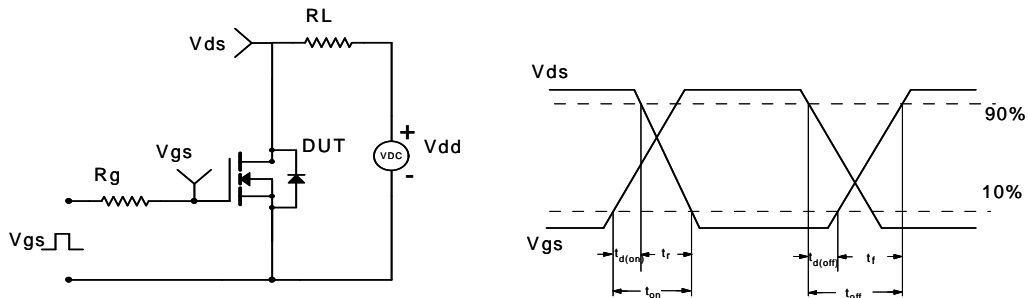
### TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS



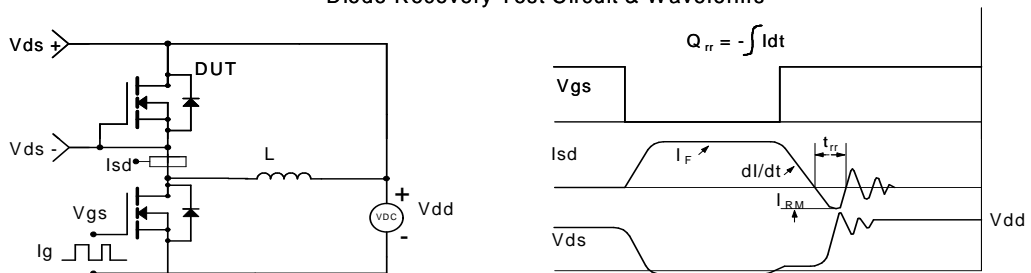
### Gate Charge Test Circuit & Waveform



### Resistive Switching Test Circuit & Waveforms

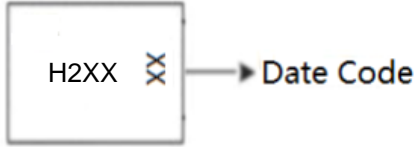


### Diode Recovery Test Circuit & Waveforms



### Ordering and Marking Information

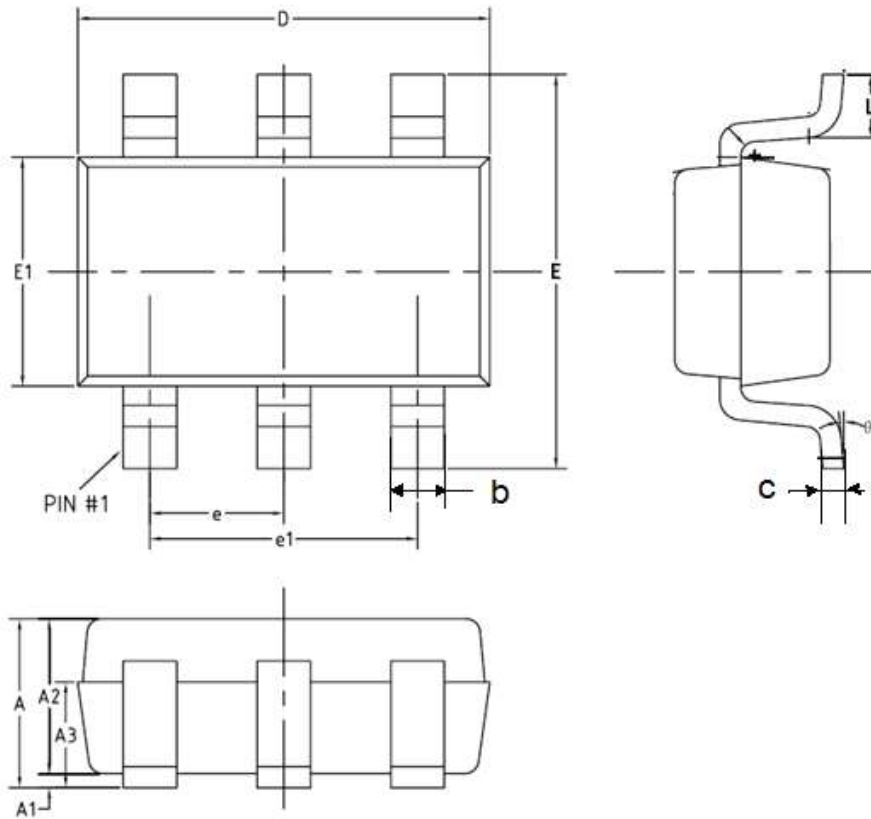
Ordering Device No.	Marking	Package	Packing	Quantity
ASDM6802ZC-R	H2XX	SOT23-6	Tape&Reel	3000/Reel

PACKAGE	MARKING
SOT23-6	

**SOT23-6 MECHANICAL DATA**

单位:毫米/UNIT: mm

符号/SYMBOL	最小值min	典型值/nom	最大值max
A	0.90		1.45
A1	0		0.15
A2	0.90		1.30
A3	0.60		0.70
b	0.35		0.49
C	0.08		0.22
D	2.80		3.00
E	2.60		3.00
E1	1.50		1.70
e	0.85		1.05
e1	1.85		2.00
L	0.35		0.60
$\theta$	0		8°



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