

## Descriptions

This 20V 3A N-Channel MOSFET in a SOT-23 Plastic Package.

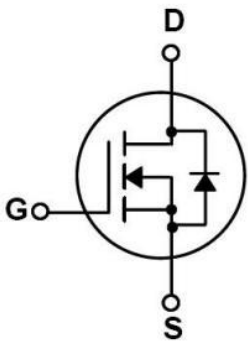
## Features

- Super high dense cell design for low  $R_{DS(ON)}$
- Halogen-Free product

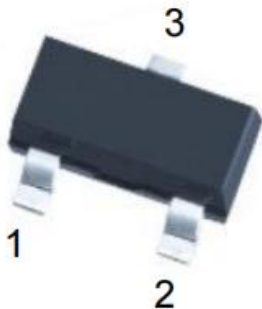
## Applications

Battery management, High speed switch, low power DC to DC converter.

## Equivalent Circuit



## Pinning



PIN1: Gate

PIN 2: Source

PIN 3: Drain

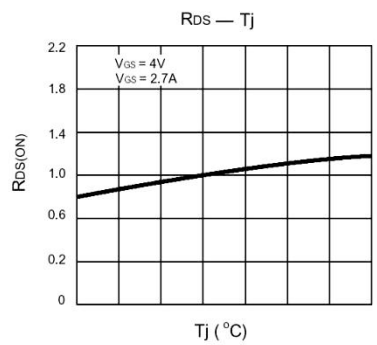
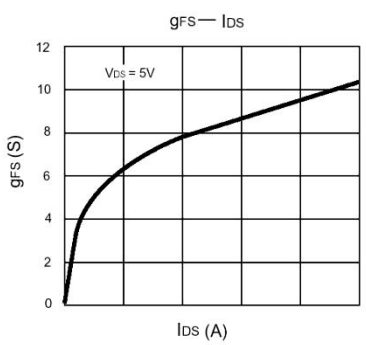
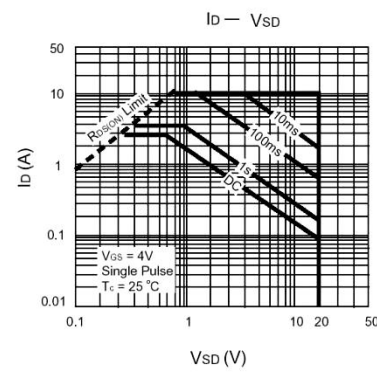
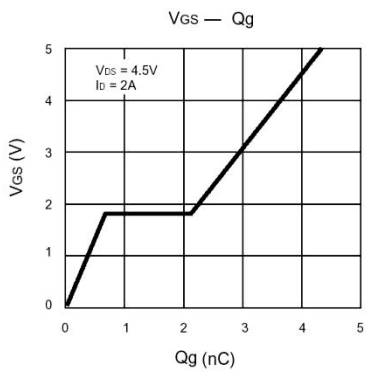
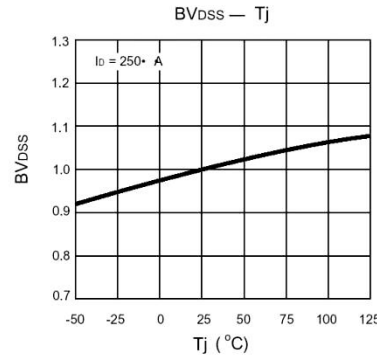
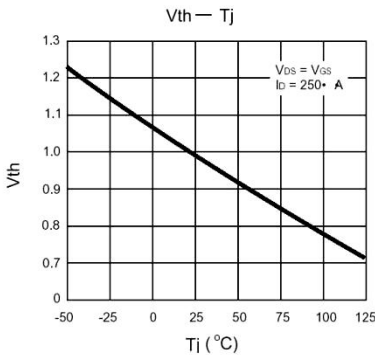
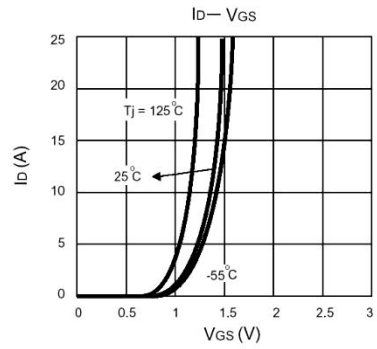
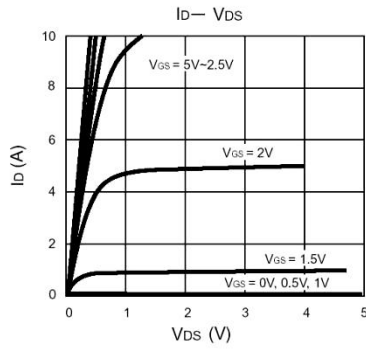
**Absolute Maximum Ratings(Ta=25°C)**

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DSS}$	20	V
Gate-Source Voltage	$V_{GSS}$	±8	V
Drain Current – Continuous	$I_D$	3.0	A
Pulsed Drain Current	$I_{DM}$	10	A
Continuous Source Current	$I_S$	0.95	A
Power Dissipation	$P_D$	0.9	W
Storage Temperature Range	$T_{stg}$	-55~150	°C

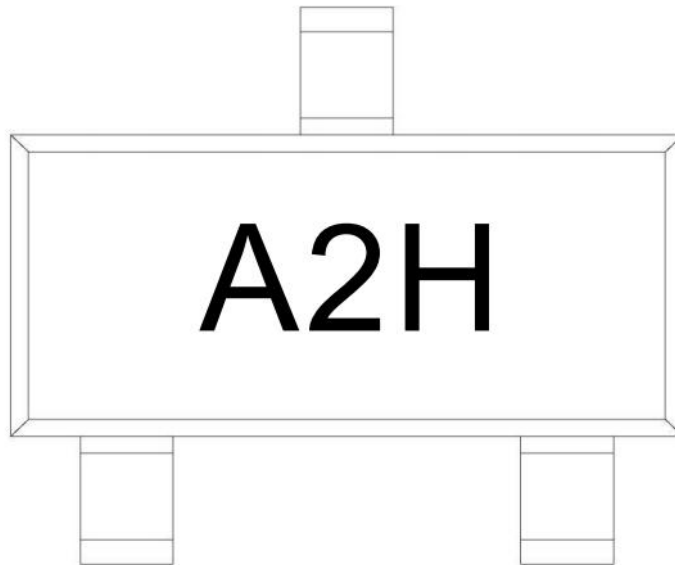
**Electrical Characteristics(Ta=25°C)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0$ $I_D=10\mu A$	20	21		V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{GS}=0$ $V_{DS}=20V$			1.0	$\mu A$
Gate–Body Leakage.	$I_{GSS}$	$V_{GS}=\pm 8V$ $V_{DS}=0V$			±100	nA
Static Drain–Source On–Resistance	$R_{DS(on)1}$	$V_{GS}=4.5V$ $I_D=3.6A$		34	60	mΩ
	$R_{DS(on)2}$	$V_{GS}=2.5V$ $I_D=3.1A$		41	115	mΩ
Forward Transconductance	$g_{FS}$	$V_{DS}=5V$ $I_D=3.6A$		8		S
Drain–Source Diode Forward Voltage	$V_{SD}$	$V_{GS}=0V$ $I_D=1.25A$			1.2	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=50\mu A$	0.50		1.0	V
State Drain Current	$I_{D(on)}$	$V_{DS}=5V$ $V_{GS}=2.5V$	4			A
Turn–On Delay Time	$t_{d(on)}$	$V_{DD}=10V$ $I_D=3.6A$ $V_{GEN}=4.5V$ $R_{GEN}=6\Omega$ $R_L=2.8\Omega$		7		ns
Turn–On Rise Time	$t_r$			55		
Turn–Off Delay Time	$t_{d(off)}$			15		
Turn–Off Fall Time	$t_f$			10		

Electrical Characteristic Curve



**Marking Instructions**



Note:

A2: Product Type Code

H: Company Code.

**Packaging SPEC**

REEL INFORMATION

Package Type	Units					Dimension (unit: mm <sup>3</sup> )		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
SOT-23	3,000	10	30,000	6	180,000	7" x8	180×120×180	390×385×205

**Package Outline Dimensions**

SOT-23

单位: mm

