

## BWS2301

### P-Channel 20-V Enhancement-Mode MOSFETs

#### Features

- RoHS compliant package

#### Mechanical Data

- Case: SOT-23 Molded plastic
- Epoxy: UL94V-O rate flame retardant

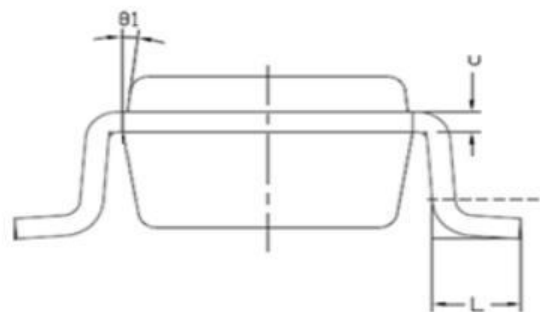
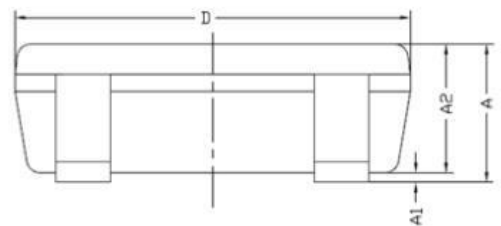
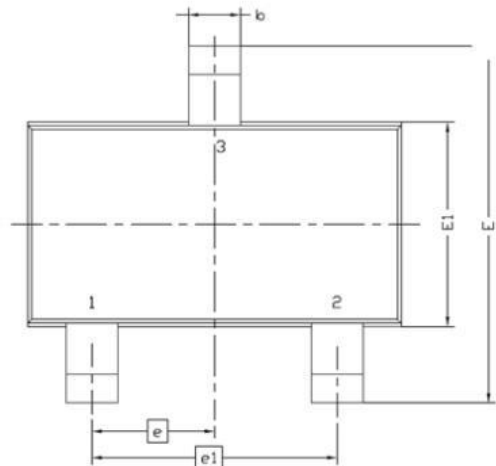
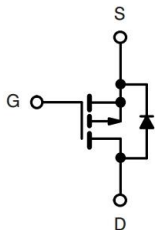
#### Packing & Order Information

3,000/Reel



**RoHS  
COMPLIANT**

Graphic symbol



Symbol	MILLIMETERS	
	MIN	MAX
A	0.8	1.2
A1	0	0.1
A2	0.7	1.1
b	0.3	0.5
c	0.1	0.2
D	2.7	3.1
E	2.6	3
E1	1.4	1.8
e	0.95 BSC	
e1	1.9 BSC	
L	0.3	0.6
θ1	7° NOM	

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#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum Ratings (Tc=25°C unless otherwise noted)

Symbol	Parameter	BWS2301	Unit
BVDS	Drain-Source Voltage	-20	V
VGS	Gate- Source Voltage	+/-8	V
ID	Drain Current (continuous)	-2.3	A
IDM	Drain Current (pulsed)	-10	A
PD	Total Device Dissipation	450	mW
TJ	Junction	150	°C
TSTG	Storage Temperature	-55 to +150	°C

Maximum Ratings (Tc=25°C unless otherwise noted)

Symbol	Parameter	MIN	TYP	MAX	UNIT
BVDS	Drain-Source Breakdown Voltage (ID =250uA, VGS=0V)	-20			V
VGS(th)	Gate Threshold Voltage (ID = 250uA, VGS= VDS)	-0.5		-1.5	V
VDS(ON)	Drain-Source On Voltage (ID= -50mA, VGS= -5V) (ID = -500mA, VGS= -10V)			-0.375 -3.75	V
VSD	Diode Forward Voltage Drop (IS= -0.75A, VGS=0V)			-1.2	V
IDSS	Zero Gate Voltage Drain Current (VGS=0V, VDS= -16V) (VGS=0V, VDS= -16V, TA=55°C)			-1 -10	uA
IGSS	Gate Body Leakage (VGS=+8V, VDS=0V)			+/-100	nA
RDS(ON)	Static Drain-Source On-State Resistance (ID= 2.6A, VGS=4.5V) (ID=1A, VGS=2.5V)			0.15 0.22	mΩ
CISS	Input Capacitance (VGS=0V, VDS= -6V, f=1 MHz)			880	pF
COSS	Output Capacitance (VGS=0V, VDS= -6V, f=1 MHz)			270	pF
t(on)	Turn-ON Time (VDS= -6V, ID= -1A, RGEN=6Ω)			20	ns
t(off)	Turn-OFF Time (VDS= -6V, ID= -1A, RGEN=6Ω)			65	ns

Pulse Width<300μs; Duty Cycle<2.0%

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#### Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE

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