

50V N-ch POWER MOSFET

Feature

- $V_{GS}=\pm 20V$
- Reliable and Rugged
- $R_{DS(ON)}=2.5\Omega$ (typ.)

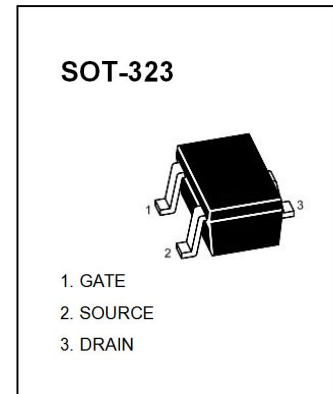
Applications

- Charger
- Adaptor
- SMPS Standby Power

Ordering Information

Part Number	Package
BSN20W	SOT-323

MARKING: M8



Electrical Characteristics

1. Absolute Maximum Ratings ($T_A=25^{\circ}C$ Unless Otherwise Noted)

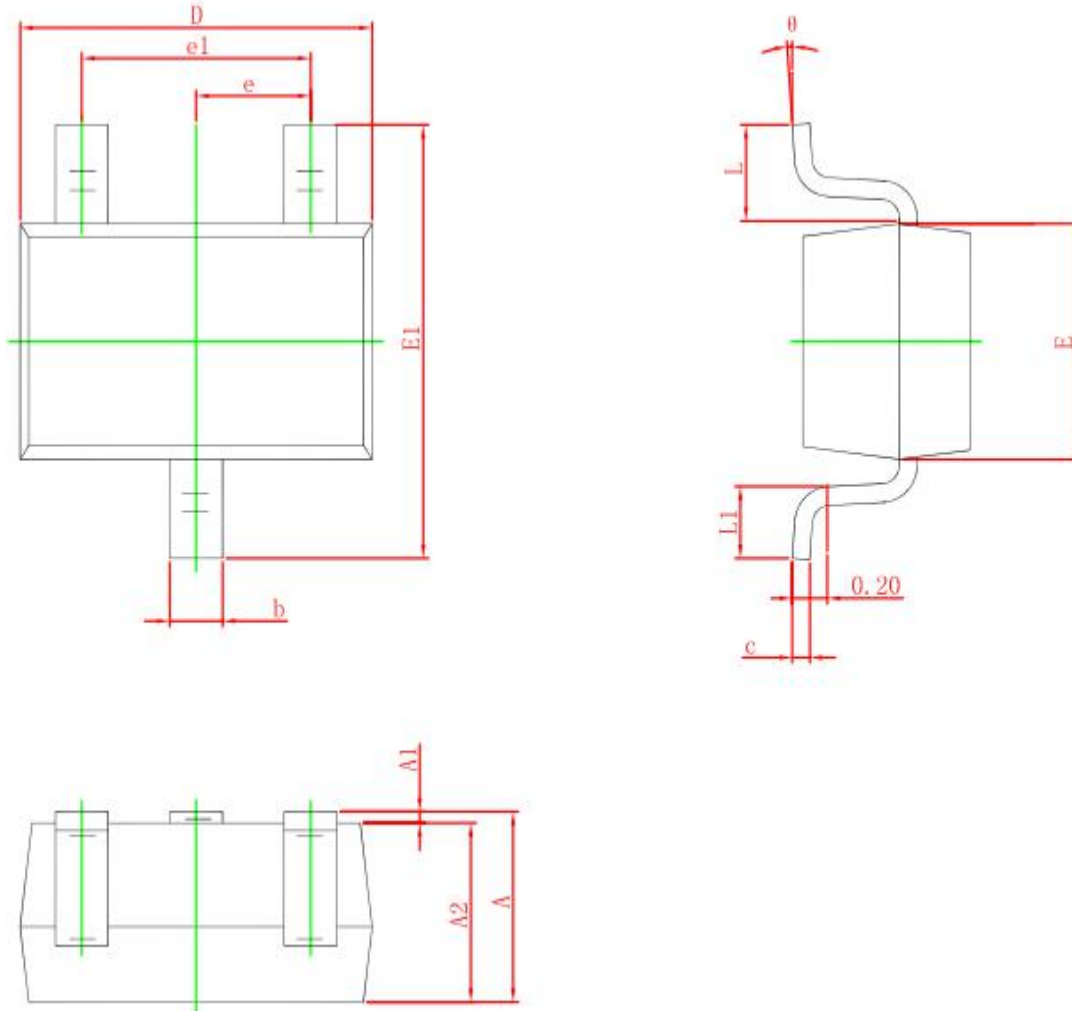
Symbol	Parameter	Rating	Unit
V_{DSS}	Drain-Source Voltage	50	V
V_{GSS}	Gate-Source Voltage	± 20	
I_D	Continue Drain Current	0.34	A
T_J	Maximum Junction Temperature	150	$^{\circ}C$
T_{STG}	Storage Temperature Range	-55 to 150	

Caution: Stresses greater than those listed in the "Absolute Maximum Ratings" may cause permanent damage to the device.

Static Electrical Characteristics (T_A=25°C Unless Otherwise Noted)

Symbol	Parameter	Test Condition	BSN20W			Unit
			Min.	Typ.	Max.	
Static Characteristics^c						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _{DS} =250μA	50	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =50V, V _{GS} =0V T _J =25°C	-	-	1	μA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _{DS} =250μA	0.8	1.2	1.6	V
I _{GSS}	Gate Leakage Current	V _{GS} =±20V, V _{DS} =0V	-	-	±0.1	μA
R _{DS(ON)}	Drain-Source On-state Resistance	V _{GS} =10V, I _{DS} =300mA	-	1.1	2.5	Ω
		V _{GS} =4.5V, I _{DS} =200mA	-	1.2	3.0	
V _{SD}	Diode Forward Voltage	I _{SD} =350mA, V _{GS} =0V	-	0.86	1.2	V

SOT-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°