20V N-Channel Enhancement Mode MOSFET

General Features

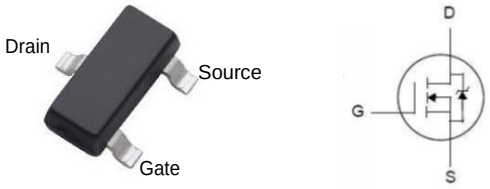
- Proprietary Advanced Planar Technology
- Rugged Polysilicon Gate Cell Structure
- Fast Switching Speed
- RoHS Compliant
- Halogen-free Available

BV_{DSS}	$R_{DS(ON)}$ (Typ.)	I_D
20V	1.55Ω	500mA

Applications

- High Efficiency SMPS
- Adaptor/Charger
- Active PFC

SOT-23



Ordering Information

Part Number	Package	Marking	Remark
FTZ20N01G5	SOT-23	N01	Halogen Free

Absolute Maximum Ratings

T_A=25℃ unless otherwise specified

Symbol	Parameter	FTZ20N01G5	Unit
V_{DSS}	Drain-to-Source Voltage[1]	20	V
I_D	Continuous Drain Current	0.5	A
I_{DM}	Pulsed Drain Current[2]	2	
P_D	Power Dissipation	0.5	W
V_{GS}	Gate-to-Source Voltage	±20	V
T_L	Soldering Temperature Distance of 1.6mm from case for 10 seconds	300	℃
T_J and T_{STG}	Operating and Storage Temperature Range	-55 to 150	

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

Thermal Characteristics

Symbol	Parameter	FTZ20N01G5	Unit
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	250	K/W

Electrical Characteristics

OFF Characteristics

T_A =25℃ unless otherwise specified

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
BV_{DSS}	Drain-to-Source Breakdown Voltage	20	--	--	V	V_{GS}=0V, I_D=250μA
I_{DSS}	Drain-to-Source Leakage Current	--	0.38	--	nA	V_{DS}=10V， V_{GS}=0V
I_{GSS}	Gate-to-Source Leakage Current	--	2	--	nA	V_{GS}=+20V, V_{DS}=0V
		--	-2	--		V_{GS}=-20V, V_{DS}=0V

ON Characteristics

T_A =25℃ unless otherwise specified

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
$R_{DS(ON)}$	Static Drain-to-Source On-Resistance	--	1.55	--	Ω	V_{GS}=10V， I_D=50mA[3]
$V_{GS(TH)}$	Gate Threshold Voltage	--	4.65	--	V	V_{GD}=0V, I_D=1μA
		--	5.39	--	V	V_{GD}=0V, I_D=250μA

Source-Drain Diode Characteristics

T_A=25℃ unless otherwise specified

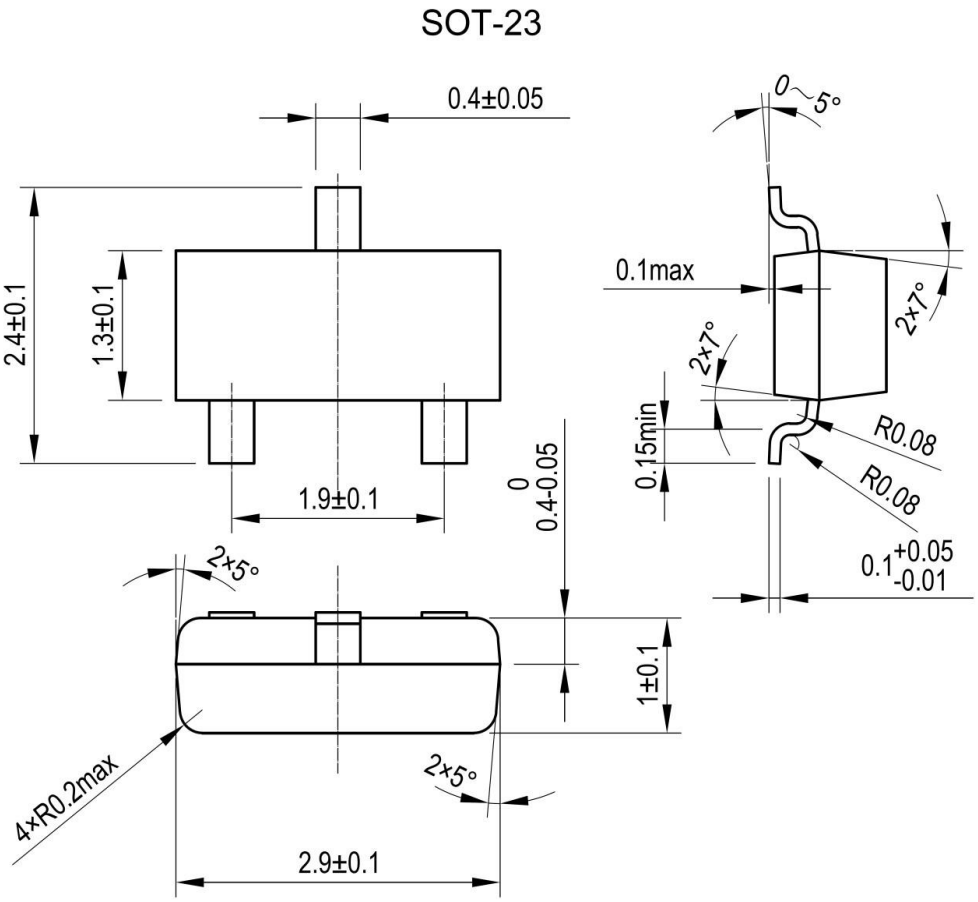
Symbol	Parameter	Min	Typ.	Max.	Units	Test Conditions
V_{SD}	Diode Forward Voltage	--	0.78	--	V	I_{SD}=50mA[3], V_{GS}=0V

NOTE：

[1] T_J=+25℃ to +150℃

[2] Repetitive rating, pulse width limited by maximum junction temperature. [3] Pulse width≤380μs; duty cycle≤2%.

Package Dimensions



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