

N-Channel 20-V (D-S) MOSFET

FEATURES

- Advance Trench Process Technology
- High Density Cell Design for Ultra Low On-resistance

Application

- Portable Devices
- Consumer Electronics

Mechanical

- Case: SOT-23 Package

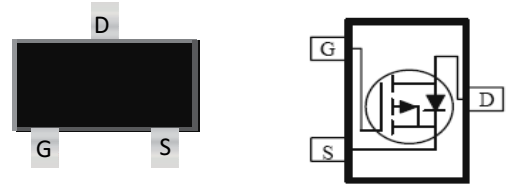
Packing Information

Package	Packing
SOT-23	3Kpcs / 7" Reel

PRODUCTY SUMMARY

V_{DS}	$R_{DS(on)}$ m(Ω)	I_D (A)
20	Rdson @4.5V	80
	Rdson @2.5V	50
		2.8
		3.0

SOT-23



Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 8	V
Continuous Drain Current ¹⁾	I_D	3.0	A
Maximum Power Dissipation	P_D	0.35	W
Pulsed Drain Current ²⁾	I_{DM}	12	A
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to 150	$^\circ\text{C}$

Typical Thermal Resistance

Parameter	Symbol	Limit	Unit
Junction-to-Ambient Thermal Resistance	$R_{\theta JA}$	156	$^\circ\text{C/W}$

Note:

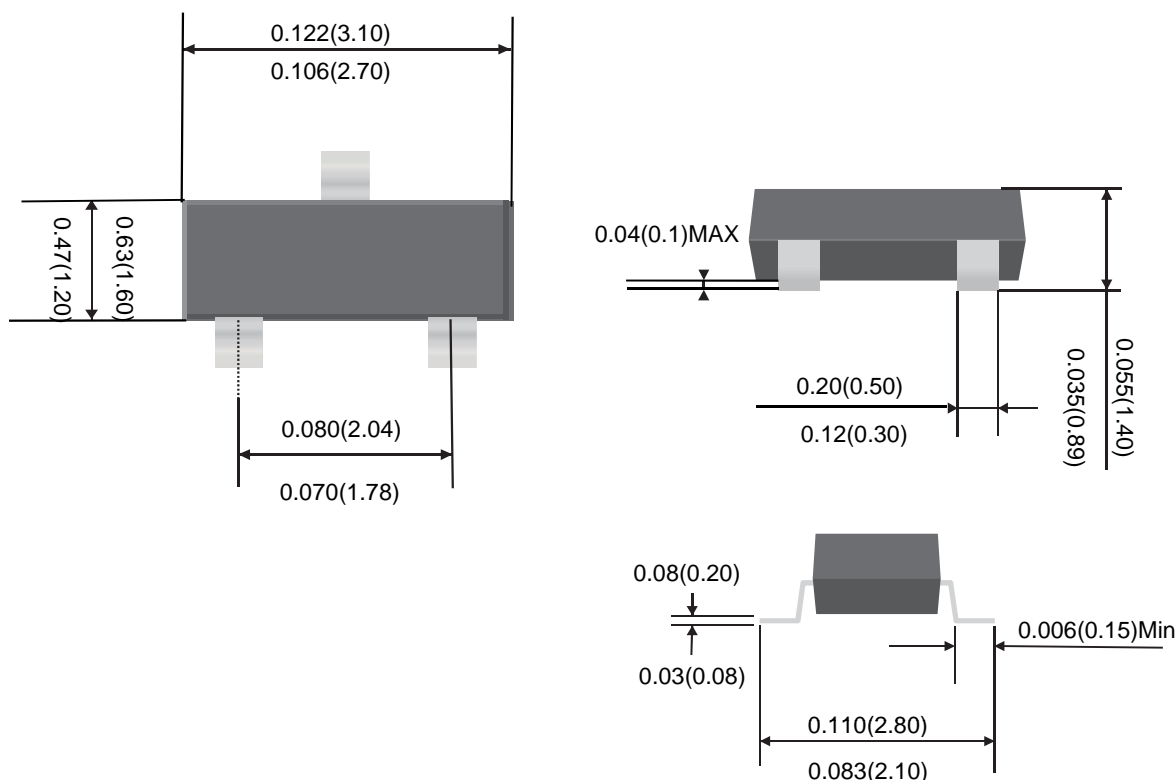
$R_{\theta JA}$ is the sum of the junction-to-case and case-to-ambient thermal resistance where the case thermal reference is defined as the solder mounting surface of the drain pins mounted on a 1 inch FR-4 with 2oz. square pad of copper

Electrical Characteristics (T _A = 25°C UNLESS OTHERWISE NOTED)						
Characteristics	Symbol	Test Condition	Limits			Unit
			Min	Typ	Max	
Static						
Drain-Source Breakdown Voltage	B _{VDSS}	V _{GS} = 0V, I _D =250uA	20			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250uA	0.50	0.75	1.2	V
Drain-Source On-State Resistance	R _{DS(on)}	V _{GS} =4.5V, I _D =3.0A	-	42	80	mΩ
		V _{GS} =2.5V, I _D =2.8A	-	35	50	mΩ
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =16V, V _{GS} =0V			-1	uA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±8V, V _{DS} =0V			±100	nA
Drain-Source Diode						
Maximum Continuous Drain-Source	I _S	-	-	-	1.5	A
Diode Forward Voltage	V _{SD}	I _S =1.0A, V _{GS} =0V	-	-	1.2	V

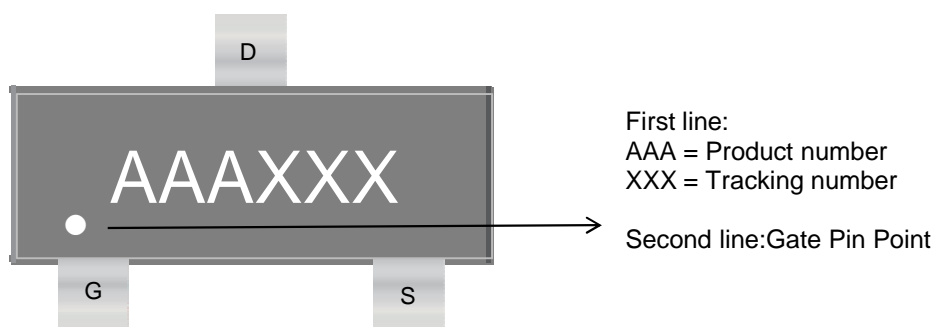
Note:

1. Pulse width<300us, Duty cycle<2%
2. Fused current that based on wire numbers and diameter
3. Guaranteed by design, not subject to production testing.

Package Outline Dimensions (inches and millimeters)



Marking Information



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