QS100N08

100A 80V N-Channel Si Power MOSFET | 6.5mΩ

www.questsemi.com

Features

- RoHS Compliant
- Low ON Resistance
- Low Gate Charge
- High Avalanche Ruggedness

Applications

- Automotive / Telecom
- DC Motor Control
- Class D Amplifier
- Uninterruptible Power Supply (UPS)

Key Values

Parameter	Value	Unit
V_{DS}	80	V
I_D (T_C=25°C)	100	A
$R_{DS(on)}$ max	6.5	mΩ
E_{AS}	5000	mJ
$R_{\theta JC}$	1.0	°C/W

Part Number

QS100N08

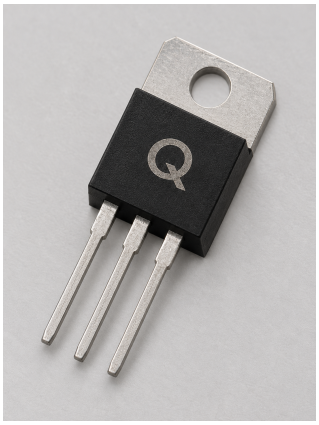
Package

TO-220

Marking

QS100N08

Package Photo



1. Gate 2. Drain 3. Source

- **RoHS Compliant**
- **Pb-Free**

© 2026 Quest Semiconductors Pty Ltd. All rights reserved.

QS100N08

100A 80V N-Channel Si Power MOSFET | 6.5mΩ

www.questsemi.com

Absolute Maximum Ratings

T_J = 25°C unless otherwise specified

Parameter	Symbol	Min	Max	Unit	Condition
Drain-to-Source Voltage	V_{DS}	--	80	V	T_J=25°C
Gate-to-Source Voltage	V_{GS}	--	±20	V	—
Continuous Drain Current	I_D	--	100	A	T_C=25°C
Continuous Drain Current	I_D	--	70	A	T_C=100°C
Power Dissipation	P_D	--	150	W	T_C=25°C
Single Pulse Avalanche Energy	E_{AS}	--	5000	mJ	L=1.0mH, T_J=25°C
Junction Temperature	T_J	−55	+175	°C	—
Storage Temperature	T_{stg}	−55	+175	°C	—

Thermal Resistance

Parameter	Symbol	Min	Typ	Max	Unit
Junction-to-Case	$R_{\theta JC}$	--	1.0	--	°C/W
Junction-to-Ambient	$R_{\theta JA}$	--	62	--	°C/W

Electrical Characteristics

T_J = 25°C unless otherwise specified

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	80	--	--	V	V_{GS}=0V, I_D=250μA
Zero Gate Voltage Drain Current	I_{DSS}	--	--	10	μA	V_{DS}=80V, V_{GS}=0V
Gate-Source Leakage	I_{GSS}	--	--	±100	nA	V_{GS}=±20V
Gate Threshold Voltage	$V_{GS(th)}$	1.0	--	3.0	V	V_{DS}=V_{GS}, I_D=250μA
Static Drain-Source On-Resistance	$R_{DS(on)}$	--	4.5	6.5	mΩ	V_{GS}=10V, I_D=40A
Forward Transconductance	g_{fs}	--	100	--	S	V_{DS}=10V, I_D=15A
Input Capacitance	C_{iss}	--	10500	--	pF	V_{GS}=0V, V_{DS}=25V, f=1MHz
Body Diode Forward Voltage	V_{SD}	--	0.7	1.2	V	I_S=1A, V_{GS}=0V

© 2026 Quest Semiconductors Pty Ltd. All rights reserved.