



MJ N-Channel Super Trench Power MOSFET

Description

The MJXP40T15GU uses Super Trench technology that is uniquely optimized to provide the most efficient high frequency switching performance. Both conduction and switching power losses are minimized due to an extremely low combination of R_{DS(ON)} and Q_g. This device is ideal for high-frequency switching and synchronous rectification.

Application

DC/DC Converter

General Features

- Vps=40V.lp=150A $R_{DS(ON)}$ =1.09m Ω (typical) @ VGS=10V RDS(ON)=1.5mΩ (typical) @ VGS=4.5V
- Excellent gate charge x RDS(on) product(FOM)
- Very low on-resistance RDS(on)
- 150°C operating temperature
- Pb-free lead plating
- ♦ 100% UIS tested



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Ideal for high-frequency switching and synchronous rectification

Schematic Diagram

Top View

MJ

Bottom View

100% UIS TESTED! 100% ΔVds TESTED!

Package Marking and Ordering Information

Device Marking	Device	Device Package	Reel Size	Tape width	Quantity
MJXP40T15GU	MJXP40T15GU	DFN5X6-8L	4	8	9

Absolute Maximum Ratings (Tc=25℃ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	Vds	40	V
Gate-Source Voltage	Vgs	±20	V
Drain Current-Continuous (Silicon Limited)	D	150	А
Drain Current-Continuous (Tc =100°C)	D(100°C)	106	А
Pulsed Drain Current (Package Limited)	Ідм	400	А
Maximum Power Dissipation	Po	135	W
Derating factor		1.1	W/°C
Single pulse avalanche energy (Note 5)	Eas	1500	mJ
Operating Junction and Storage Temperature Range	Тј ,Тѕтс	-55 To 150	°C

Thermal Characteristic

Thermal Resistance, Junction-to-Case (Note 2) Reju	c 0.93 °C/W	
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