Power Delivery Charger (PD Charger)

PANJIT's PSMQC076N12LS1: An attractive MOSFET for High Efficiency, Power Availability and Quality

PANJIT's 115V Medium (MV) SGT MOSFET has lower Qrr and Irr than other suppliers, this enables the PD charger to have high performance and better efficiency when using PANJIT's PSMQC076N12L1.

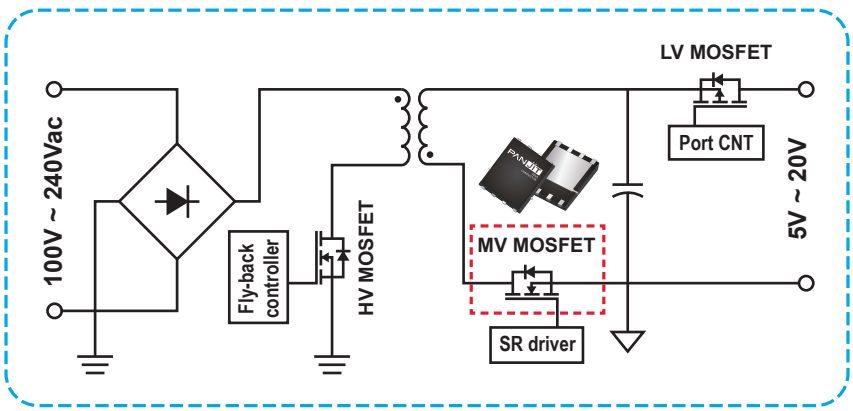
Features

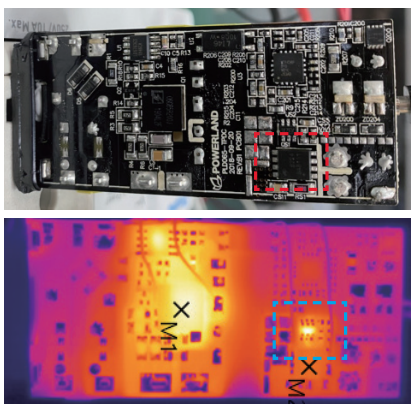
- R_{DS}(on), V_{GS}@10V, I_D@20A<7.6mΩ
- R_{DS}(on), V_{GS}@4.5V, I_D@10A<11mΩ
- High switching speed
- Low reverse transfer capacitance
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Applications

- Travel adapter
- PD charger
- Gaming console adapter

115V SGT MOSFET for PD Charger Block Diagram





Temperature max = 42°C

Benchmark Result

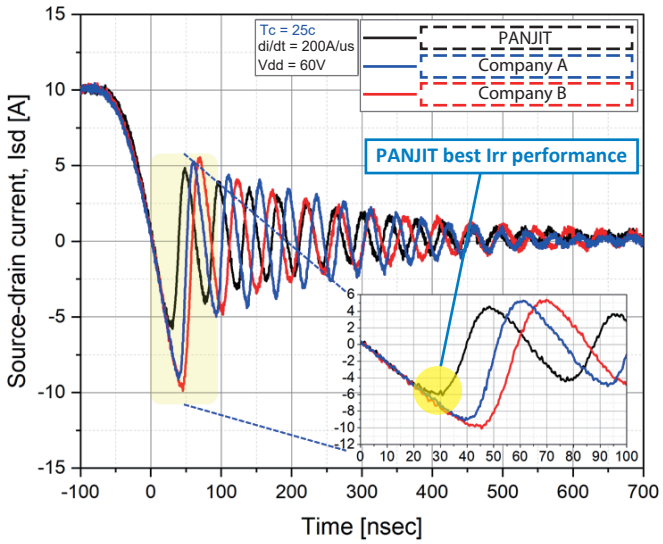
Parameters	Specification
Input Voltage	115VAC / 60Hz 230VAC / 50Hz
Output Voltage	20VDC
Max. Power	65W
Switching Frequency	50 ~ 70kHz
Ambient Temperature	25 deg.c

Test Condition		4 Points Avr. Effi.	10% load Effi.	No-load Ploss
Criteria (CoC Tier 2)		> 89.0 %	> 79.0 %	< 0.150 W
115Vac 60Hz	**PANJIT**	> 92 %	> 89 %	**0.031 W**
	Company A	> 92 %	> 89 %	0.035 W
230Vac 50Hz	**PANJIT**	> 92 %	> 85 %	< 0.05 W
	Company A	> 92 %	> 85 %	< 0.05 W

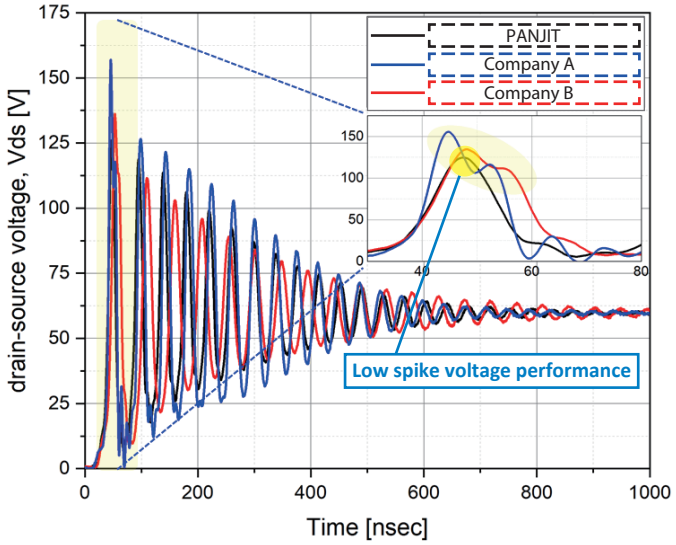
Body Diode performance

Reverse Recovery Characteristic @200A/us, Isd=10A

Irr performance



Spike voltage performance



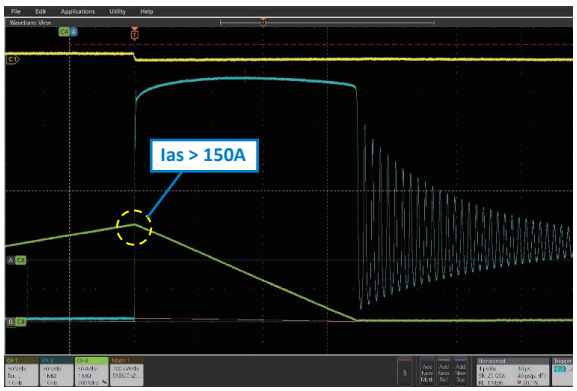
Robustness performance

UIS (Unclamped Inductive Switching) Capability

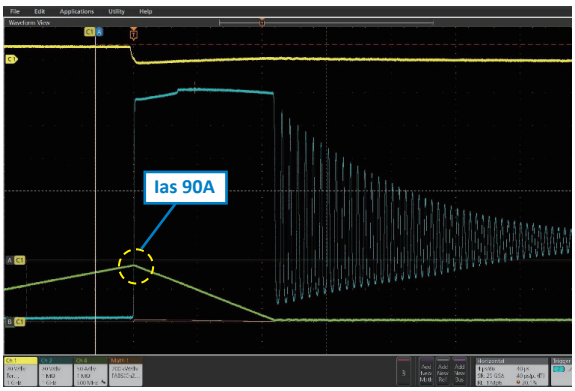
UIS Test	L=10uH, Vds=50V		
	Ias	VR_as	Eas
PANJIT	>150 A	152 V	>160 mJ
Company A	90 A	144 A	62 mJ

- PANJIT showes stronger UIS Capacity

PANJIT



Company A



PANJIT International Inc.

Headquarters No.24, Gangshan N. Rd., Gangshan Dist., Kaohsiung City 82063, Taiwan

TEL 886-7-621-3121 **FAX** 886-7-621-3129 **MAIL** sales@panjit.com.tw