

Smart-Resoic®

MH2501SC, MH2511SC

Multi Interleave Technology ! "Over 2 Stage"



MOSFET :
Cool MOS C3,CPseries
Hi-pot2 series
Diode :
FRD SF*K60Mseries

MH2501SC : master PFC_IC SOP8
MH2511SC : slave PFC_IC SOP8

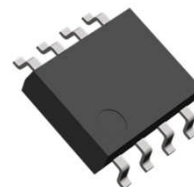
- High efficiency and low EMI integrated Critical Current Mode PFC Controller
- Multiple interleaving operation possible by adding multiple slave controller
- No input voltage sensing permits reduction in power consumption
- $I_{src}/I_{sink} = 0.5A(\text{sourcing})/1.2A(\text{sinking})$ Gate driver
- OVP , OCP , loop open/short protections , Slave stop protection ,Blocking diode short protection

MV1000series

MV1001SC: Can operated via AC direct input
MV1002SC: Uses an external starter circuit

- Constant current control
- Critical Conduction Mode \Rightarrow High efficiency and low EMI
- Allows for PWM dimming input and linear dimming input
- Can operated via AC direct input (MV1001SC)
- high side and low side drive -- both are possible
- Switching frequency clamp by OFF width control
- Equipped with various protection, such as LED short protection

Deep Dimming Control !



MOS
Hi-pot2 series

Simple Design !

MD5021T



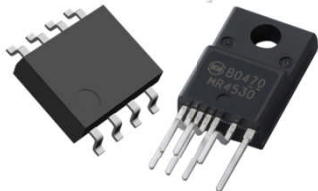
- Integrated P-Channel MOSFET reduces component count total cost
- Input Voltage range: 4.5V ~14V
- Adjustable output voltage range: 0.8 ~12V
- Adjustable operating frequency range: 100k ~500kHz
- High output current 2A

2013/4/5

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**Soft Switching !
Hi Stand-by Performance !**

MS1000series, MR4000series



MS1000series : Quasi-Resonant IC
MR4000series : MOSFET (SIGBT) + Quasi-Resonant IC



SW : Hi-pot MOS 2 series
VX4 series
SIGBT series

Output Di : SBD SG(SC,JC,TC)
FRD SF

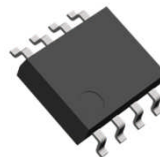
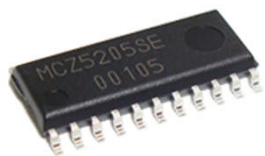
- High Efficiency quasi-resonant converter
- Low EMI with soft switching
- External start up resistor not required (MS1000 series)
- Super stand-by mode for high efficiency (MS1000 series)
- Improvement of "light load" due to automatic QR operation function (MS1000 series)
 - 1 Bottom – skip QR operation (MS1003SH)
 - 2 Bottom – skip QR operation (MS1004SH)
- Automatic OCL level compensation for input BUS voltage (MS1000 series)
- MS1000 in SOP8 package & MR4000 in FTO220 package

MCZ5205SE, MCZ5203SE, MCZ5301SC

**Soft Switching !
Hi Efficiency !**

MCZ5205SE : Direct drive LLC controller and PFC controller in a SOP22 PKG
MCZ5203SE : Direct drive LLC controller in a SOP22 PKG
MCZ5301SC : External drive LLC controller in a SOP8 PKG

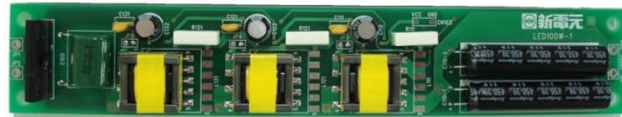
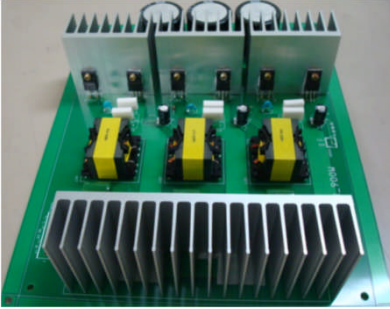
- Built-in 600V high voltage gate driver for high reliability, (excluding MCZ5301SC),
- Protection functions against abnormal over-current protection (AOCP), brownout detection and Best-in-class capacitive mode protection
- Integrated active stand-by function to reduce loss in light load range (MCZ5205SE)



SW :Cool MOS C3,CP series
Hi-pot MOS 2 series*
VX4 series
Output Di :SBD SG(SC,JC,TC)
FRD SF

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PFC course with MH series



- Sample 1: AC85V~132V, 395V 80W (MH2501SC*1, MH2511SC*2)
- Sample 2: AC180V~264V, 395V 4kW (MH2501SC*1, MH2511SC*2)
- Sample 3: AC85V~264V, 395V 900W (MH2501SC*1, MH2511SC*2)

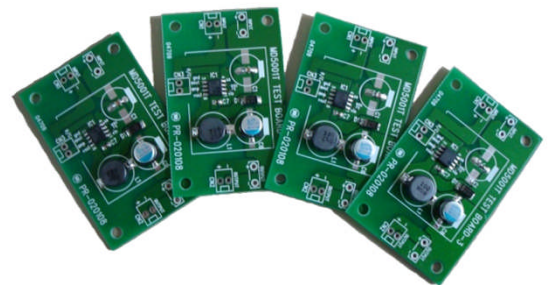
Stepping down chopper course for LED lighting with MV series



- Sample 1: AC180V~264V, 100V 0.3A (MV1001SC)

Stepping down chopper course with MD series

- Sample 1: DC12V, 9V / 0.5A (MD5021T)
- Sample 2: DC12V, 5V / 1A (MD5021T)
- Sample 3: DC12V, 3.3V / 1A (MD5021T)
- Sample 4: DC12V, 1.5V / 2A (MD5021T)

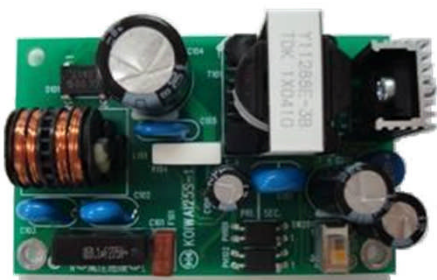


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QRC course with MR

- Sample 1 : AC90V~276V, 24V1.9A (MR4010)
- Sample 2 : AC90V~276V, 24V1.9A (MR9010)

QRC – “Super Stand-by Series” course with MS series



- Sample 1 : AC80V~132V, 12V2A (MS1003SH)
- Sample 2 : AC90V~276V, 24V3A (MS1003SH)
- Sample 3 : AC90V~276V, 12V2A (MS1003SH)

LLC course with MCZ series

- Sample 1 : AC90V~264V, 140V0.35A (MCZ5205SE) Constant current control
- Sample 2 : AC90V~264V, 24V3A/12V2A (MCZ5205SE)

