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CIPOS™ Maxi IM828-XCC Introduction

Infineon's virtual show 2020



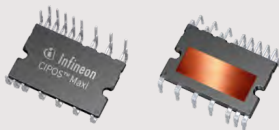
CIPOS™ Maxi 1200 V IPMs

Overall portfolio



Products

DIP 36X23D package



IM818-series IGBT IPM

IM828-series SiC IPM

Dimension [mm]

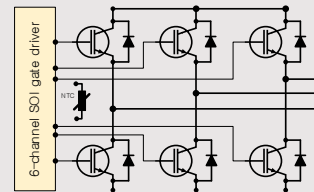
36 x 22.7 x 3.1 mm³ with 24 pins

Product line

Part No.	Voltage Rating	Current Rating	Ver.	Remark
IM818-SCC	1200 V	5A	IGBT 4	In production
IM818-MCC	1200 V	10A	IGBT 4	In production
IM818-LCC	1200 V	15A	IGBT 4	ES : available MP : Q2/2021
IM828-XCC	1200 V	Rdson= 55mΩ	CoolSiC™ MOSFET	In production

Topology

3-phase inverter with open emitters



Application



Benefits

- › System cost saving
- › Faster time-to-market
- › High power density and high efficiency
- › Wide switching speed range

CIPOS™ Maxi: IM828-XCC

Description and product portfolio

Description



- › The CIPOS™ Maxi IM828 series offers a 3-phase inverter with 1200 V CoolSiC™ MOSFETs combined with an optimized 6-channel SOI gate driver for excellent electrical performance to increase reliability, optimize PCB size and system costs.
- › The product concept is specially adapted to power applications, which need good thermal performance and electrical isolation as well as EMI save control and overload protection.
- › It is designed to operate as high performance inverter for demanding motor drive applications and active power factor correction.

Product portfolio

Part No.	Voltage Rating	Current Rating	Ver.	Remark
IM828-XCC	1200 V	Rdson= 55mΩ	CoolSiC™ MOSFET	In production

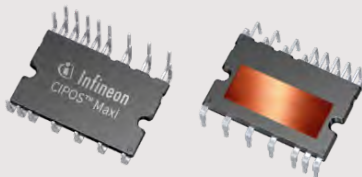
CIPOS™ Maxi: IM828-XCC

1200 V CoolSiC™ MOSFET 55 mΩ IPM overview



Product

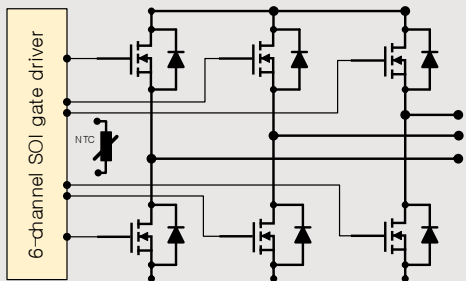
DIP 36X23D package



Dimension [mm] 36 x 22.7 x 3.1 mm³ with 24 pins

Topology

3-phase inverter with open emitters



Benefit and value proposition

- › Very low loss thanks to advanced CoolSiC™ MOSFET technology
- › Reduced system costs and easy design-in
- › Fast time-to-market
- › Wide switching speed range
- › High power density, high efficiency and high output power in one small package

Typical applications

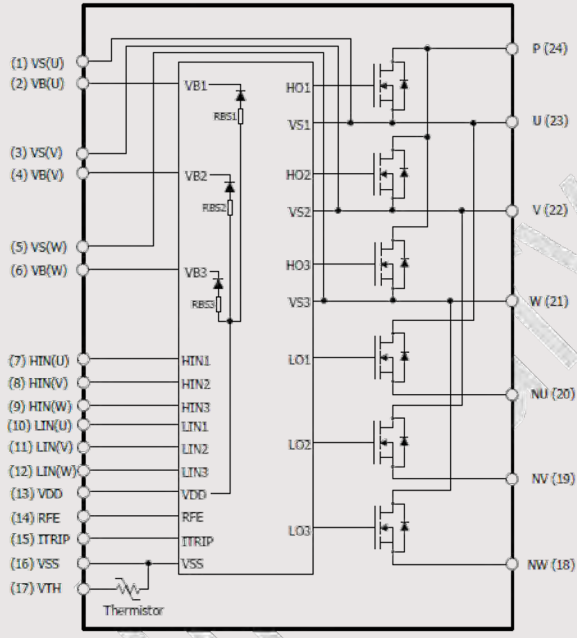


CIPOS™ Maxi: IM828-XCC

Key features



Block diagram



Main features

Fully isolated dual in-line molded module with DCB substrate

Integrated 6 CoolSiC™ MOSFET and a rugged 1200 V 6-channel SOI gate driver

Integrated bootstrap diodes

Allowable negative VS potential up to -11 V for signal transmission at VBS=15 V

Under-voltage lockout at all channels

RFE pin with multi-functions

ITRIP pin with over current detection

Independent thermistor for temperature monitoring

Low side emitter pins accessible for all phase current monitoring (open emitter)



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