

DESCRIPTION

M57146U-01 is an insulated DC-DC converter designed to drive the IPM. 4 outputs of 15VDC can obtain from an input of 220 ~ 380VDC.

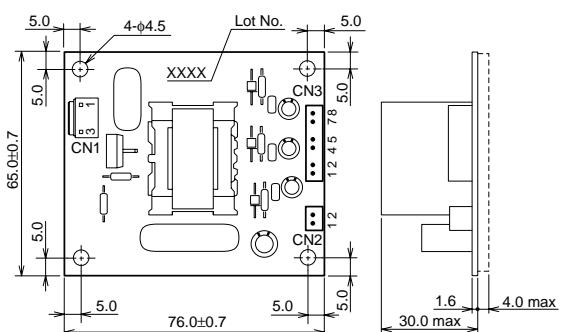
The terminals between inputs and outputs, and each outputs are insulated.

FEATURES

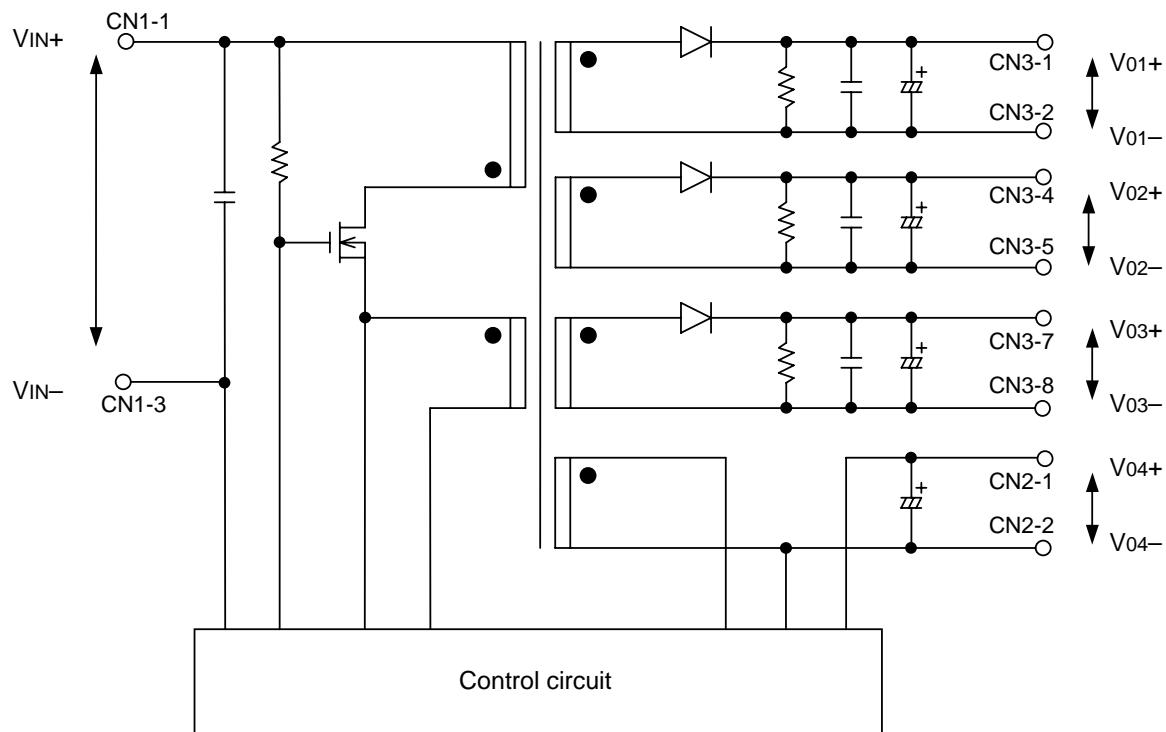
- Output +15V, 50mA X3
+15V, 100mA X1
- Electrical isolation (between input and outputs) 1500Vrms 1 minute
- Electrical isolation (between each outputs) 1500Vrms 1 minute

OUTLINE DRAWING

Dimensions: mm

**APPLICATION**

Power supply for IPM drive

BLOCK DIAGRAM

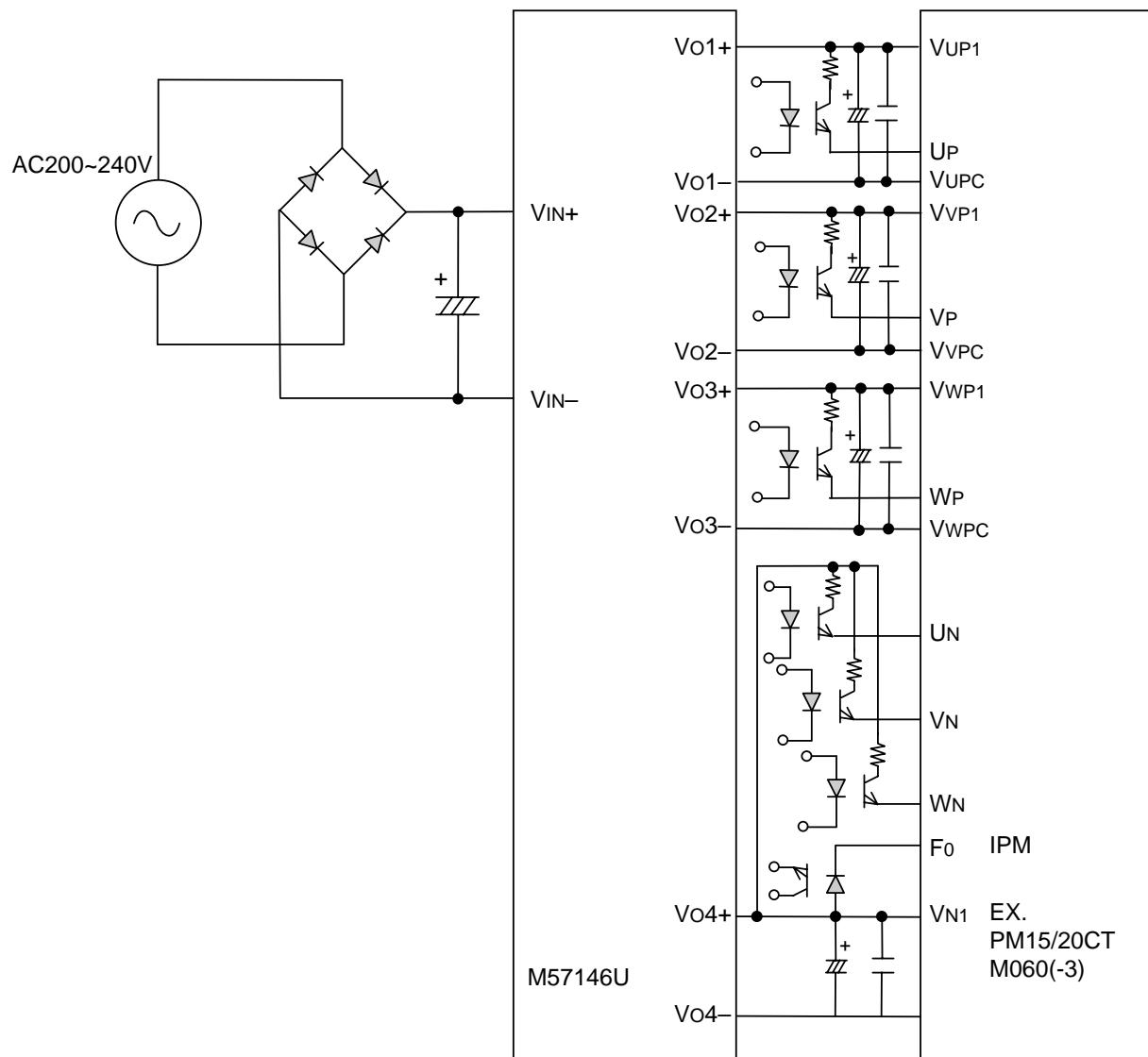
MAXIMUM RATINGS (Ta = 25°C, unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
VI	Input voltage	—	380	V
IL	Output current	Vo1, Vo2, Vo3	50	mA
		Vo4	100	mA
Topr	Operating temperature	No condensation	-10 ~ 70	°C
Tstg	Storage temperature	No condensation	-20 ~ 85	°C
Po	Total output power	—	3.75	W
Viso1	Electrical isolation between input and outputs	Sine wave voltage, 60Hz, 1 minutes	1500	Vrms
Viso2	Electrical isolation between each outputs	Sine wave voltage, 60Hz, 1 minutes	1500	Vrms

ELECTRICAL CHARACTERISTICS (VIN= 220 ~ 380V, Ta = 25°C, unless otherwise noted)

Symbol	Parameter	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
VI	Input voltage	Recommended range	220	—	380	V
Vo1	Output voltage	Io1 = 0 ~ 50mA, Io2 = Io3 = 0mA, Io4 = 80mA	14	15	16	V
Vo2		Io2 = 0 ~ 50mA, Io1 = Io3 = 0mA, Io4 = 80mA	14	15	16	
Vo3		Io3 = 0 ~ 50mA, Io1 = Io2 = 0mA, Io4 = 80mA	14	15	16	
Vo4		Io4 = 10 ~ 100mA, Io1 = Io2 = Io3 = 0mA	14	15	16	
Reg-I	Line regulation	Vo1 voltage change Io1 = 30mA, Io2 = Io3 = 0mA, Io4 = 80mA	—	50	—	mV
		Vo2 voltage change Io2 = 30mA, Io1 = Io3 = 0mA, Io4 = 80mA	—	50	—	
		Vo3 voltage change Io3 = 30mA, Io1 = Io2 = 0mA, Io4 = 80mA	—	50	—	
		Vo4 voltage change Io1 = Io2 = Io3 = 0mA, Io4 = 80mA	—	50	—	
		Vo1 voltage change Io1 = 0 ~ 50mA, Io2 = Io3 = 0mA, Io4 = 80mA	—	50	—	
Reg-L	Load regulation	Vo2 voltage change Io2 = 0 ~ 50mA, Io1 = Io3 = 0mA, Io4 = 80mA	—	0.7	—	V
		Vo3 voltage change Io3 = 0 ~ 50mA, Io1 = Io2 = 0mA, Io4 = 80mA	—	0.7	—	
		Vo4 voltage change Io4 = 10 ~ 100mA, Io1 = Io2 = Io3 = 0mA	—	0.7	—	
		Vo1 voltage change Io1 = 0 ~ 50mA, Io2 = Io3 = 0mA, Io4 = 80mA	—	50	—	
		Vo2 voltage change Io2 = 0 ~ 50mA, Io1 = Io3 = 0mA, Io4 = 80mA	—	0.7	—	
η	Efficiency	VIN = 300V, Io1 = Io2 = Io3 = 30mA, Io4 = 80mA	—	73	—	%

APPLICATION EXAMPLE



AVAILABLE IPM

PM10CSJ060	PM15CTM060	PM30CTJ060
PM15CSJ060	PM15CTM060-3	PM30CTJ060-3
PM20CSJ060	PM20CTM060	
PM30CSJ060	PM20CTM060-3	PM30RSF060