

MITSUBISHI HYBRID IC  
**M57145L-01**

HYBRID IC FOR ON-BOARD POWER SUPPLY

**DESCRIPTION**

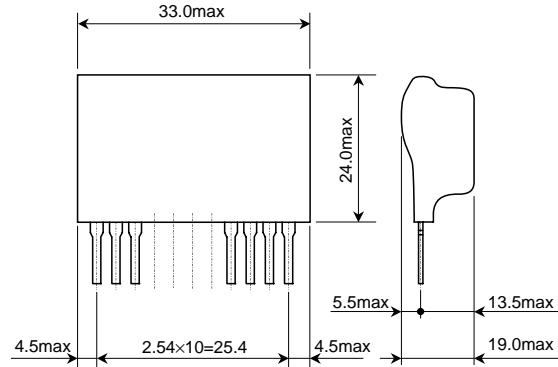
M57145L-01 is an insulated type DC-DC converter which can supply 2 outputs from 12 ~ 18VDC single input. The insulation can endure to 2500Vrms and a pair of output voltages is +15.8V, -8.2V which can suitable for power supply to IGBT driver.

**FEATURES**

- Input voltage ..... DC12 ~ 18V
- Output voltage ..... +24V, 100mA  
+8.2V
- Insulation endurance between input and output ..... 2500Vrms 1minute
- Small SIP structure

**OUTLINE DRAWING**

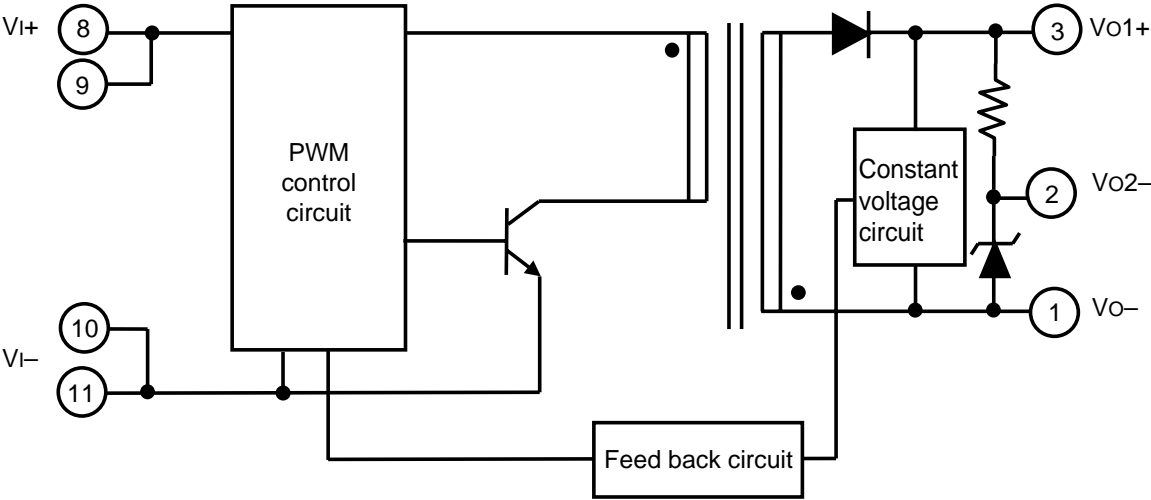
Dimensions: mm



**APPLICATION**

Power supply for IGBT driver, etc.

**BLOCK DIAGRAM**



# M57145L-01

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

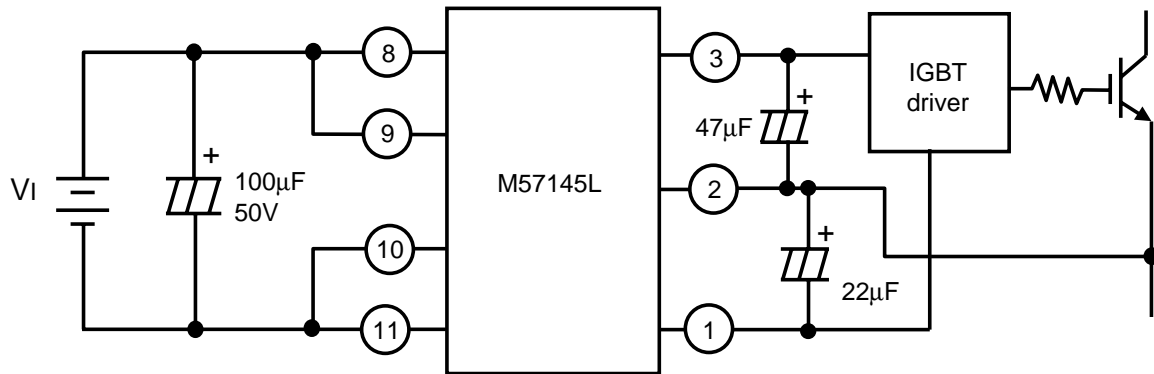
Symbol	Parameter	Conditions	Ratings	Unit
V <sub>I</sub>	Input voltage	—	18	V
I <sub>L1</sub>	Load current 1	③ pin output current	100 <sup>(*)</sup>	mA
T <sub>opr</sub>	Operating temperature	No condensation	-10 ~ +70	°C
T <sub>stg</sub>	Storage temperature	No condensation	-20 ~ +85	°C
V <sub>iso1</sub>	Electrical isolation between input and outputs	Sine wave voltage, 60Hz, 1 minutes	2500	V <sub>rms</sub>

(\*)See the derating curve in next page.

**ELECTRICAL CHARACTERISTICS** (V<sub>IN</sub>=15V, Ta = 25°C, unless otherwise noted)

Symbol	Parameter	Conditions	Limits			Unit
			Min.	Typ.	Max.	
V <sub>I</sub>	Input voltage	Recommended range	12	—	18	V
V <sub>o1</sub>	Output voltage 1	③ pin voltage I <sub>o</sub> = 0 ~ 60mA	22.8	24.0	25.2	V
V <sub>o2</sub>	Output voltage 2	② pin voltage No load of ②, ③ pins	7.96	8.2	8.43	V
Reg-I	Input regulation	I <sub>L</sub> = 60mA, V <sub>I</sub> = 12 ~ 18V, No load of ② pin	—	—	50	mV
Reg-L	Load regulation	I <sub>L</sub> = 0 ~ 60mA, No load of ② pin	—	—	50	mV
η	Efficiency	I <sub>L</sub> = 60mA, No load of ② pin	—	68	—	%

**APPLICATION EXAMPLE**



**Note:** The value of capacitance of electrolytic capacitor between ③, ② and ① pin must be detail adjusted by IGBT and driver.

TYPICAL CHARACTERISTICS

