

### Small size & high efficiency, and constant current control with simple LED drive circuit ! **IPD for LED-lighting MIP553/MIP554**

#### ■ Overview

MIP553 is the best device for the drive of the set with large current such as LED illuminators of 30W or less by the world wide input. MIP554 is the best device for the drive of LED lightings of small sets of the lamp and the down light etc. of 10W or less in the region of the AC100V/120V fraction input.

MIP553/MIP554 can drive in a constant current for LED current and the miniaturization and making the LED lighting circuit highly effective are achieved. The circuit configuration is possible by a little number of parts with non-isolated applications. In addition, power factor has achieved 0.9 or more only by adding one resistance.

#### ■ Feature

##### ★MIP553

- Possible to correspond to the output about 30W by the world wide input.(with heat sink)
- Typical LED peak current : 1.5 A
- With built-in LED short-circuit protection function.
- Input voltage detecting function is used, and the protection at a low input voltage is possible.
- Possible to correspond to the PWM dimming method and the triac light dimmer.
- Over temperature protection for IPD (Auto-restart)

##### ★MIP554

- It corresponds to the output for 10W.
- Typical LED peak current : 1.0 A
- On resistance can be decreased to 3.7Ω by adjusting the breakdown voltage to 400V.
- The stability operation that suppresses the flicker in the triac light dimmer is possible.
- Possible to correspond to the PWM dimming method and the triac light dimmer..
- Over temperature protection for IPD (Auto-restart)

#### ■ Applications

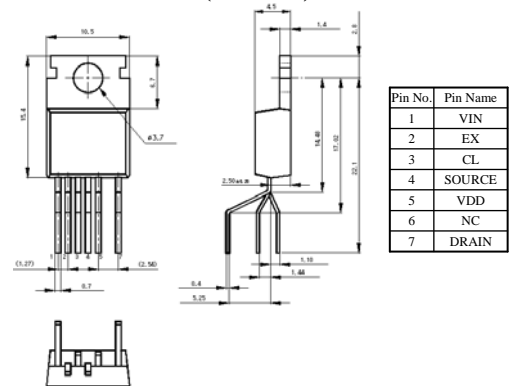
LED-lighting HB-LED drive circuit

#### ■ Specifications

Item	Package	VDSS	Toff	IDpeak	RON	Current status
MIP5530MDSLJ	TO-220IPD7-A2	≥700V	16 μs(typ)	1.5A (typ.)	3.5Ω (typ.)	ES available
MIP5540MSSCF	DIP7-A1	≥400V	15 μs(typ)	1.0A (typ.)	3.7Ω (typ.)	Under development

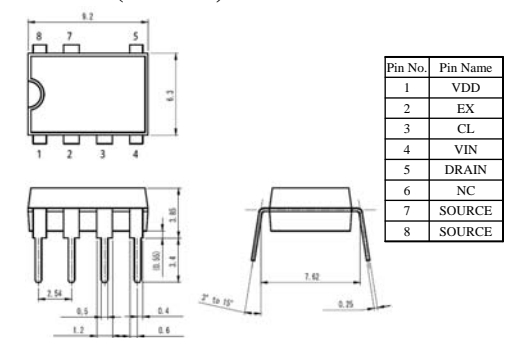
#### •TO-220IPD7-A2 (MIP553)

: mm

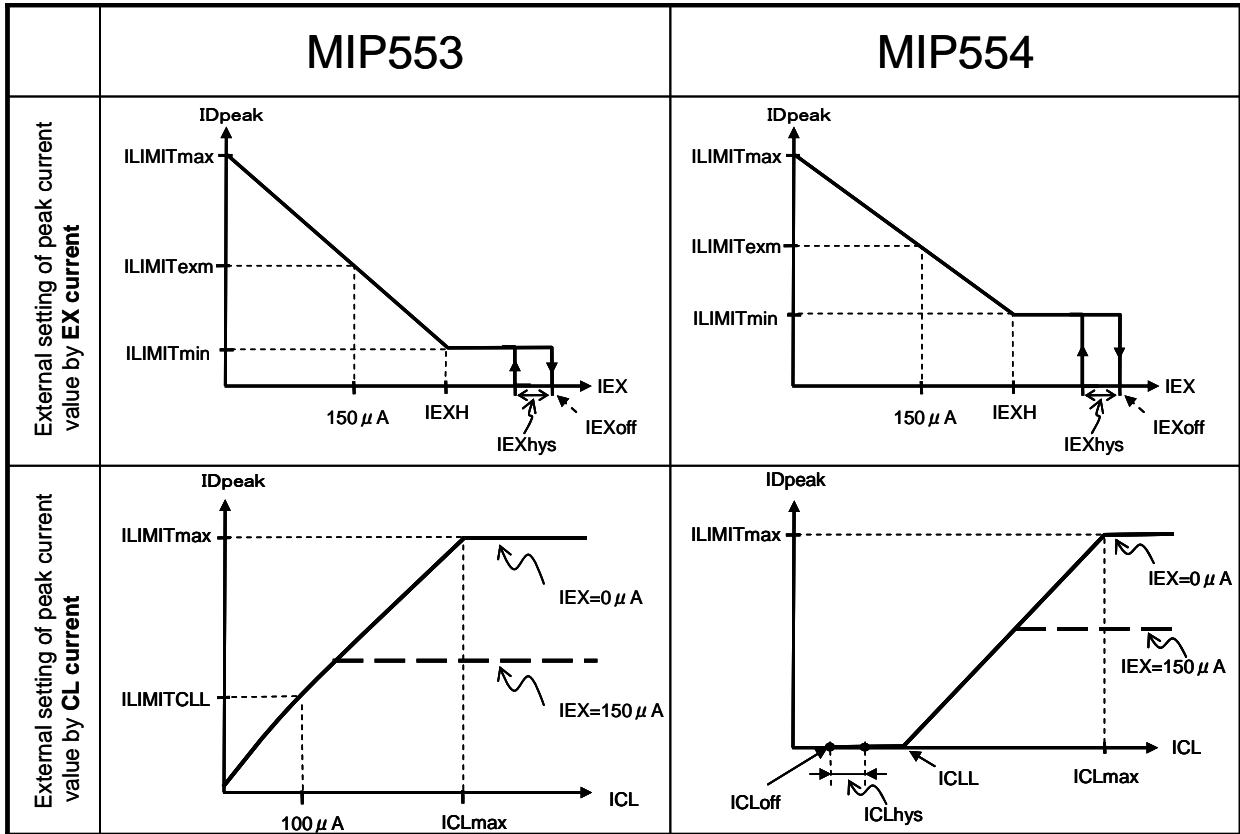


#### •DIP7-A1 (MIP554)

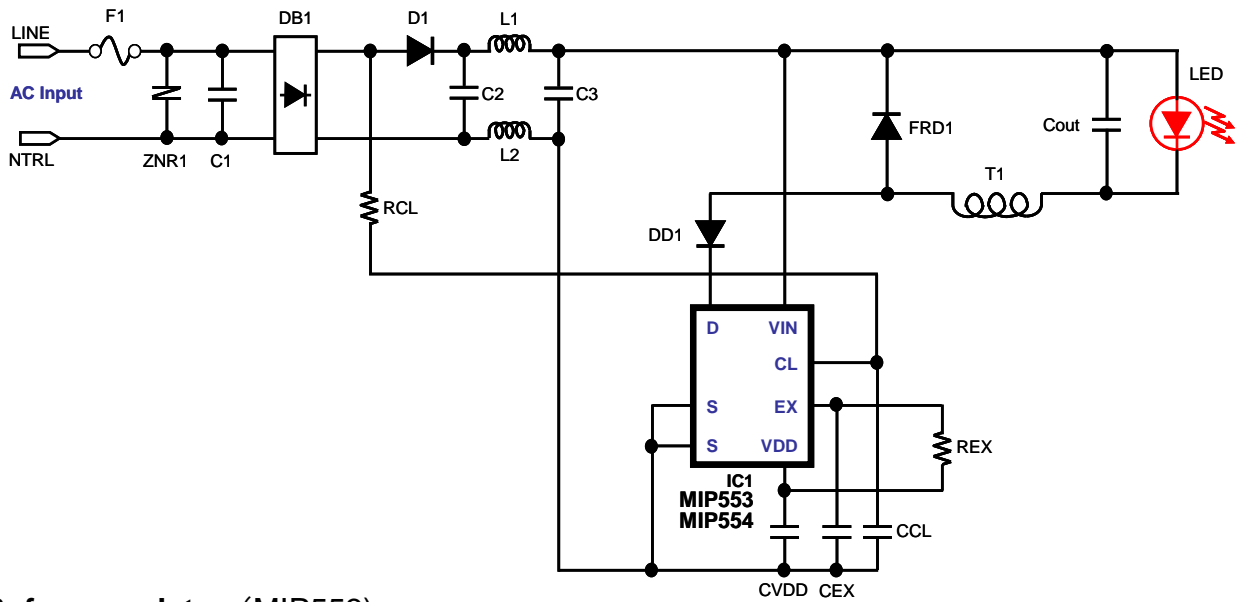
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## ■ Explanation of function terminal



## ■ Reference Application (MIP553, MIP554)

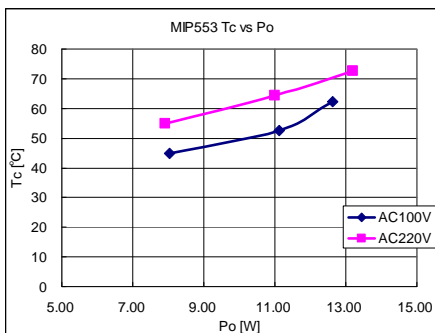


## ■ Reference data (MIP553)

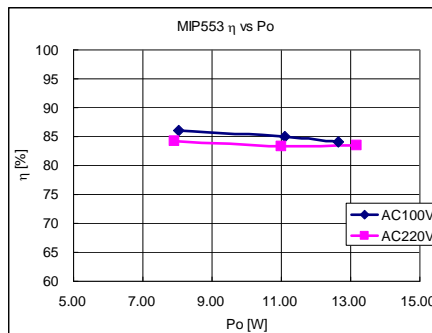
### <Measurement condition>

- Circuit : Buck
- Input : AC100V, AC220V
- LOAD : LED 9pcs series
- Output current : 300mA / 400mA / 450mA
- Ta : Normal temperature(26°C)
- heat sink : Non

**Tc - Po**



**η - Po**



**PF - Po**

