

TLE4267 / TLE4267-2 – INH / HOLD Function

Low Drop Voltage Regulators

Z8F52274291

Application Note

Rev. 1.33, 2015-04-27

Automotive Power

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Purpose of the INH / HOLD Function

1 Purpose of the INH / HOLD Function

- In a supply system for a micro controller, where the INH is controlled by the ignition key, the micro controller must be enabled (must have the chance) to store his data in case of INH=Off.
- This possibility is given by the INH / HOLD.
- Application Circuit:

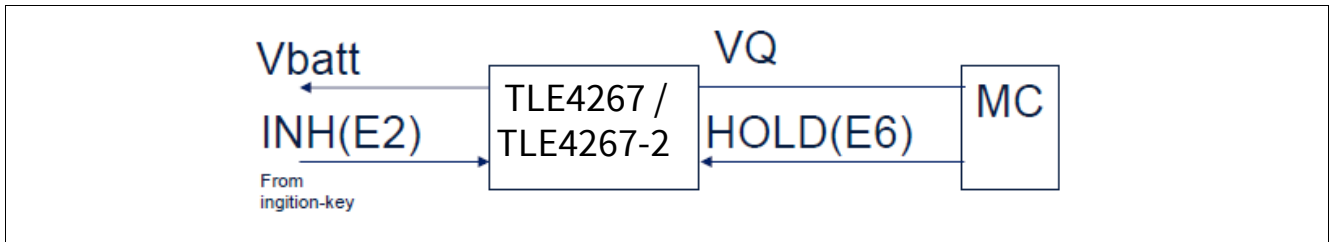


Figure 1

- If the Ignition is turned off (INH=off) at any time, the micro controller might need time to store data. To achieve that and to avoid interruption of the process, the micro controller is allowed to control the turn-off sequence by the HOLD-pin. That means, the micro controller can release the pin, as soon as it is ready and INH=off. Only then V_{reg} is turned off.

Functional description (Data sheet)

2 Functional description (Data sheet)

Table 1 shows the turn-off sequence - it is not a logic table.

Table 1 Turn-off-sequence

E2, Inhibit	E6, Hold	V_Q	Remarks
L	X	OFF	Initial state, Inhibit internally pulled-up
H	X	ON	Regulator switched on via Inhibit, for example by ignition
H	L	ON	HOLD clamped active to ground by controller while Inhibit is still high
X	L	ON	Previous state remains, even ignition is shut off: self-holding state
L	L	ON	Ignition shut off while regulator is in self-holding state
L	H	OFF	Regulator shut down by releasing Hold while Inhibit remains Low, final state. No active clamping required by external self holding circuit () to keep regulator in off-state.

Inhibit: E2 Enable function, active High

HOLD: E6 HOLD and release function, active Low

Functional description (Logic description)

3 Functional description (Logic description)

Table 2 Logic Table

INH	HOLD	Regulator
H	H	ON
H	L	ON
L	H	OFF
L	L	ON

Table 3 Sequence: INH / HOLD +1

E2, Inhibit	E6, Hold	V _Q	Remarks
	L/x	OFF	
L/x	H/x	ON	
H/x	H/L	ON	(HOLD function on)
H/L	x/L	ON	(INH=Ignition off)
x/L	L/L	ON	
L/L	L/H	OFF	(HOLD is released)



Figure 2

Alternative to achieve the HOLD-Function

4 Alternative to achieve the HOLD-Function

e.g. with TLE4271-2, 4276, 7272, 7276

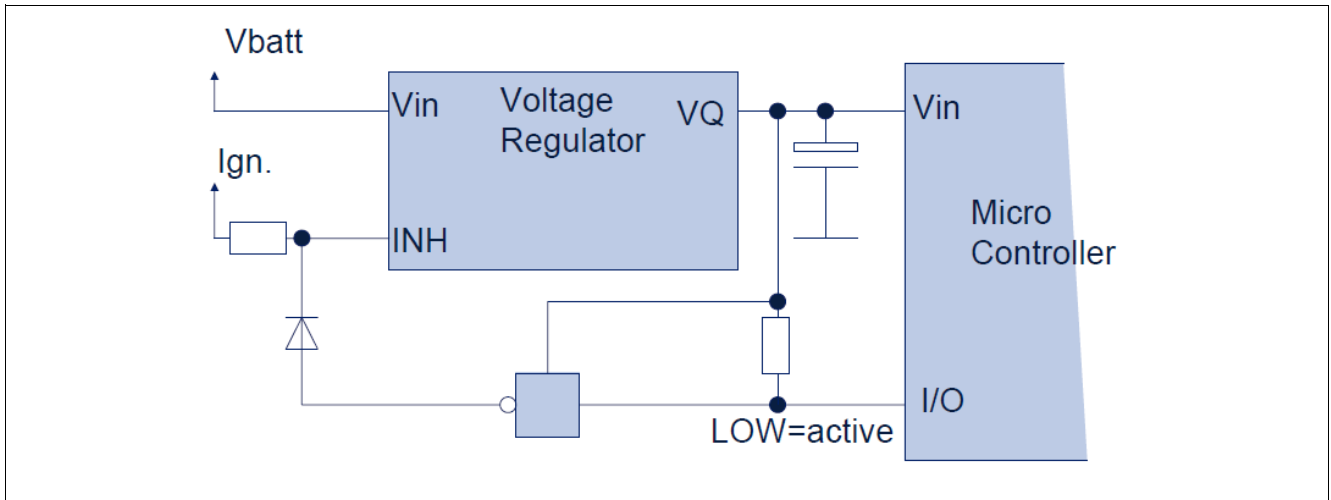


Figure 3 Alternative to achieve the HOLD Function

Revision History

5 Revision History

Revision	Date	Changes
1.33	2015-04-27	TLE4267-2 added.
1.32	2015-03-10	Infineon Style Guide update. Editorial changes.

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