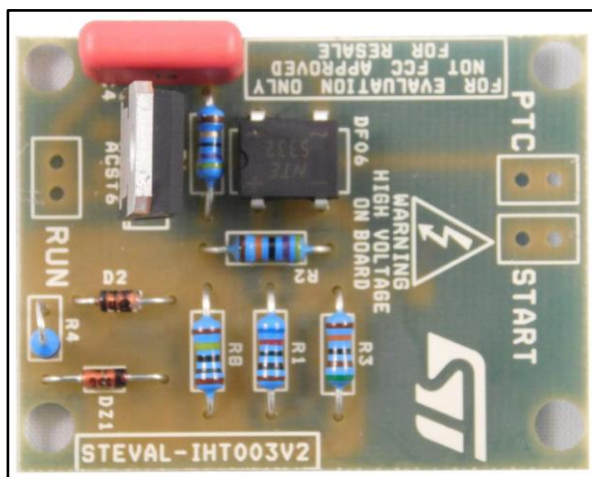


Low loss e-starter evaluation board for compressor starter circuits based on the ACST6

Data brief



Features

- Suitable for refrigerator and freezer compressor applications
- Reduces PTC resistor power losses
- RoHS compliant

Description

The STEVAL-IHT003V2 evaluation board represents an innovative solution patented by STMicroelectronics to reduce the power losses caused by positive temperature coefficient (PTC) resistors in compressor starter circuits.

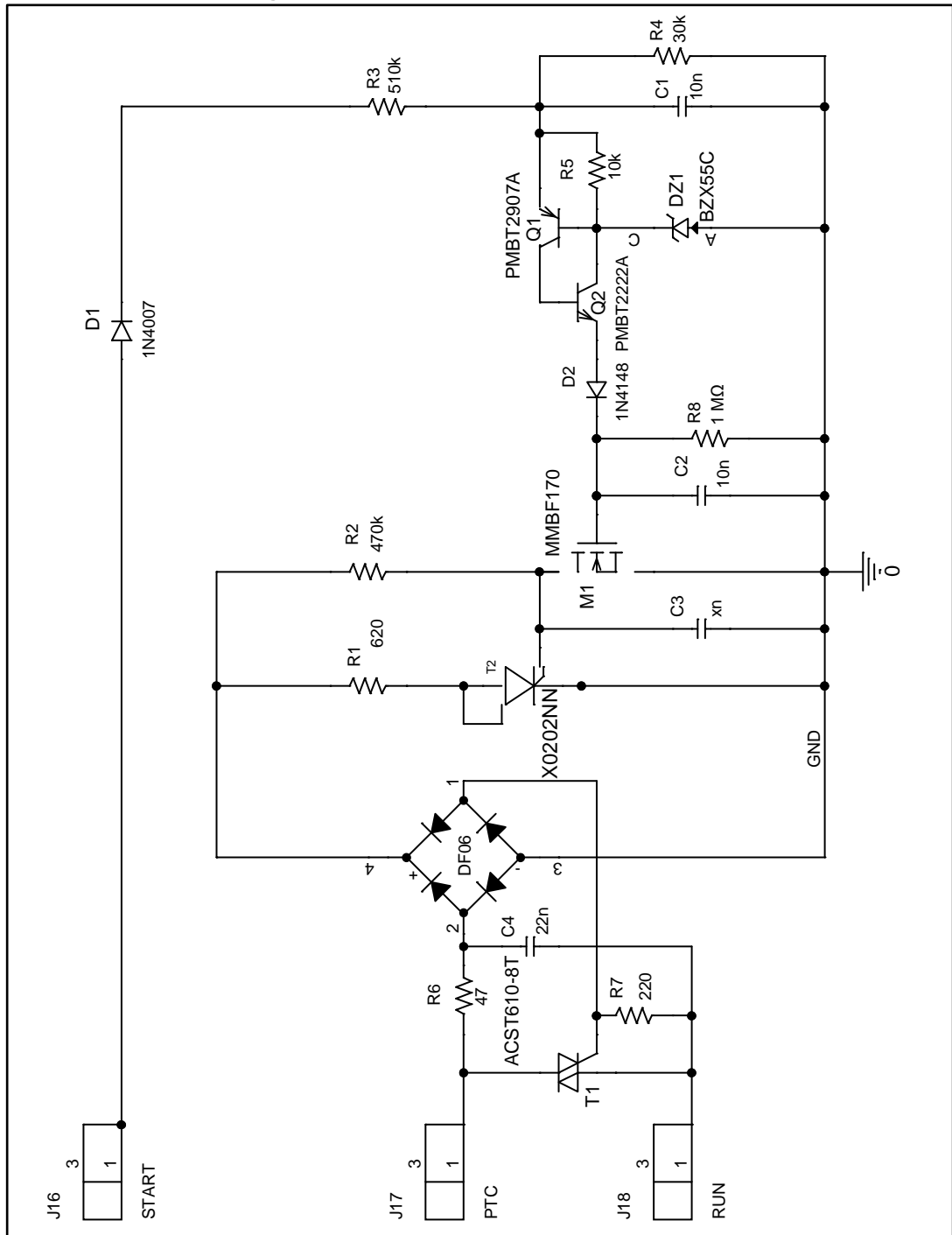
The solution features an ACST6 AC switch device to turn off the PTC current after motor start-up; note that the traditional PTC is still used in the electronic starter circuit as it increases circuit safety for AC switch short-circuits or diode mode failure (ref. EN60335-1).

The design reduces starter standby losses from (typ.) 2.5 W to 380 mW for 230 V applications, or 2.5 W to 40 mW for 100 V applications.

Before using the board with a compressor, the PTC behavior must be checked (especially VPTC1 and VPTC2 levels) and different R4 resistor values may be required.

1 Schematic diagram

Figure 1: STEVAL-IHT003V1 circuit schematic



2 Revision history

Table 1: Document revision history

Date	Version	Changes
30-Jan-2017	1	Initial release.

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