THE TLE 6710Q is a combined power supply and firing IC specially designed for automotive restraint applications. The device, located in the ECU (Electronic Control Unit) of the airbag system, incorporates several system functions in one single package.

Applications
- Automotive Restraint Applications

Features
- Boost Converter up to 30 V
- Buck Converter 5 V
- 4 independent firing loops (1.75 A ... 3 A)
- Extra HW lines (Safety Lines) to enable firing
- High Side and Low Side Switch for each firing circuit
- Digital output for firing current detection
- Watchdog for supervision
- Power on/off reset generator
- Serial interface line driver (ISO 9141 and TTL-Level)
- 4 voltage/current sources for diagnostic purposes
- Diagnostic driver for inductive loads or lamps
- Unidirectional Serial Peripheral Interface (SPI) up to 4 MHz
- Logic and analogue output for direct sensing and diagnostic via µC

Embedded Protection Functions
- Thermal and short circuit protection for each switch
- Current limitation for each firing loop

Embedded Diagnostic Functions
- Squib resistance Measurement with programmable gain
- Programmable Squib Leakage Measurement to GND or BAT
- Detection of safing sensor closure
- Low battery detection
- Average Chip Temperature Measurement
- Supply voltage measurement on external pins

Automotive Power
**System Overview**

**Product Summary**

<table>
<thead>
<tr>
<th>Type</th>
<th>Sales Code</th>
<th>Description</th>
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<tr>
<td>TLE 6710Q</td>
<td>available upon request</td>
<td>Airbag System IC</td>
<td>P-MQFP-64-11</td>
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**Legal Disclaimer**

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Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (www.infineon.com).

**Warnings**

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

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Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

**Ordering No. B525-118515-X.R.7600**

Printed in Germany

PS 1116.5 nb