

FEATURES

- Ideal for Server Memory applications using +5V
- Fixed 5V Gate Drive
- Large drivers designed to drive 3nF in $\leq 15\text{ns}$ with +5V drive
 - Low side driver – 1.5A source / 3A sink
 - High side driver – 1.5A source / 3A sink
 - Transitions times & Propagation delays $\leq 15\text{ns}$
- Integrated bootstrap diode
- Capable of high switching frequencies from 200kHz up to greater than 1MHz
- Compatible with CHiL's patented Active Tri-Level (ATL) PWM for fastest response to transient overshoot
- Non-overlap and under voltage protection
- Thermally enhanced 10 pin DFN package
- Lead free RoHS compliant package
- Low Quiescent power to optimize efficiency

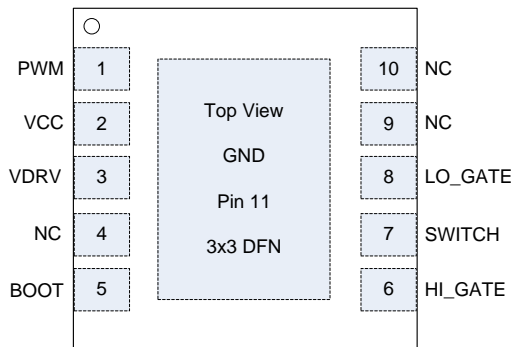


Figure 1. CHL8505 pin DFN Package

DESCRIPTION

The CHL8505 MOSFET is a high efficiency gate driver which can switch both high-side and low-side N-channel external MOSFETs in a synchronous buck converter. It is intended for use with CHiL Digital PWM controllers to provide a total voltage regulator (VR) solution for today's advanced computing applications.

The CHL8505 driver is capable of rapidly switching large MOSFETs with low R_{dson} and large input capacitance used in high efficiency designs. It is uniquely designed to operate from a 5V source such as a system 5V or 5V standby voltages in sleep states.

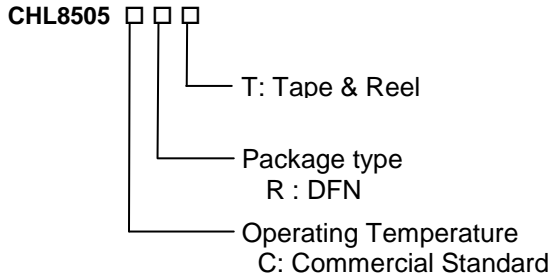
The CHL8505 has a unique circuit which improves drive strength to the external MOSFETs even with just 5V supplied at the VDRV pin. This insures faster switching comparable to drivers designed for +12V drive operation. The integrated boot diode reduces external component count. The CHL8505 also features an adaptive non-overlap control for shoot-through protection.

The CHL8505 is configured to drive both the high and low side switches from the patented CHiL fast Active Tri-Level (ATL) PWM signal, which will optimize the turn off time of individual phases, optimizing transient performance.

APPLICATIONS

- Multiphase synchronous buck converter for Server CPUs and DDR Memory VR solutions
- High efficiency and compact VRM
- Optimized for Sleep state S3 systems using +5VSB
- Notebook Computer and Graphics VR solutions

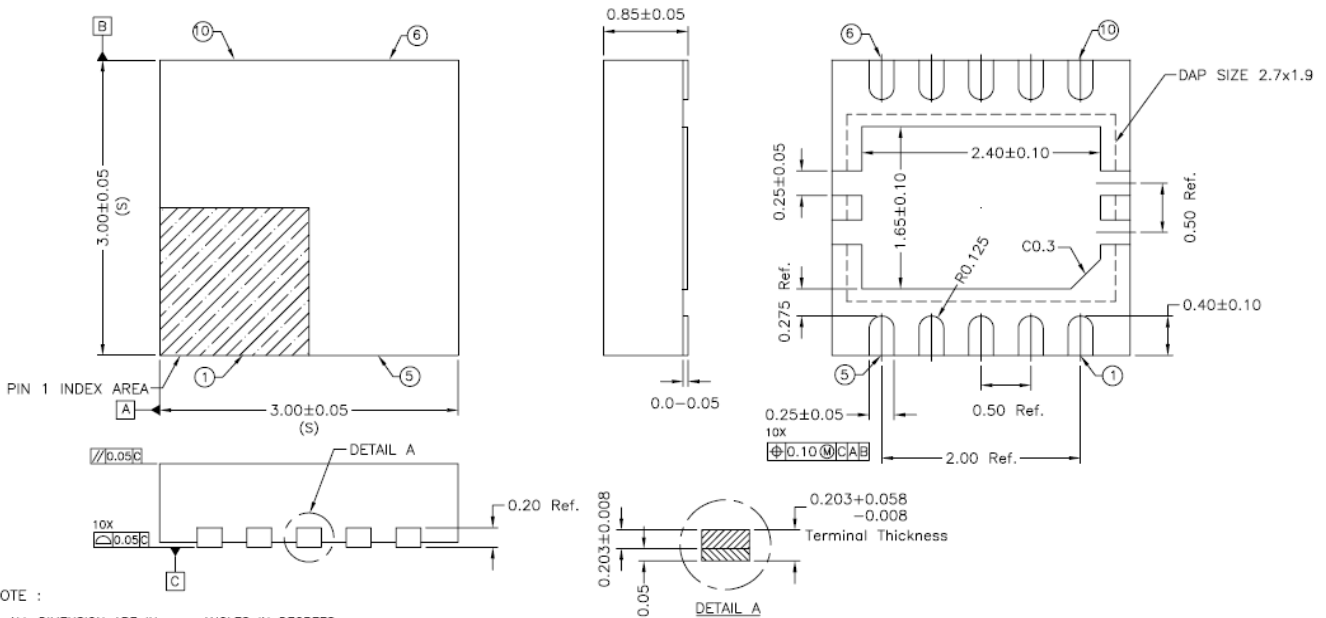
ORDERING INFORMATION



Package	Tape & Reel Qty	Part Number
DFN	3000	CHL8505CRT

PACKAGE INFORMATION & LAND PATTERN

DFN 3x3mm, 10 pin



- NOTE :
1. ALL DIMENSION ARE IN mm. ANGLES IN DEGREES.
 2. COPLANARITY APPLIES TO THE EXPOSED PAD AS WELL AS THE TERMINALS. COPLANARITY SHALL NOT EXCEED 0.05 mm.
 3. WARPAGE SHALL NOT EXCEED 0.05 mm.
 4. PACKAGE LENGTH / PACKAGE WIDTH ARE CONSIDERED AS SPECIAL CHARACTERISTIC(S)
 5. REFER JEDEC MO-229.