

TOP HEATSINK APPLICATION

SEE NOTE 3

NOTES:

1. FOR PCB LAYOUT SEE VICOR APPLICATION DRAWING 40438.

- 2. ROHS COMPLIANT PER CST-0001 LATEST REVISION.
- 3. THE SOLDERING METHOD USED FOR CHIPS (AND OPTIONAL HEATSINK GROUNDING) IS IMPORTANT WHEN SELECTING A THERMAL INTERFACE MATERIAL (TIM). THE PHASE-CHANGE TIM SHOWN IN THESE ILLUSTRATIONS MAY BE DAMAGED BY TEMPERATURES OVER 125C, SO TWO ASSEMBLY PROCEDURES ARE DESCRIBED BELOW: (A) FOR HAND-SOLDERING ONLY, (B) FOR WAVE-SOLDERING AND/OR HAND-SOLDERING.

**APPLICATION** 

SEE NOTE 3

TORQUE TO 6 IN-LBS. (2) PL.

(A) PLACE BOTTOM-SIDE HEATSINK (WITH PRE-ATTACHED PHASE-CHANGE TIM) ON PCB.
PLACE CHIP AND TOP-SIDE HEATSINK (WITH PRE-ATTACHED TIM AND GROUNDING TABS).
WHILE SUPPORTING PCB, INSERT PLASTIC PUSH-PINS THROUGH BOTH HEATSINKS AND PCB.
(SELECT PROPER PUSH-PIN LENGTH FROM TABLE ON THIS DRAWING.)

IMPORTANT: TO SET FINAL THICKNESS OF PHASE-CHANGE TIM ENSURE THAT THE ENTIRE ASSEMBLY IS RAISED ABOVE 65C FOR SEVERAL MINUTES.

HAND-SOLDER ALL CHIP AND GROUNDING PINS. ADDITIONAL SOLDERING IRON HEAT MAY BE REQUIRED TO COMPENSATE FOR LOSSES TO THE HEATSINKS.

- (B) WAVE SOLDERING TEMPERATURES ARE UNSUITABLE FOR PLASTIC PUSH-PINS AND PHASE-CHANGE TIM, SO VICOR TIM 40325 (PARKER CHOMERICS GEL8010) IS RECOMMENDED. APPLY A UNIFORM .003" (.076MM) LAYER OF TIM 40325 TO THE TOP AND BOTTOM SURFACE OF THE CHIP, OR TO THE CORRESPONDING HEATSINK SURFACES. PLACE BOTTOM-SIDE HEATSINK, CHIP, AND TOP-SIDE HEATSINK ON PCB. WITH A CUSTOM FIXTURE APPLY APPROX. 10 LBS LOAD TO THE TOP-SIDE HEATSINK AND THEN WAVE-SOLDER ALL PINS. REMOVE FIXTURE AND INSERT PLASTIC PUSH-PINS THROUGH BOTH HEATSINKS AND PCB.
- 4. CARE SHOULD BE TAKEN TO AVOID FULLY COMPRESSING THE PUSH-PIN SPRING DURING INSTALLATION AS THIS WOULD EXPOSE THE CHIP TO FORCES GREATER THAN THE RECOMMENDED LIMIT OF 3.1 LBF (13.8 N) PER PUSH-PIN.

(SELECT PROPER PUSH-PIN LENGTH FROM TABLE ON THIS DRAWING.)

	HEATSINK TYPE	P/N HEATSINK, TIM AND GROUND TAB	P/N HEATSINK W/GROUND TAB ONLY
SOLDERING METHOD (SEE NOTE 2)	_	2(A) HAND SOLDER ONLY	2(B) WITH VICOR 40325 THERMAL GEL
2702	DUAL 11MM	40518	40526
3623	DUAL 19MM	TBD	TBD

## HEATSINK SELECTION

PUSH-PINS W/SPRINGS (100/BAG)	COLOR	PCB THK NOMINAL RANGE	PCB THK MINIMUM	PCB THK MAXIMUM
32436	BLUE	1.143 MM TO 1.854 MM [.045"] TO [.073"]	1.041 MM [.041"]	2.057 MM [.081"]
32437	GRAY	1.880 MM TO 2.438 MM [.074"] TO [.096"]	1.676 MM [.066'']	2.692 MM [.106"]

## **PUSH-PIN SELECTION**

DRAWN BY	DATE			/ / / <b>V</b> /	COR	SWD
Robert Wasik	09/06/2013			<u> </u>		
UNLESS OTHERW DIMENSIONS ARE		ASS	Y DWC	ΠΙΔΙ	HEATSINE	( 3623
TOLERANCES ADECIMALS X.XX [X.X] = $\pm 0.01$ [0 X.XXX [X.XX] = $\pm 0.00$	ANGLES .25] ±1°	7100		DOME	TIEATOIN.	1 0020
DECIMALS X.XX [X.X] = ±0.01 [0	ANGLES 0.25] ±1° 05 [0.127]	SIZE	CAGE COD		TILATONI	REV
DECIMALS X.XX [X.X] = ±0.01 [0 X.XXX [X.XX] = ±0.00	ANGLES 0.25] ±1° 05 [0.127]		_		40190	