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REV.

DESCRIPTION

INTL

DATE

APVD

1

RELEASE PER E140060

REJH

01/17/14

REW

OPTION:
LOCATING/GROUNDING
PIN (40249)
SOLDERED TO PCB
(2) PL.
SEE NOTE 2

6123 CHIP SHOWN HERE

THERMAL
INTERFACE
SEE NOTE
3(A) OR 3(B)

OPTION:
SCREW (40578)
INSTALLED FROM
BOTTOM SIDE OF PCB.
TORQUE TO 3 IN-LBS.
(2) PL.
SEE NOTE 2

**BOTTOM HEATSINK
APPLICATION
SEE NOTE 2**

PUSH-PINS
SEE NOTE 3.4
AND SELECTION TABLE

GROUNDING TABS
SOLDERED TO PCB
SEE NOTE 3

**TOP HEATSINK
APPLICATION
SEE NOTES 2 & 3**

ASSEMBLED FRONT VIEW

3.20
[.126]

NOTES:

1. FOR PCB LAYOUT SEE VICOR APPLICATION DRAWING 40483.

2. OPTION: SOLDERED LOCATING/GROUNDING PIN 40249 CAN BE USED IN CONJUNCTION OR AS ALTERNATIVE TO SCREW 40578 INSTALLED FROM BACK OF PCB.

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.

(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 (OR VICOR WAVESOLDER FIXTURE 40416, 40417) 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. (SELECT PROPER PUSH-PIN LENGTH FROM TABLE ON THIS DRAWING.)

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.

5. ROHS COMPLIANT PER CST-0001 LATEST REVISION.

	HEATSINK TYPE	P/N ASSY HEATSINKS, TIM AND GROUND TAB	P/N ASSY HEATSINK W/GROUND TAB ONLY
SOLDERING METHOD (SEE NOTE 2)	-	2(A) HAND SOLDER ONLY	2(B) WITH VICOR 40325 THERMAL GEL
4623	DUAL 11MM	40519	40526
	DUAL 19MM	40408	-
6123	DUAL 11MM	40520	40528
	DUAL 19MM	40409	-

HEATSINK OPTIONS

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

Robert Wasik

7/12/2013

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE: INCH / (MM)

TOLERANCES ARE:

DECIMALS

ANGLES

XXX (X.X) = +0.01 (0.25)

XXXX (X.XX) = +0.005 (0.127)

±1°

THIRD ANGLE PROJECTION

DO NOT SCALE DRAWING

SIZE

CAGE CODE

DWG NO

REV

D

67131

40191

1

SCALE 3:1

SHEET 1 OF 1

VICOR

SWD

APP DWG, DUAL HEATSINK,
6123, 4623