

# SIL/SMT80C2

## 80 Amps

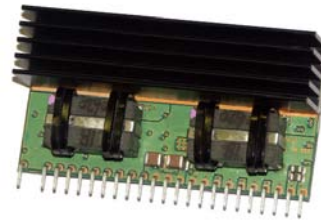
Total Power: 400 Watts  
Input Voltage: 4.7-13.8 V  
No. of Outputs: Single

### Special Features

- 80 A output rating
- Input voltage range: 4.7-13.8 V
- Output voltage range: 0.8375-5.1 V
- Current sharing
- Industry leading value
- Cost optimized design
- Excellent transient response
- Output voltage adjustability
- Pathway for future upgrades
- Supports silicon voltage migration
- Resulting in reduced design-in and qual time
- Over-temperature protection
- RoHS compliant

### Safety

- Designed to meet:
- UL, cUL 60950-1
  - (EN60950)



## Electrical Specifications

Output		
Voltage adjustability	See Note 5	0.8375-5.1 V
Output setpoint accuracy	1.0% trim resistors	±1.0%
Line regulation	Low line to high line	±0.2% max
Load regulation	Full load to min load	±0.5% max
Min/max load		0 A/80 A
Overshoot	At turn-on	0.5% max
Undershoot	At turn-off	100 mV max
Ripple and noise 5 Hz to 20 MHz	See Note 1	35 mV Vin=12, Vout=2.5 V
Transient response See Notes 1 and 2	Deviation Vin=12 V Vout=2.5 V	150 mV 20 μs recover to within regulation band
Input		
Input voltage		4.7-13.8 VDC
Input current	Minimum load Remote OFF	290 mA 30 mA
Input current (max)	See Note 3	60 A max @ Io max
Start-up time	Power up Remote ON/OFF	<12 ms <12 ms
General		
Efficiency	Vo=2.5 V, Vin=12 V, Iout=80 A	88%
Switching frequency	Fixed	500 kHz
Material flammability		UL94V-0
Weight		1.6 oz
MTBF (calculated)	12 V @ 40 °C 100% load Bellcore 332	3.7 Mhrs
Coplanarity		TBD

## Environmental Specifications

Thermal performance See Note 6	Operating ambient Non-operating ambient	0 °C to +85 °C -40 °C to +125 °C
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### Protection

Over-temp	Hiccup, non-latching
Short-circuit	Hiccup, non-latching
Over-voltage	Hiccup, non-latching

### Recommended System Capacitance

Input	See Note 7	0 μF
Output	See Note 8	0 μF

### Setting Output Voltage

Default output voltage: 0.8375 V

The output voltage may be adjusted with a resistor placed between Trim (Pin 1) and (-)Trim (Pin 5).

The formula for calculating the value of this resistor is:

$$R_{\text{Trim}} \text{ (k)} = 1.675 / (V_{\text{out}} - 0.8375)$$

### Pin Assignments

Pin Number	Function	Pin Number	Function
1	Trim	14	Vin
2	No Pin	15	Vout
3	Ground	16	Vout
4	Power Good	17	Ground
5	(-) Trim	18	Vout
6	Ishare	19	Ground
7	Ground	20	Vout
8	Ground	21	Ground
9	Enable	22	Vout
10	Rem Sense (-)	23	Ground
11	Rem Sense (+)	24	Vout
12	Vin	25	*Mech Support
13	Vin	26	*Mech Support

\*For Horizontal mounts only

#### Notes:

- Measured as per recommended system capacitance.
- $di/dt = 10 \text{ A} / \mu\text{s}$ ,  $V_{\text{in}} = \text{Nom}$ ,  $T_c = 25 \text{ }^\circ\text{C}$ , load change = 0.50  $I_o$  max. and vice versa.
- External fusing is recommended.
- Measured with external filter.
- Uses external resistor from trim pin to (-) trim pin.
- Airflow dependent, 300 LFM minimum required.
- No capacitor needed for ripple current capability.
- No capacitor needed for stability
- TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local representative for details.
- NOTICE: Some models do not support all options. Please contact your local Emerson Network Power representative or use the on-line model number search tool at <http://www.powerconversion/products.htm> to find a suitable alternative.

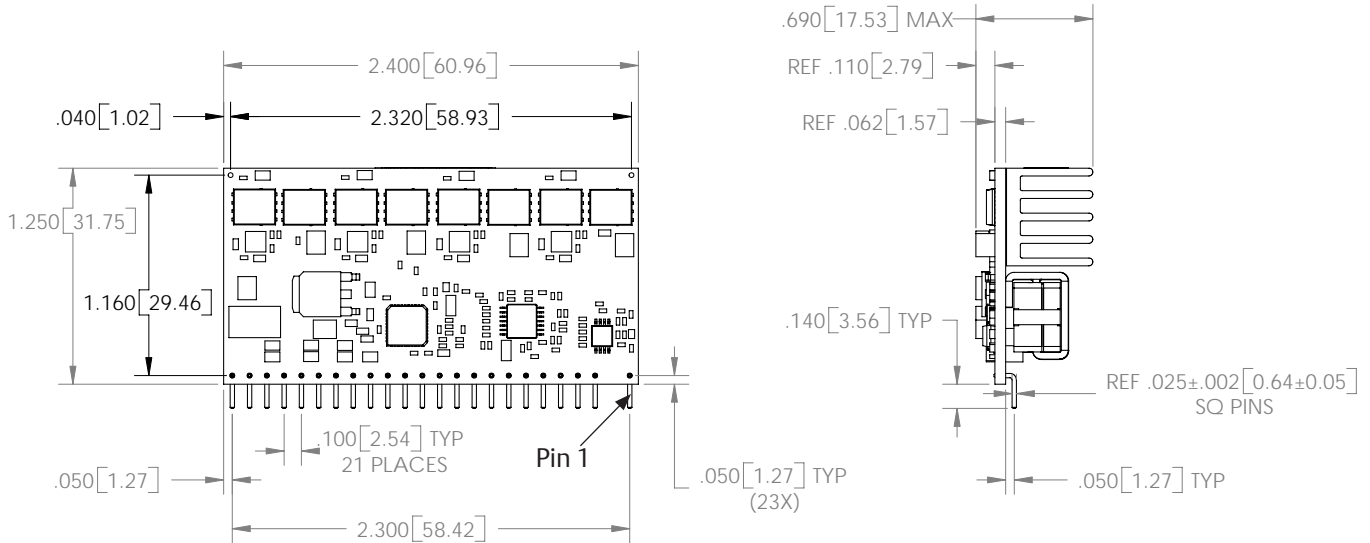
## Part Number System with Options

Product Family	Rated Output Current	Performance	Generation	Input Voltage	Output Voltage	Mounting Option	Custom Options	RoHS Compliance <sup>(9)</sup>
<b>SIL</b>	<b>80</b>	<b>C</b>	<b>2</b>	<b>- 00</b>	<b>SADJ</b>	<b>- X</b>	<b>X</b>	<b>J</b>
Product Family SIL = Single In Line	Rated Output Current 80 = 80 A	Performance C = Cost Optimized	Generation 2 = Increased Current Density	Input Voltage 00 = 4.7-13.8 V	Output Voltage Single Adjustable Output	Mounting Option H = Horizontal V = Vertical	Custom Options Blank = 3.05mm pin 3 = 3.50mm pin (horizontal mount only)	RoHS Compliance J = Pb-free (RoHS 6/6 compliant)

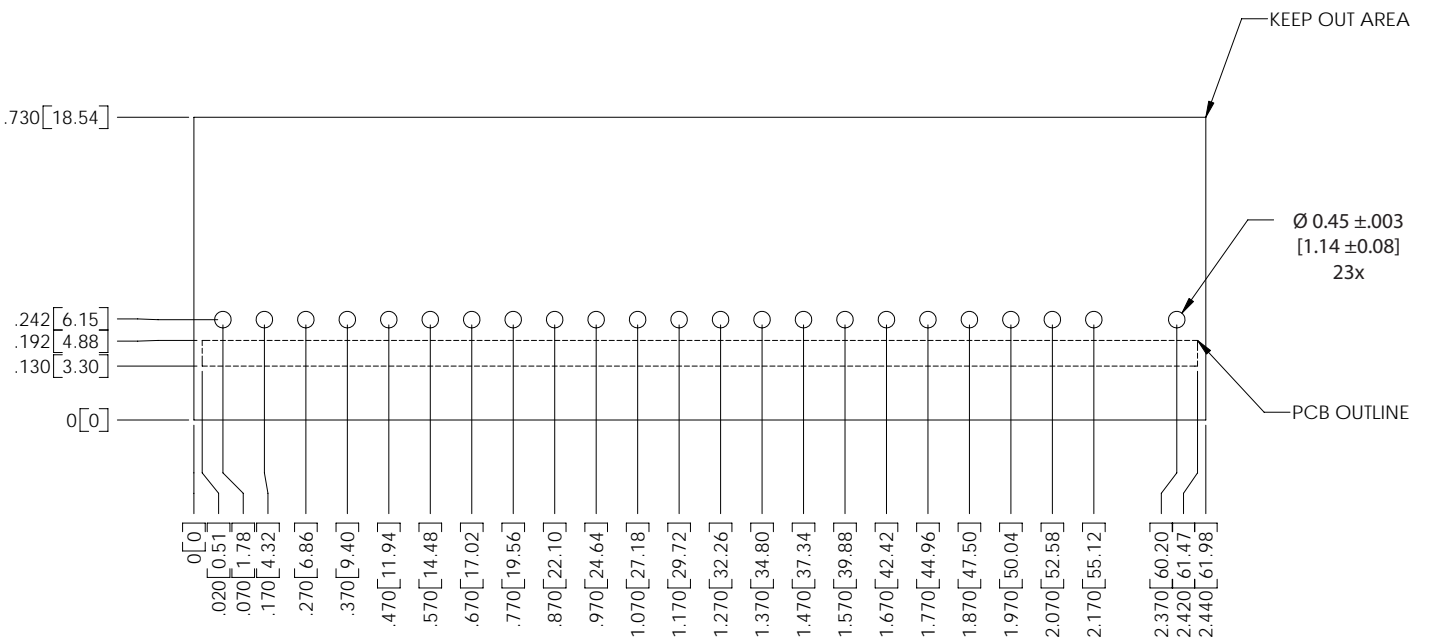
Product Family	Rated Output Current	Performance	Generation	Input Voltage	Output Voltage	Mounting Option	Custom Options	RoHS Compliance <sup>(9)</sup>
<b>SMT</b>	<b>80</b>	<b>C</b>	<b>2</b>	<b>- 00</b>	<b>SADJ</b>	<b>X</b>	<b>X</b>	<b>J</b>
Product Family SMT = Surface Mount	Rated Output Current 80 = 80 A	Performance C = Cost Optimized	Generation 2 = Increased Current Density	Input Voltage 00 = 4.7-13.8 V	Output Voltage Single Adjustable Output	Mounting Option Blank = Horizontal -V = Vertical	Custom Options Blank = Standard	RoHS Compliance J = Pb-free (RoHS 6/6 compliant)

# Mechanical Drawings

## SIL80C2-00SADJ-VJ

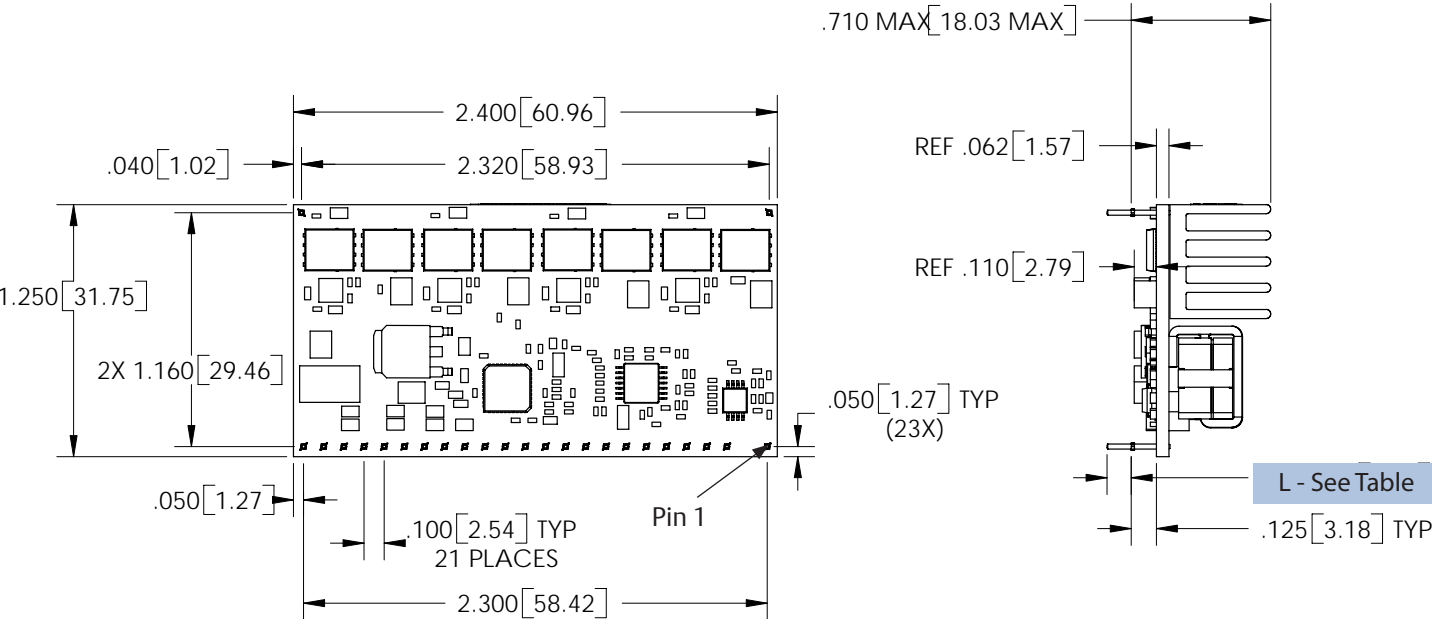


## Footprint



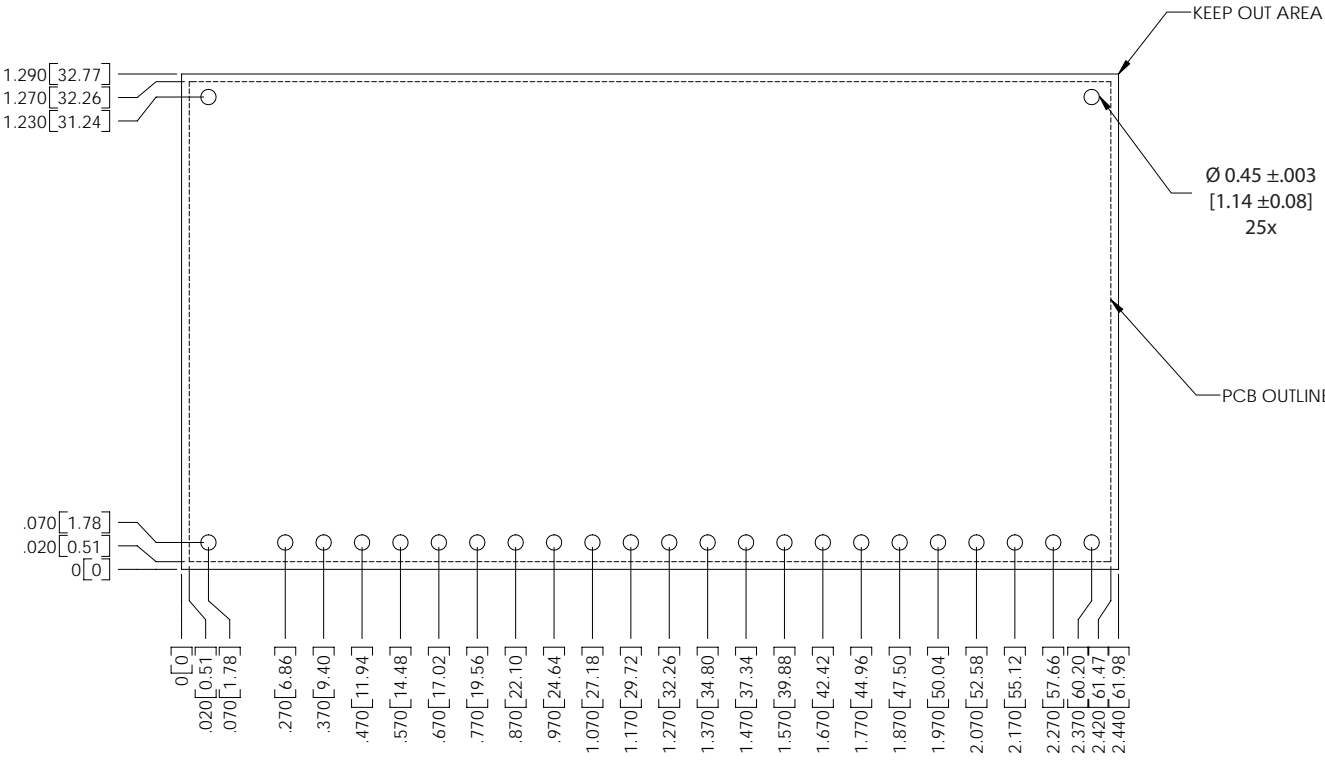
# Mechanical Drawings

## SIL80C2-00SADJ-HJ/H3J



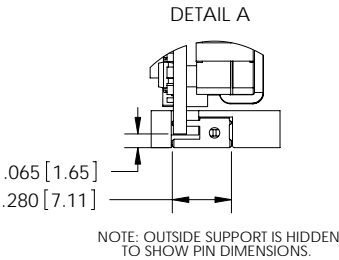
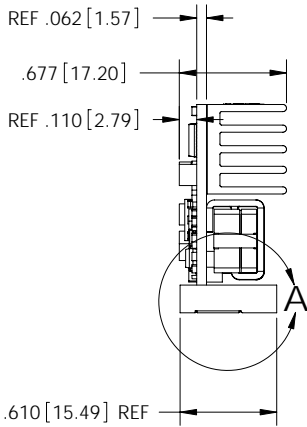
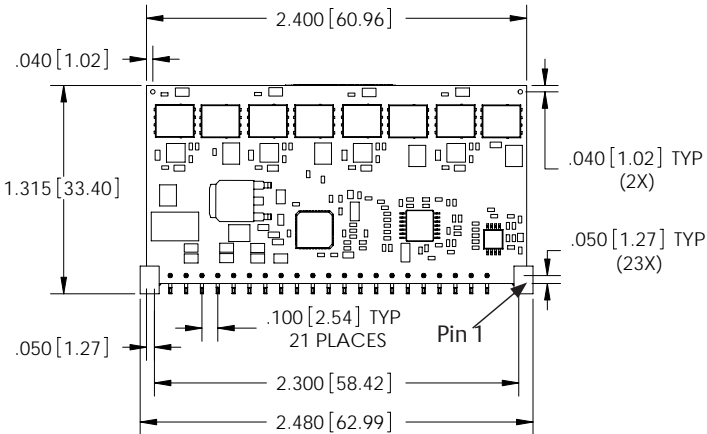
Model	L Dimension
SIL80C2-00SADJ-HJ	REF .120 [3.05]
SIL80C2-00SADJ-H3J	REF .138 [3.50]

## Footprint

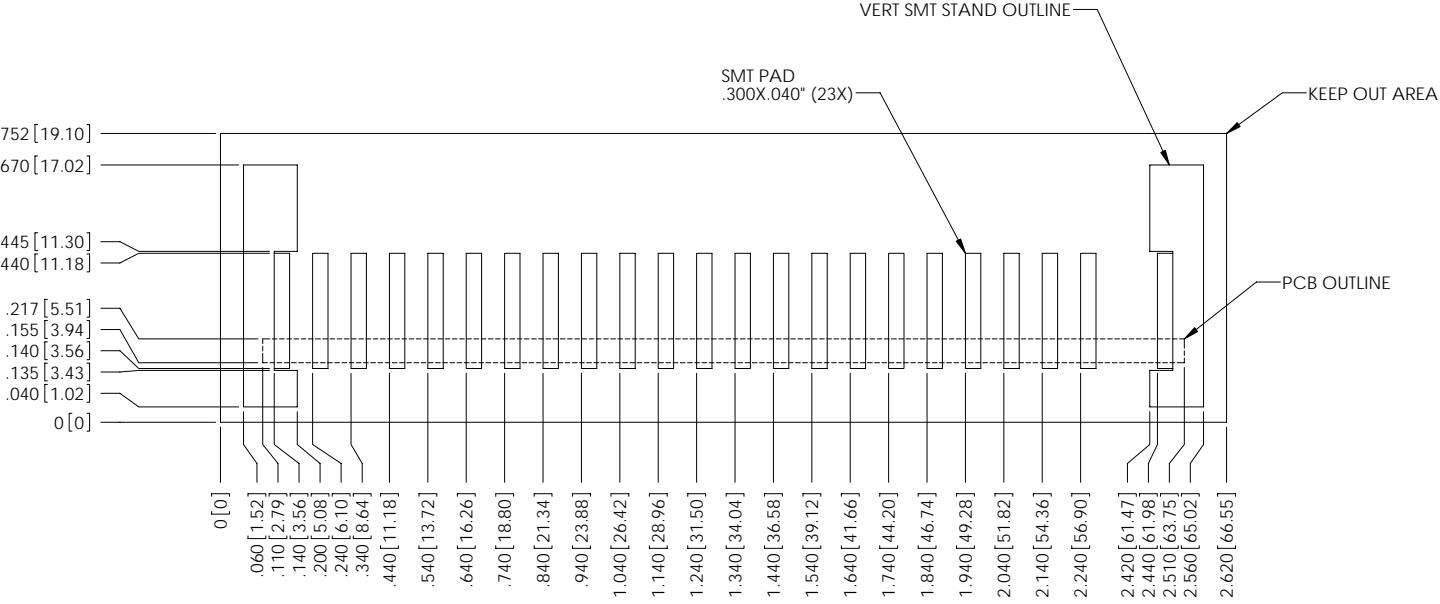


# Mechanical Drawings

## SMT80C2-00SADJ-VJ

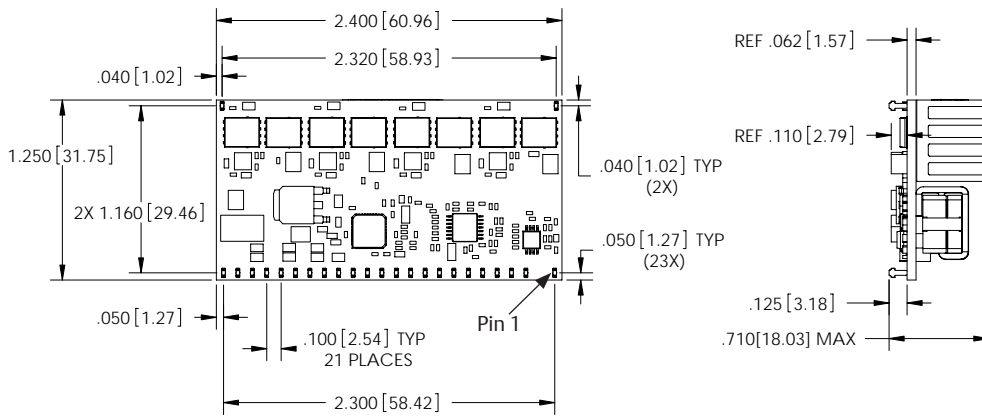


## Footprint

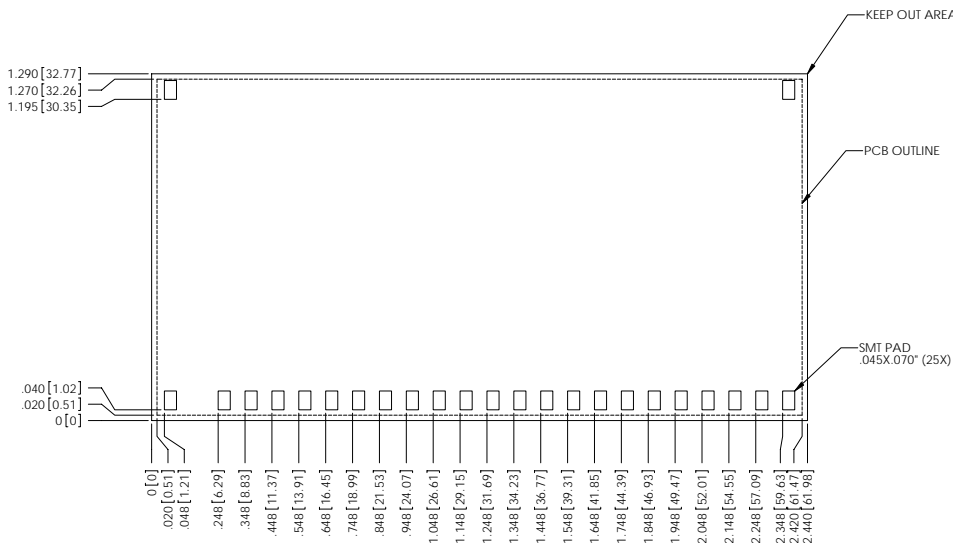


## Mechanical Drawings (cont'd)

### SMT80C2-00SADJJ



### Footprint



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