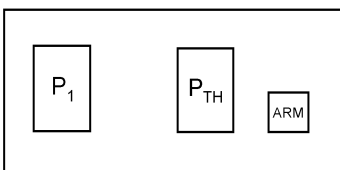


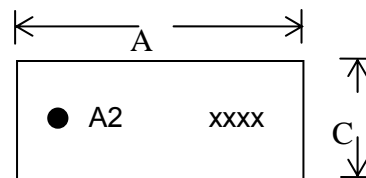
## Specification Status: Preliminary

### PIN CONFIGURATION AND DESCRIPTION:

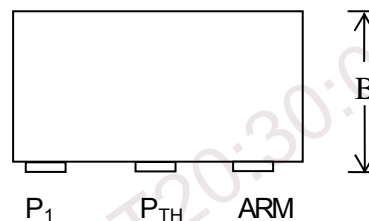
#### Pin Configuration (Bottom View of Device)



#### (Top View of Device)



#### (Side View of Device)



Note:  
A2 is product code  
xxxx is Batch Code  
P1 indicated by inmolded mark

**TABLE 1. DIMENSIONS:**

	A		B		C	
	MIN	MAX	MIN	MAX	MIN	MAX
mm	11.60	12.00	6.00	6.35	5.25	5.50
in:	(0.46)	(0.47)	(0.24)	(0.25)	(0.21)	(0.22)

**TABLE 2. ABSOLUTE MAX RATINGS:**

Absolute Max Ratings		Max	Units
Max DC Open Voltage <sup>1</sup>		32	V <sub>DC</sub>
Max DC Interrupt Current <sup>1</sup>	@ 16 V <sub>DC</sub>	200	A
	@ 24 V <sub>DC</sub>	130	
	@ 32 V <sub>DC</sub>	100	
ESD rating (Human Body Model)		25	KV
Max Reflow Temperature (pre-arming)		260	°C
Operating temperature limits, post-arming, non-opening		-55 +175	°C

1. Performance capability at these conditions can be influenced by board design. Performance should be verified in the user's system.

**TABLE 3. PERFORMANCE CHARACTERISTICS (Typical unless otherwise specified):**

Resistance and Open Characteristics P <sub>1</sub> to P <sub>TH</sub>		Min	Typ	Max	Units
R <sub>PP</sub> (Resistance from P <sub>1</sub> to P <sub>TH</sub> )	@ 23+/-3°C @ 175+/-3°C		0.6 0.8	0.8 1.0	mΩ
Operating Voltage			32		V <sub>DC</sub>
Open Temperature, post-arming	I <sub>PP</sub> = 0	200	205	210	°C
Thermal Resistance: Junction to Ambient <sup>2</sup>	See note 2		150		°C/W
Thermal Resistance: Junction to Case	Case = P <sub>TH</sub> pad		0.5		°C/W
Installation dependent Operating Current, post-arming <sup>2,3</sup>	@ 23+/-3°C @ 100+/-3°C @ 175+/-3°C	32	34 28 10		A
Moisture Sensitivity Level Rating <sup>4</sup>			1		

- Results obtained on 44.4mm x 57.2mm x 1.6mm single layer FR4 boards with 2oz Cu traces, a 645 sq. mm, 2oz Cu heat spreader connected to the P<sub>TH</sub> pad, and a 387 sq. mm Cu heat spreader connected to the P<sub>1</sub> pad of the RTP device. (See RTP test board drawing in the RTP Datasheet). Results are highly installation-dependent. Users should confirm for their own applications.
- Operating current is measured on the RTP test board (see the RTP Datasheet) at the specified temperature. It is a highly installation dependent value. Users should confirm for their own applications.
- As per JEDEC J-STD-020C

**TABLE 4. ARMING CHARACTERISTICS:**

Arming Characteristics ARM		Min	Typ	Max	Units
Arming Type		Electronically Armed			
R <sub>ARM</sub> (Resistance from ARM to P <sub>1</sub> or P <sub>TH</sub> )	Pre-Arming		300		mΩ
	Post-Arming	10			KΩ
Arming Current (I <sub>ARM</sub> ) <sup>5</sup>	@ 23 +/-3°C	2		5	A
Arming Time (@23 +/-3°C) <sup>5</sup>	@ 2A		0.20		Sec
	@ 5A		0.02		

- Results obtained on 44.4mm x 57.2mm x 1.6mm single layer FR4 boards with 2oz, Cu traces, a 645 sq. mm 2oz Cu heat spreader connected to the P<sub>TH</sub> pad, and a 387 sq. mm Cu heat spreader connected to the P<sub>1</sub> pad of the RTP device. (See RTP test board drawing in the RTP Datasheet.) Results are highly installation dependent. Users should confirm for their own applications.

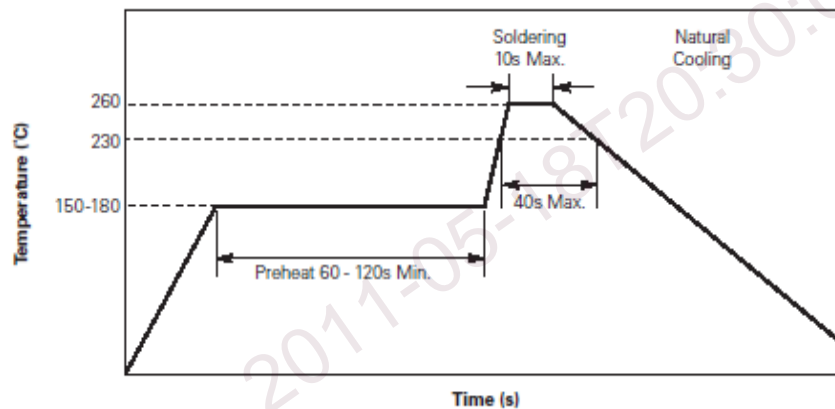
308 Constitution Drive  
Menlo Park, CA USA  
www.circuitprotection.com

## Solder Reflow Recommendation:

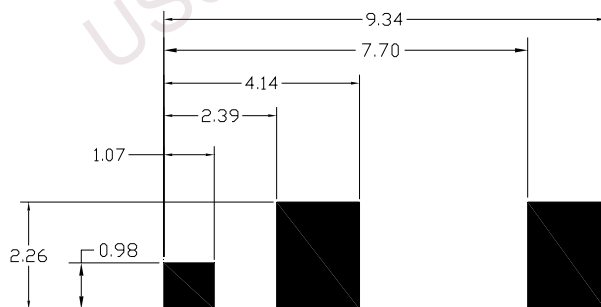
### Classification Reflow Profiles

Profile Feature	Pb-Free Assembly
Average ramp up rate ( $T_{S_{MAX}}$ to $T_p$ )	3°C/second max.
<b>Preheat</b>	
• Temperature min. ( $T_{S_{MIN}}$ )	150°C
• Temperature max. ( $T_{S_{MAX}}$ )	200°C
• Time ( $t_{S_{MIN}}$ to $t_{S_{MAX}}$ )	60-180 seconds
<b>Time maintained above:</b>	
• Temperature ( $T_L$ )	217°C
• Time ( $t_L$ )	60-150 seconds
<b>Peak/Classification temperature (<math>T_p</math>)</b>	260°C
<b>Time within 5°C of actual peak temperature</b>	
Time ( $t_p$ )	20-40 seconds
<b>Ramp down rate</b>	6°C/second max.
<b>Time 25°C to peak temperature</b>	8 minutes max.

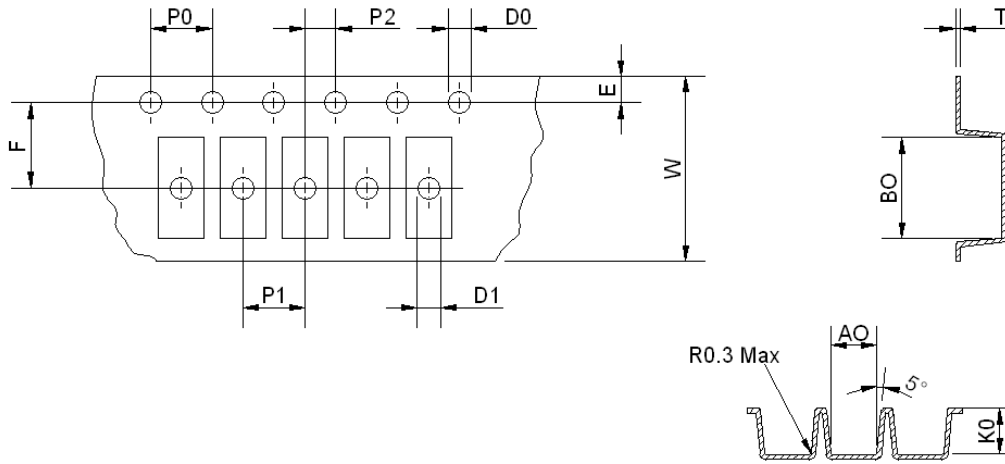
**Note:** All temperatures refer to topside of the package, measured on the package body surface.



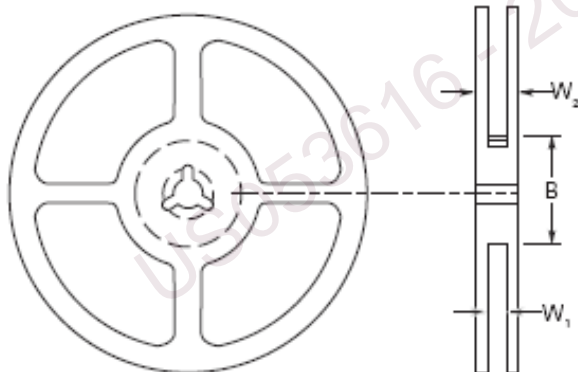
## Recommended Pad Layout: mm



## Package Information:



	<b>E</b>	<b>F</b>	<b>W</b>	<b>P1</b>	<b>P0</b>	<b>P2</b>
mm	1.75±0.10	11.50±0.10	24.00±0.30	12.00±0.10	4.00±0.10	2.00±0.10
(in)	(0.069±0.004)	(0.453±0.004)	(0.945±0.012)	(0.472±0.004)	(0.157±0.004)	(0.079±0.004)
	<b>D0</b>	<b>D1</b>	<b>T</b>	<b>A0</b>	<b>BO</b>	<b>K0</b>
mm	1.50+0.10/-0.00	1.50±0.10	0.46±0.046	5.70±0.18	12.40±0.18	6.50±0.18
(in)	(0.059+0.004/-0.000)	(0.059±0.004)	(0.018±0.002)	(0.224±0.007)	(0.488±0.007)	(0.256±0.007)



	<b>B</b>	<b>W<sub>1</sub></b>	<b>W<sub>2</sub> Max</b>
mm	102.0 ± 2.0	24	29
(inch)	(4.0 ± 0.079)	(0.945)	(1.14)

## Reflowable Thermal Protection Device

**PRODUCT: RTP200R060SA**

DOCUMENT: SCD28104  
REV LETTER: A  
REV DATE: MAY 17, 2011  
PAGE NO.: 5 OF 5

Precedence: This specification takes precedence over documents referenced herein.  
Effectivity: Reference documents shall be the issue in effect on the date of invitation for bid.

### MATERIALS INFORMATION

#### RoHS Compliant

Directive 2002/95/EC  
Compliant

#### ELV Compliant

Directive 2000/53/EC  
Compliant

#### Pb-Free



#### Halogen Free\*



\* Halogen Free refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm.

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