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

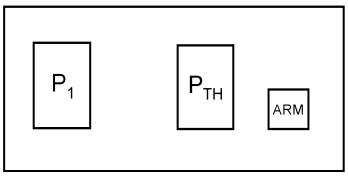
Reflowable Thermal Protection Device

PRODUCT: RTP200R060SA

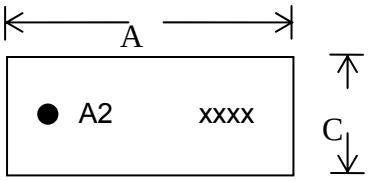
Specification Status: Released

PIN CONFIGURATION AND DESCRIPTION:

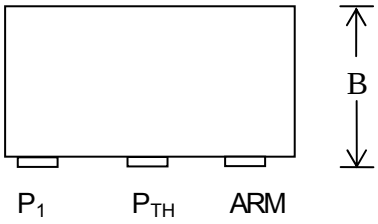
Pin Configuration
(Bottom View of Device)



(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 [1]		32	V_{DC}
Max DC Interrupt Current [1]	@ 16 V_{DC}	200	A
	@ 24 V_{DC}	130	
	@ 32 V_{DC}	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_1 to P_{TH}		Min	Typ	Max	Units
R_{PP} (Resistance from P_1 to P_{TH})	@ 23+/-3°C @ 175+/-3°C		0.6 0.8	0.8 1.2	mΩ
Operating Voltage			32		V_{DC}
Open Temperature, post-arming	I_{PP} = 0	196	205	213	°C
Thermal Resistance: Junction to Case	Case = P_{TH} pad		0.5		°C/W
Installation dependent Operating Current, post-arming [2, 3]	@ 23+/-3°C @ 100+/-3°C @ 175+/-3°C	32 27	34 28 10		A
Moisture Sensitivity Level Rating [4]			1		

2. 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_{TH} pad, and a 387 sq. mm Cu heat spreader connected to the P_1 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.
3. 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.
4. As per JEDEC J-STD-020C

TABLE 4. ARMING CHARACTERISTICS:

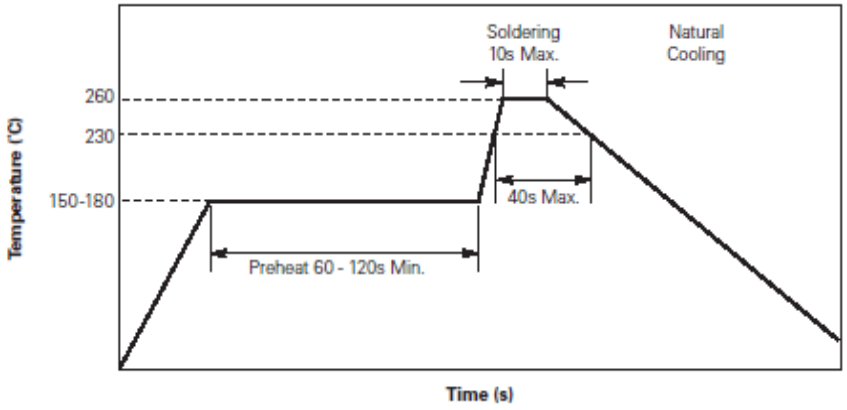
Arming Characteristics ARM		Min	Typ	Max	Units
Arming Type		Electronically Armed			
R_{ARM} (Resistance from ARM to P_1 or P_{TH})	Pre-Arming		300		mΩ
	Post-Arming	10			KΩ
Arming Current (I_{ARM}) [5]	@ 23 +/-3°C	2		5	A
Arming Time (@23 +/-3°C) [5]	@ 2A @ 5A		0.10 0.01		Sec

5. 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_{TH} pad, and a 387 sq. mm Cu heat spreader connected to the P_1 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.

Solder Reflow Recommendation:

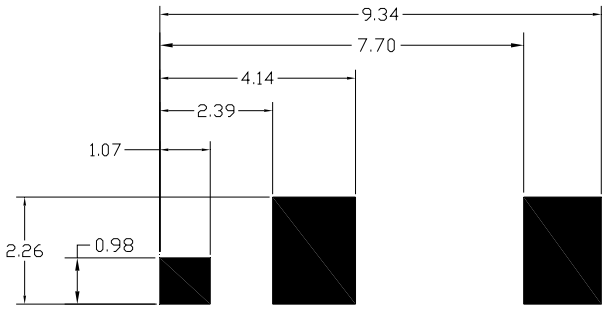
Classification Reflow Profiles	
Profile Feature	**Pb-Free Assembly**
Average ramp up rate (Ts_{MAX} to Tp)	3°C/second max.
Preheat	
• Temperature min. (Ts_{MIN})	150°C
• Temperature max. (Ts_{MAX})	200°C
• Time (ts_{MIN} to ts_{MAX})	60-180 seconds
Time maintained above:	
• Temperature (T_L)	217°C
• Time (t_L)	60-150 seconds
Peak/Classification temperature (Tp)	260°C
Time within 5°C of actual peak temperature	
Time (tp)	20-40 seconds
Ramp down rate	6°C/second max.
Time 25°C to peak temperature	8 minutes max.

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



Recommended Pad Layout:

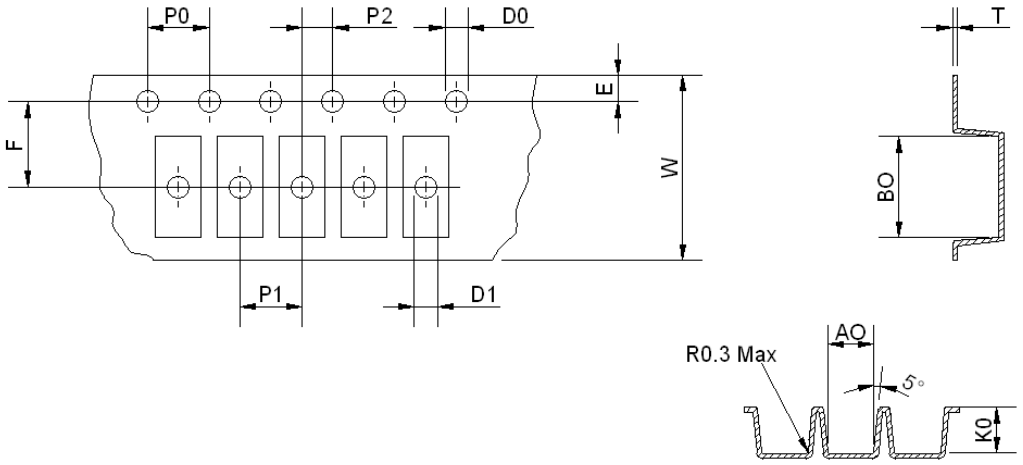
mm



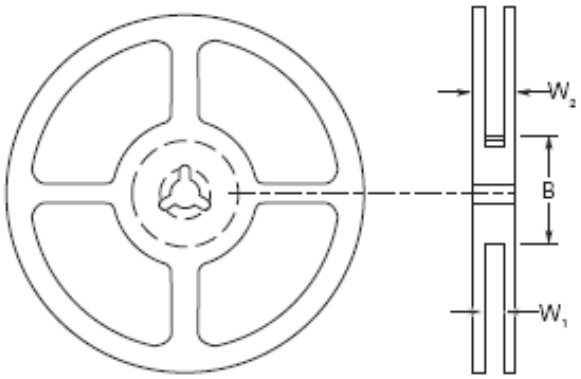
308 Constitution Drive
Menlo Park, CA USA
www.circuitprotection.com

Reflowable Thermal Protection Device

Package Information:



	E	F	W	P1	P0	P2
mm (in)	1.75±0.10 (0.069±0.004)	11.50±0.10 (0.453±0.004)	24.00±0.30 (0.945±0.012)	12.00±0.10 (0.472±0.004)	4.00±0.10 (0.157±0.004)	2.00±0.10 (0.079±0.004)
	D0	D1	T	A0	B0	K0
mm (in)	1.50+0.10/-0.00 (0.059+0.004/-0.000)	1.50±0.10 (0.059±0.004)	0.46±0.046 (0.018±0.002)	5.70±0.18 (0.224±0.007)	12.40±0.18 (0.488±0.007)	6.50±0.18 (0.256±0.007)



	B	W_1	W_2 Max
mm (inch)	102.0 ± 2.0 (4.0 ± 0.079)	24 (0.945)	29 (1.14)

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

Reflowable Thermal Protection Device

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*
HF

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

Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Tyco Electronics Corporation and its affiliates in the TE Connectivity Ltd. group of companies ("TE") reserves the right to change or update, without notice, any information contained in this publication; to change, without notice, the design, construction, processing, or specification of any product; and to discontinue or limit production or distribution of any product. This publication supersedes and replaces all information previously supplied. Without expressed or written consent by an officer of TE, TE does not authorize the use of any of its products as components in nuclear facility applications, aerospace, or in critical life support devices or systems. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. TE' only obligations are those in the TE Standard Terms and Conditions of Sale and in no case will TE be liable for any incidental, indirect, or consequential damages arising from the sale, resale, use, or misuse of its products.

© 2011 Tyco Electronics Corporation, a TE Connectivity Ltd. company. All rights reserved.

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:
moschip.ru
moschip.ru_4
moschip.ru_6
moschip.ru_9