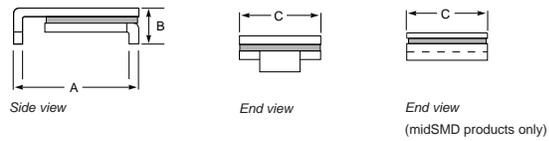


This product line is also designed for surface-mount applications. The products range in hold currents from 0.3 Amps to 3.0 Amps and voltages from 6 Volts to 60 Volts. These devices are suited for high-density board applications in computer and computer peripheral products, telecommunications, and general electronics applications. They are designed to be reflowed onto a printed circuit board using standard surface-mount processes.

Figure 4



### midSMD Size: 5050 (mm), 2018 (mils)

Part number	I <sub>H</sub> <sup>+</sup> (A)	V max. (Vdc)	I max. (A)	R <sub>Typ</sub> (Ω)	R <sub>1</sub> max. (Ω)	Agency recognition	Dimensions (millimeters/inches)			Fig.
							A (max.)	B (max.)	C (max.)	
SMD030-2018	0.3	60	20	1.40	2.30	UL	5.44 (0.214)	1.78 (0.07)	4.93 (0.194)	4
<b>New</b> SMD050-2018	0.55	57	10	—	1.0	UL, TÜV, CSA	5.44 (0.214)	1.78 (0.07)	4.93 (0.194)	4
SMD100-2018	1.10	15	40	0.25	0.400	UL, TÜV, CSA	5.44 (0.214)	1.52 (0.06)	4.93 (0.194)	4
SMD150-2018	1.50	15	40	0.13	0.180	UL, TÜV, CSA	5.44 (0.214)	1.52 (0.06)	4.93 (0.194)	4
SMD200-2018	2.00	6	40	0.07	0.100	UL, TÜV, CSA	5.44 (0.214)	1.52 (0.06)	4.93 (0.194)	4

### SMD Size: 7555 (mm), 2920 (mils)

Part number	I <sub>H</sub> <sup>+</sup> (A)	V max. (Vdc)	I max. (A)	R <sub>Typ</sub> (Ω)	R <sub>1</sub> max. (Ω)	Agency recognition	Dimensions (millimeters/inches)			Fig.
							A (max.)	B (max.)	C (max.)	
SMD030	0.30	60	10	3.0	4.800	UL, TÜV, CSA	7.98 (0.314)	3.18 (0.125)	5.44 (0.214)	4
SMD050	0.50	60	10	0.87	1.400	UL, TÜV, CSA	7.98 (0.314)	3.18 (0.125)	5.44 (0.214)	4
SMD075	0.75	30	40	0.67	1.000	UL, TÜV, CSA	7.98 (0.314)	3.18 (0.125)	5.44 (0.214)	4
SMD100	1.10	30	40	0.30	0.480	UL, TÜV, CSA	7.98 (0.314)	3.00 (0.118)	5.44 (0.214)	4
SMD100/33	1.10	33	40	0.27	0.410	UL, TÜV, CSA	7.98 (0.314)	3.00 (0.118)	5.44 (0.214)	4
SMD125	1.25	15	40	0.16	0.250	UL, TÜV, CSA	7.98 (0.314)	3.00 (0.118)	5.44 (0.214)	4
SMD260	2.60	6	40	0.05	0.075	UL, TÜV, CSA	7.98 (0.314)	3.00 (0.118)	5.44 (0.214)	4
SMD260-RB	2.60	6	40	0.055	0.075	UL, TÜV, CSA	7.98 (0.314)	3.00 (0.118)	5.44 (0.214)	4
SMD300	3.00	6	40	0.033	0.048	UL, TÜV, CSA	7.98 (0.314)	3.00 (0.118)	5.44 (0.214)	4

### SMD2 Size: 8763 (mm), 3425 (mils)

Part number	I <sub>H</sub> <sup>+</sup> (A)	V max. (Vdc)	I max. (A)	R <sub>Typ</sub> (Ω)	R <sub>1</sub> max. (Ω)	Agency recognition	Dimensions (millimeters/inches)			Fig.
							A (max.)	B (max.)	C (max.)	
SMD150	1.50	15	40	0.16	0.250	UL, TÜV, CSA	9.40 (0.370)	3.00 (0.118)	6.71 (0.264)	4
SMD150/33	1.50	33	40	0.15	0.230	UL, TÜV, CSA	9.40 (0.370)	3.00 (0.118)	6.71 (0.264)	4
SMDH160	1.60	16	70	0.10	0.150	—	9.40 (0.370)	3.00 (0.118)	6.71 (0.264)	4
SMD185	1.80	33	40	0.12	0.165	UL, TÜV, CSA	9.40 (0.370)	3.00 (0.118)	6.71 (0.264)	4
SMD200	2.00	15	40	0.09	0.125	UL, TÜV, CSA	9.40 (0.370)	3.00 (0.118)	6.71 (0.264)	4
SMD250	2.50	15	40	0.06	0.085	UL, TÜV, CSA	9.40 (0.370)	3.00 (0.118)	6.71 (0.264)	4

## Definitions

**$I_H$**  = Hold current—maximum current at which the device will not trip under specified conditions.

**$I_{max}$**  = The highest fault current that can safely be used to trip a PolySwitch device under specified conditions.

**$V_{max}$**  = The highest voltage that can safely be dropped across a PolySwitch device in its tripped state under specified fault conditions.

**$R_1max$**  = Maximum device resistance under specified conditions measured 1 hour post trip or post reflow.

**$R_a max$**  = Maximum device resistance under automotive conditions specified in PS400 measured 1 hour after stress has been removed.

**$R_{max}$ . Initial** = Maximum device resistance under specified conditions as supplied.

**Trip Current** = Minimum current at which a device will trip under specified conditions.

### WARNING!

- Operation beyond maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- These devices are intended for protection against occasional overcurrent or overtemperature fault conditions, and should not be used when repeated fault conditions are anticipated.
- TR and TS devices are not intended for continuous utility line voltage such as 120/220 V or 240 V.

## Agency approvals for PolySwitch devices:

PolySwitch devices, where appropriate, have been tested and have gained the following safety agency approvals:

- UL Component Recognition in Category XGPU2, Thermistor Type Devices
- CSA Component Acceptance Class 9073 32, Thermistors—PTC Type
- TÜV Rheinland Certification, PTC Resistors



## Voltage Rating for Telecom Devices

For Raychem Circuit Protection telecom devices (TC, TGC, TRx, TSx) there are two applicable voltage ratings. These are  **$V_{max}$ . Operating** and  **$V_{max}$ . Interrupt**. To help understand the nature of these two different voltage ratings the following definitions are provided:

**$V_{max}$ . Interrupt:** Under specified conditions this is the highest voltage that can be applied to the device at the maximum current. Devices have been designed to trip safely under higher power level cross conditions, as listed above, to assist equipment in meeting the appropriate industry conditions.

**$V_{max}$ . Operating:** For telecom devices this is the voltage we have used to obtain component recognition under UL1434. Most Raychem Circuit Protection devices (TC, TGC, TRx, TSx) are certified at 60V but can withstand higher  $V_{max}$ . TR600 and TS600 product families are certified at 250V but can withstand higher  $V_{max}$ . Interrupt conditions as noted above.

For the purposes of this brochure we have included in the table of electrical ratings the more applicable  $V_{max}$ . Interrupt value.

Standard PolySwitch product families include RGE, RHE, RTE, RUE, RXE, SMD, nanoSMD, microSMD, miniSMD, TS, BBR, TR, LR4, LTP, SRP, TAC, VTP, VLR, VLP, AHR, AGR, ASMD, and AHS devices. In addition, special devices, such as speaker devices (SPK), terminal devices (TD) and custom chip devices, can be manufactured to meet performance requirements that could be outside of the performance band of the standard products listed in this short-form catalog. Please contact a Raychem Circuit Protection Customer Service representative to discuss your special product needs.