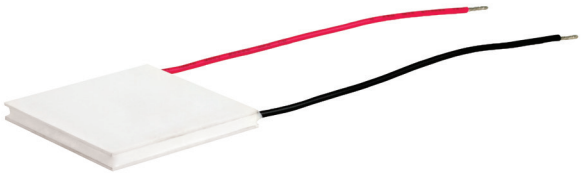
CUDEVICES

SERIES: CP50 | **DESCRIPTION:** PELTIER MODULE

FEATURES

- arcTEC™ structure on select models
- solid state device
- precise temperature control
- quiet operation



RoHS

MODEL	input voltage[1] max (Vdc)	input current[2] max (A)	internal resistance[3] typ (Ω±10%)	output Qmax[4] T_h=27°C (W)	output Qmax[4] T_h=50°C (W)	output ΔTmax[5] T_h=27°C (°C)	output ΔTmax[5] T_h=50°C (°C)
CP50141	2.1	5.0	0.31	5.5	6.1	68	75
CP50241	3.8	5.0	0.56	10.0	11.1	68	75
CP50301541	4.2	5.0	0.63	11	12.3	68	75
CP5030395[6]	11.8	5.0	1.74	35.0	38.0	70	77
CP50341[6]	8.6	5.0	1.29	23.0	25.7	70	77
CP50441[6]	15.4	5.0	2.3	41.0	45.8	70	77

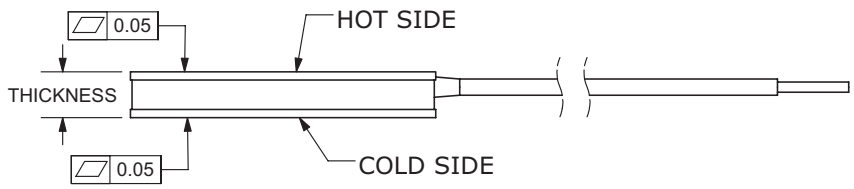
Notes:
1. Maximum voltage at ΔT max and T_h=27°C
2. Maximum current to achieve ΔT max
3. Measured by AC 4-terminal method at 25°C
4. Maximum heat absorbed at cold side occurs at I_{max}, V_{max}, and ΔT=0°C
5. Maximum temperature difference occurs at I_{max}, V_{max}, and Q=0W (ΔT max measured in a vacuum at 1.3 Pa)
6. Designed with arcTEC™ structure

SPECIFICATIONS

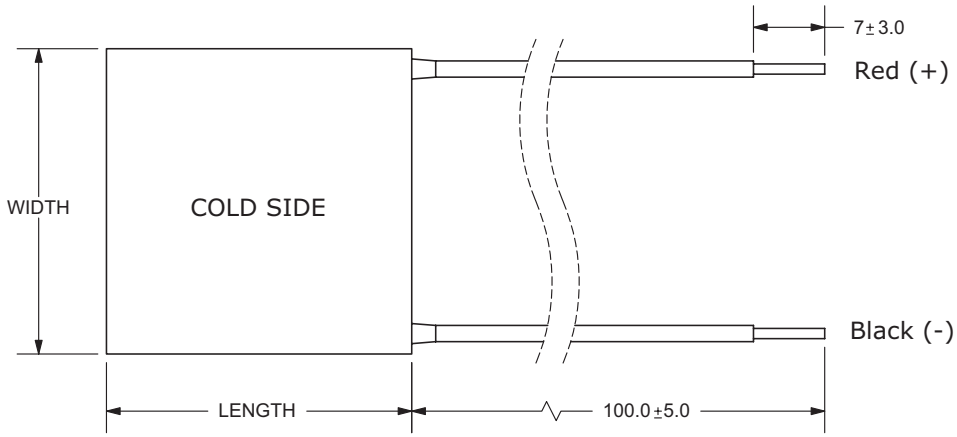
parameter	conditions/description	min	typ	max	units
solder melting temperature	connection between thermoelectric pairs	235			°C
assembly compression				1	MPa
RoHS	yes				

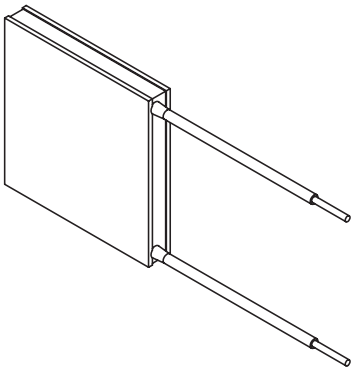
MECHANICAL DRAWING

units: mm



	MATERIAL	PLATING
ceramic plate	96% AL_2O_3	
wire leads	20 AWG	tin
sealer	silicon rubber 703 RTV (between cold and hot side plates)	
joint cover	silicon rubber 703 RTV	
marking	P/N & S/N printed on cold side surface	

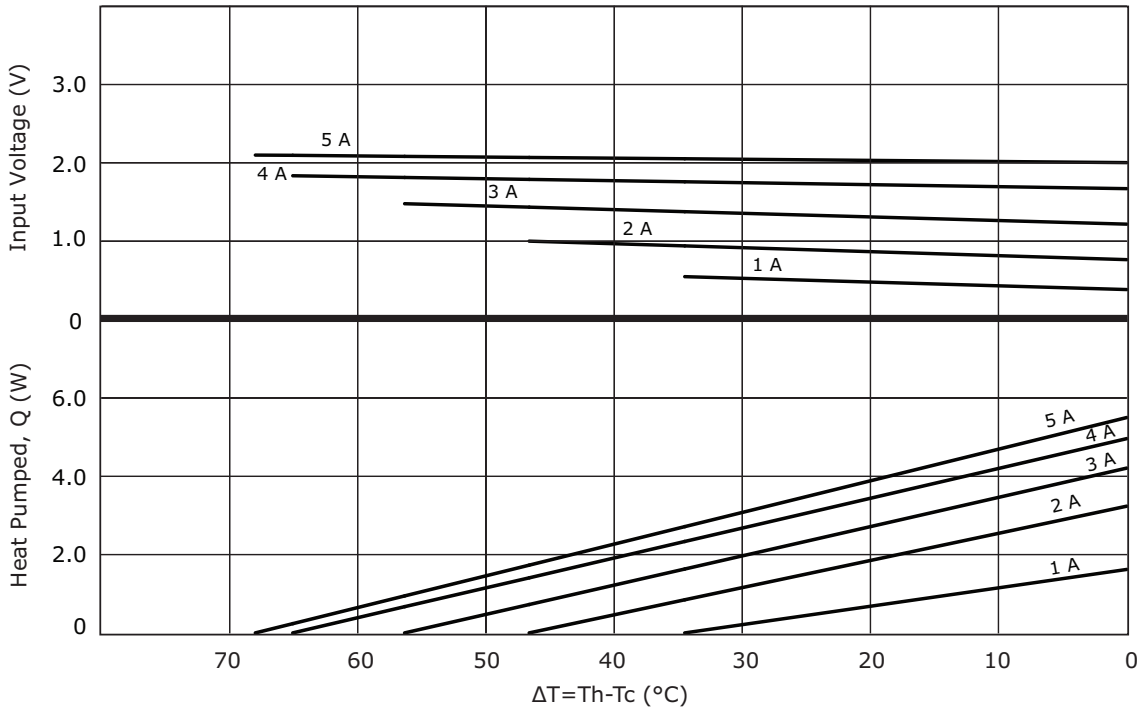




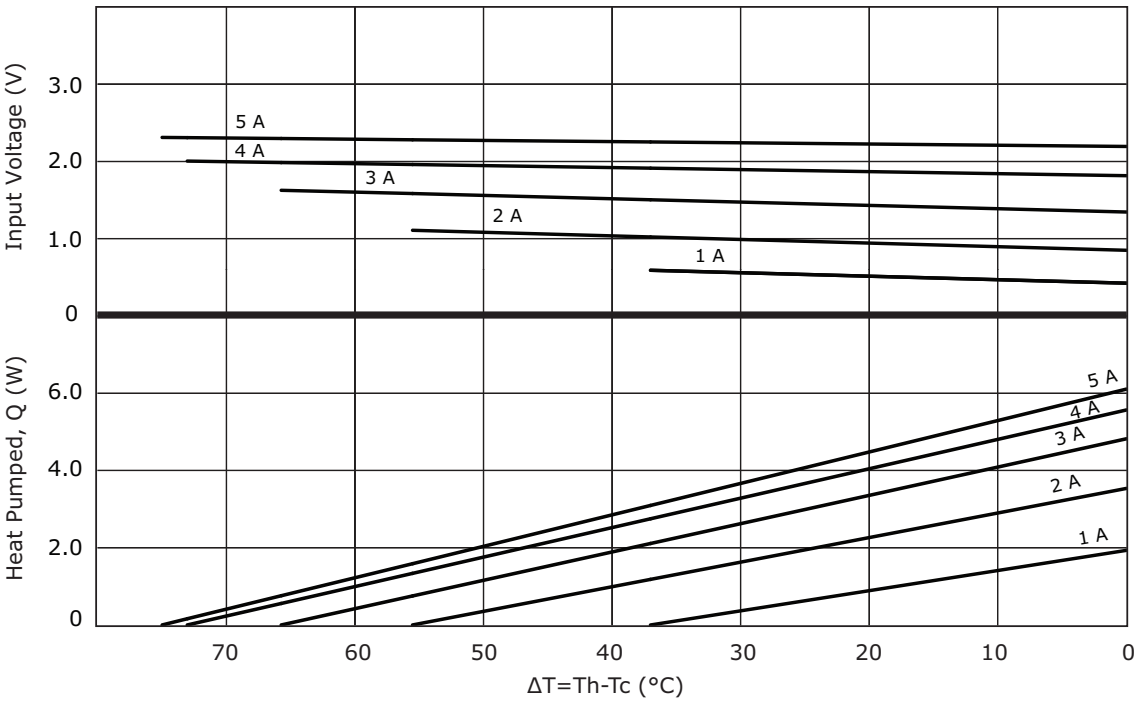
MODEL NO.	LENGTH (mm)	WIDTH (mm)	THICKNESS (mm)
CP50141	15 ±0.3	15 ±0.3	4.0 ±0.1
CP50241	20 ±0.3	20 ±0.3	4.0 ±0.1
CP50301541	30 ±0.3	15 ±0.3	4.0 ±0.1
CP5030395	30 ±0.3	30 ±0.3	3.95 ±0.025
CP50341[1]	30 ±0.3	30 ±0.3	4.0 ±0.1
CP50441[1]	40 ±0.3	40 ±0.3	4.0 ±0.1

Notes: 1. Wire lead strip length on models CP50341 & CP50441 is 10 ±3.0 mm.

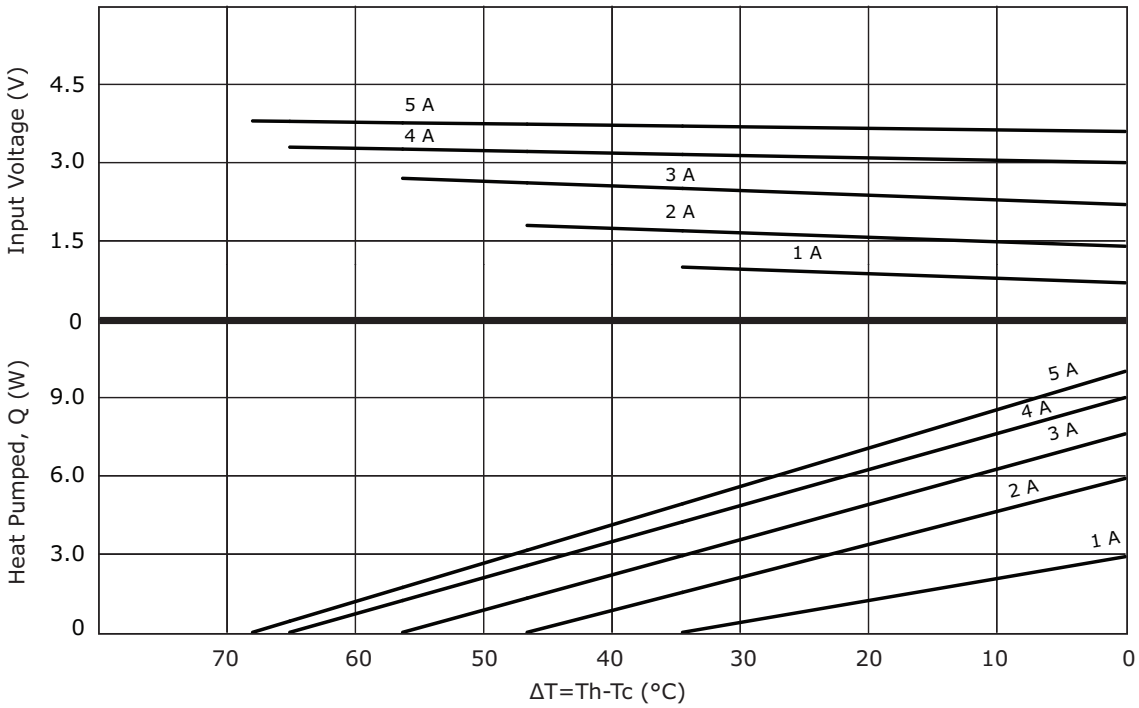
CP50141 PERFORMANCE (Th=27°C)



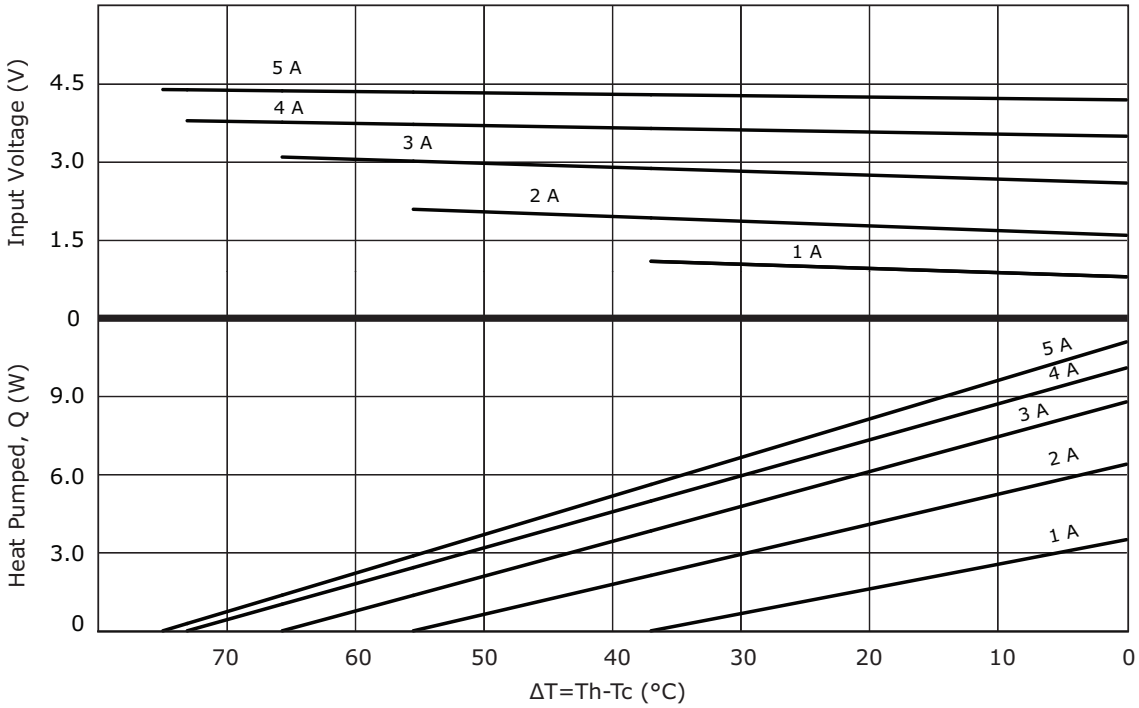
CP50141 PERFORMANCE (Th=50°C)



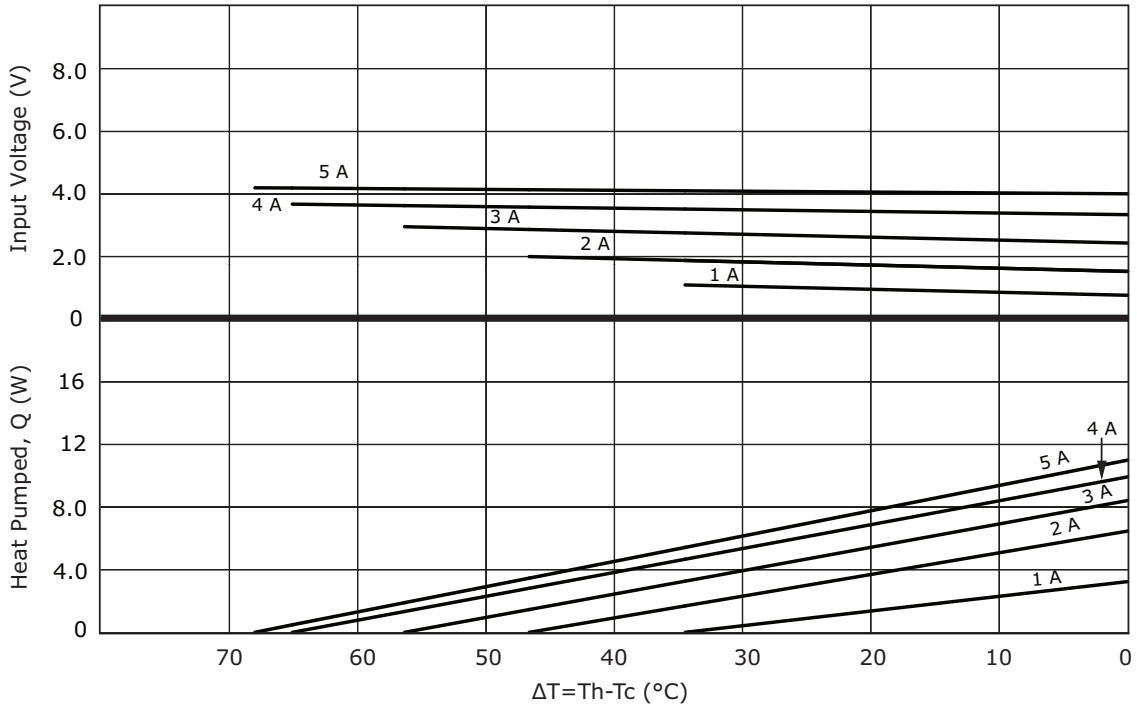
CP50241 PERFORMANCE (Th=27°C)



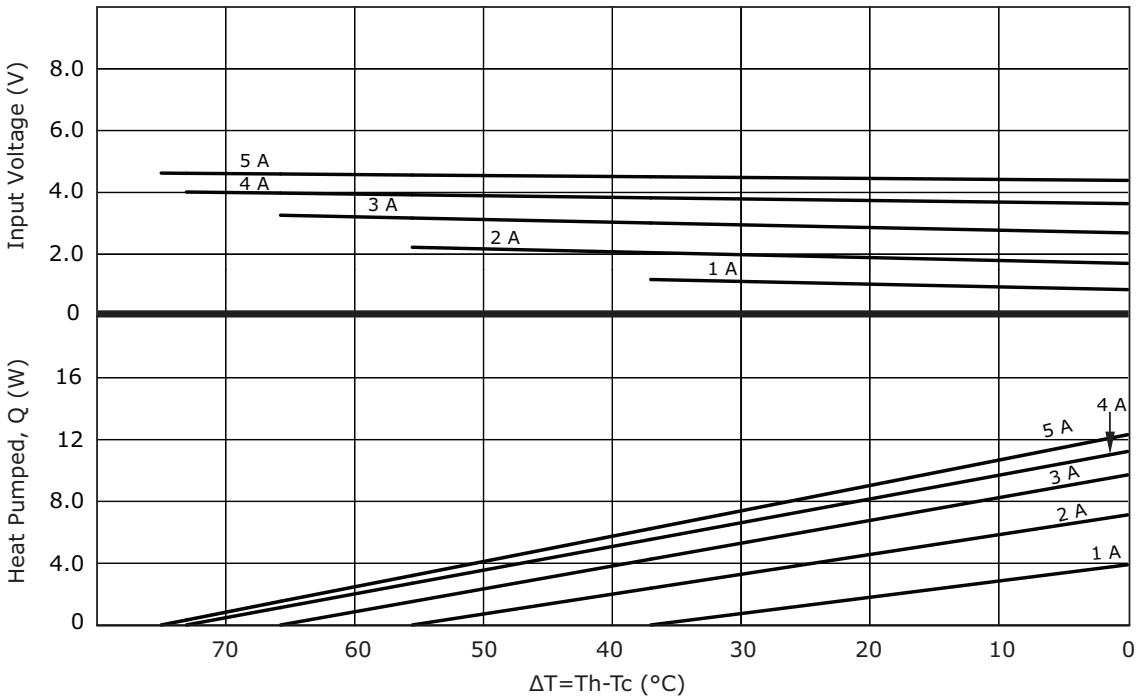
CP50241 PERFORMANCE (Th=50°C)



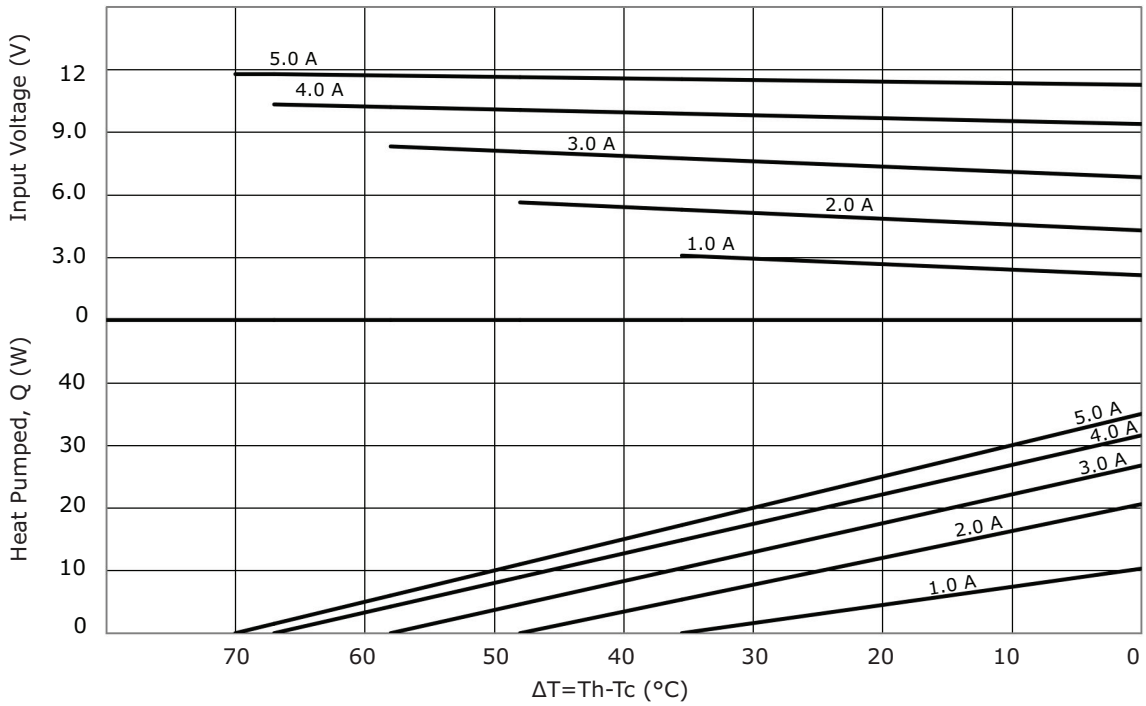
CP50301541 PERFORMANCE (Th=27°C)



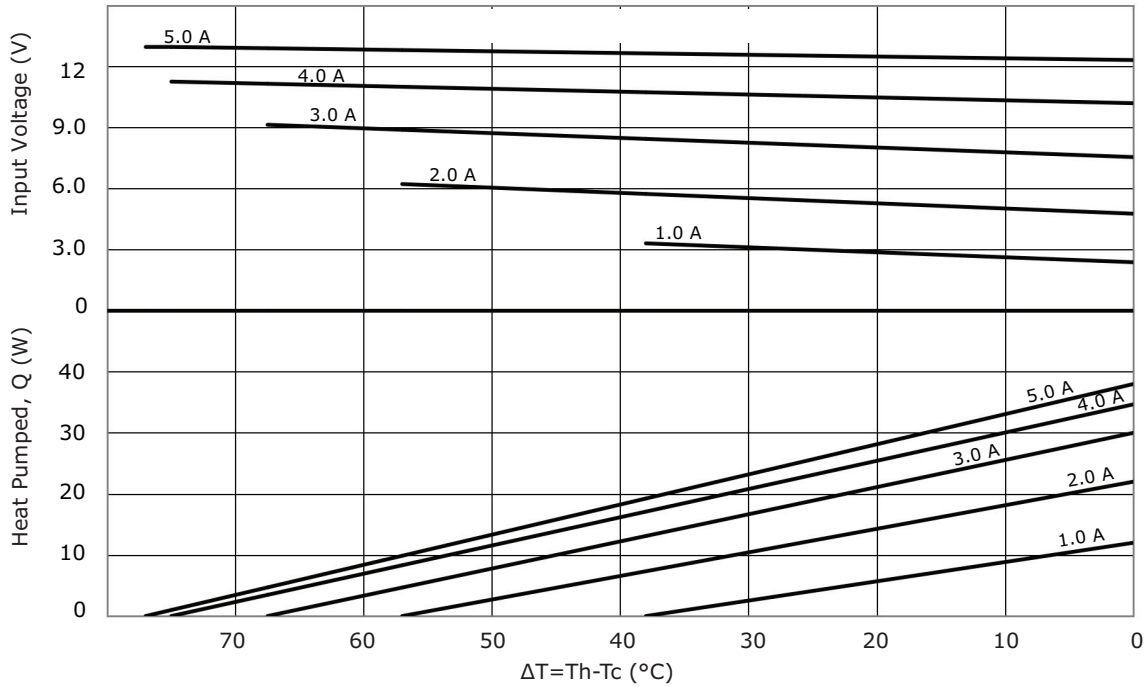
CP50301541 PERFORMANCE (Th=50°C)



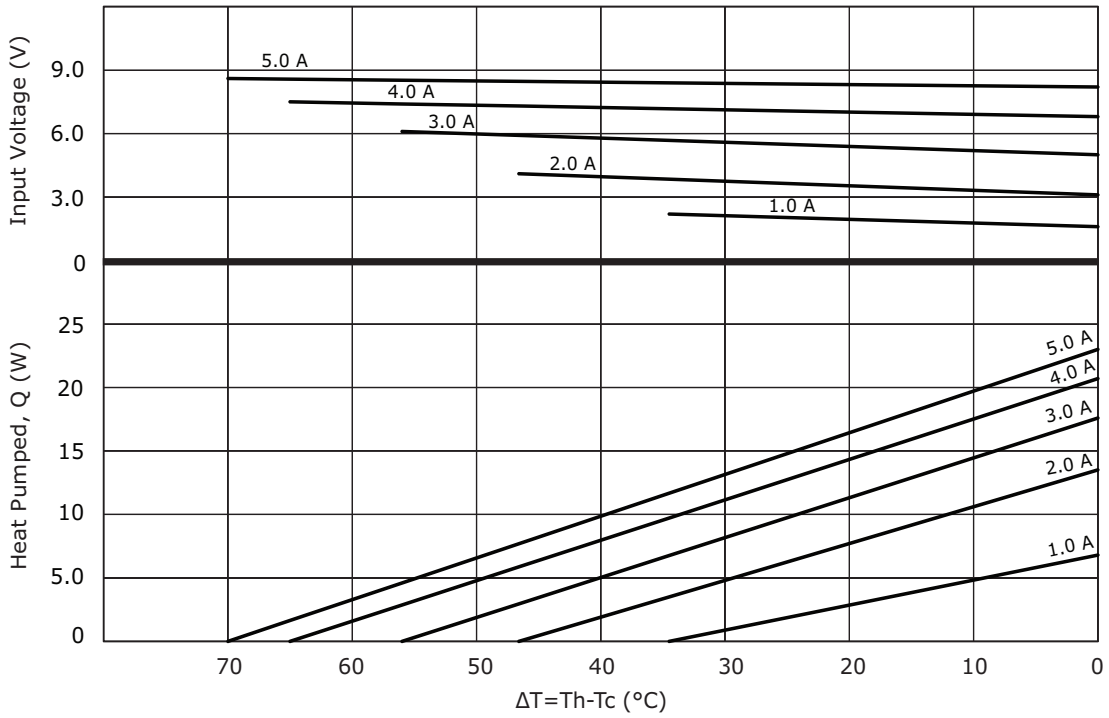
CP5030395 PERFORMANCE (Th=27°C)



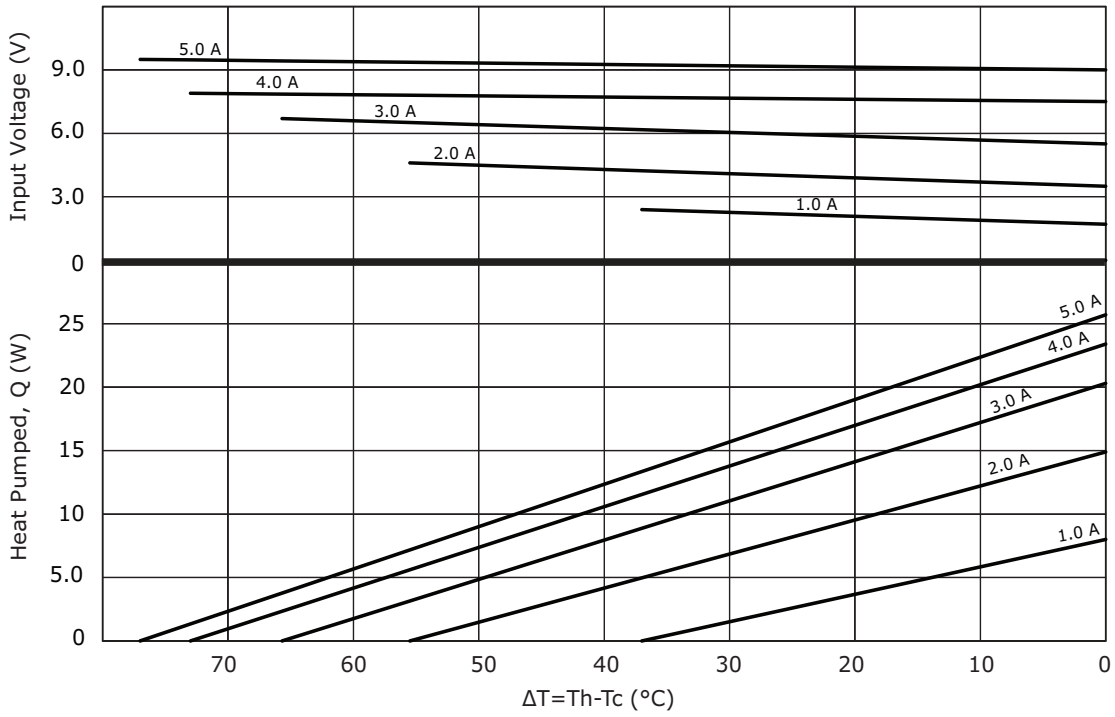
CP5030395 PERFORMANCE (Th=50°C)



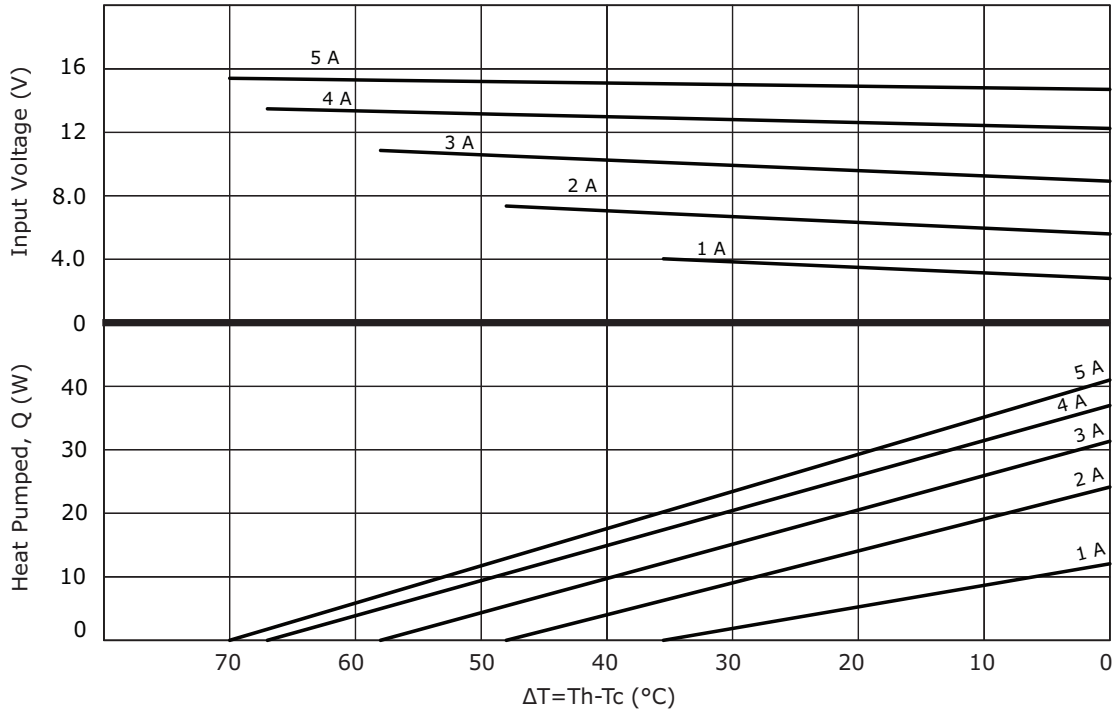
CP50341 PERFORMANCE (Th=27°C)



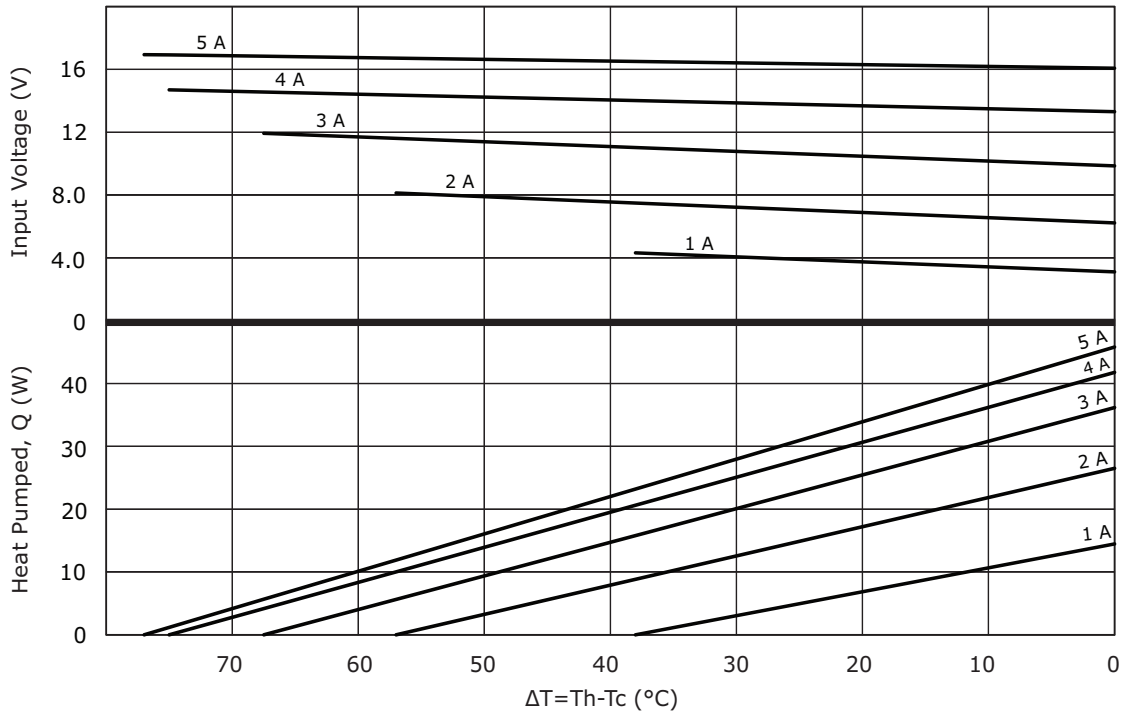
CP50341 PERFORMANCE (Th=50°C)



CP50441 PERFORMANCE (Th=27°C)



CP50441 PERFORMANCE (Th=50°C)



REVISION HISTORY

rev.	description	date
1.0	initial release	09/08/2016
1.01	changed models CP50341 & CP50441 to arcTEC™ structure	12/01/2017
1.02	changed thickness of CP50141, CP50241, CP50301541 models	09/20/2018
1.03	added model CP5030395, brand update	10/18/2019
1.04	logo, datasheet style update	08/05/2022

The revision history provided is for informational purposes only and is believed to be accurate.

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