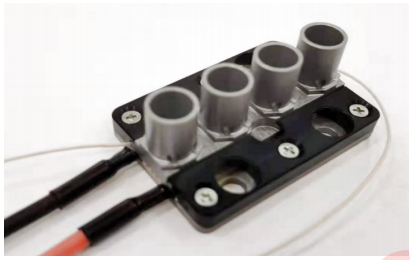
THERMOELECTRIC COOLER PERFORMANCE

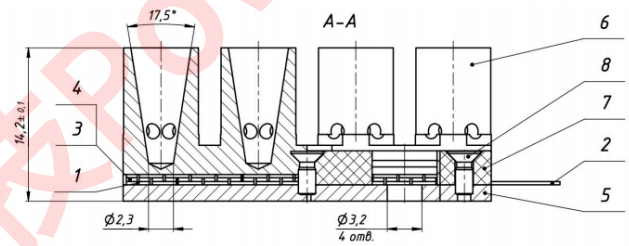


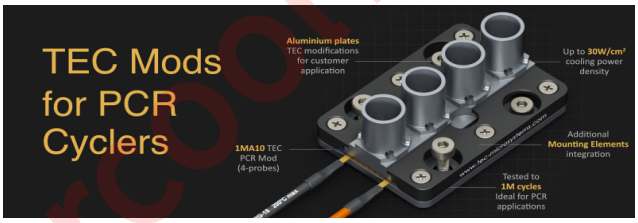
0 10mm

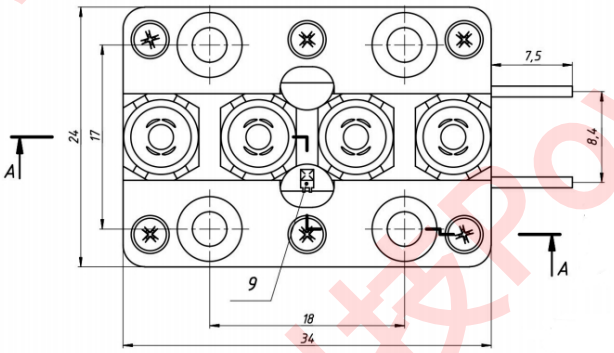
ΔTmax K	Qmax W	Imax A	Umax V	ACR Ohm	Ambient Temperature	Conditions
69	100.6	13.2	13.0	0.64	+27ºC / 300K	Vacuum
74	108.2	12.9	14.2	0.65	+50ºC / 323K	Dry N2
79	115.4	12.5	15.4	0.71	+75ºC / 348K	Dry N2
81	118.2	12.4	15.8	0.72	+85ºC / 358K	Dry N2

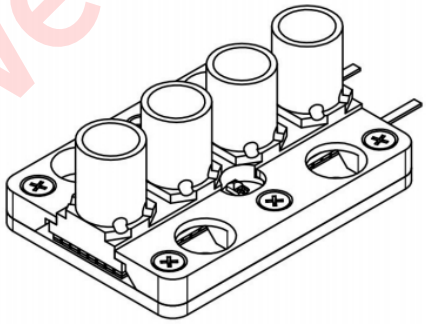
Note: Thermoelectric Cooler performance values are specified for optimal conditions, assuming that TEC hot side (T_{hot}) is stabilized at ambient temperature (T_{amb})

TECHNICAL DRAWING 1MA10-111-03.PCR4X









Dimensions are in mm

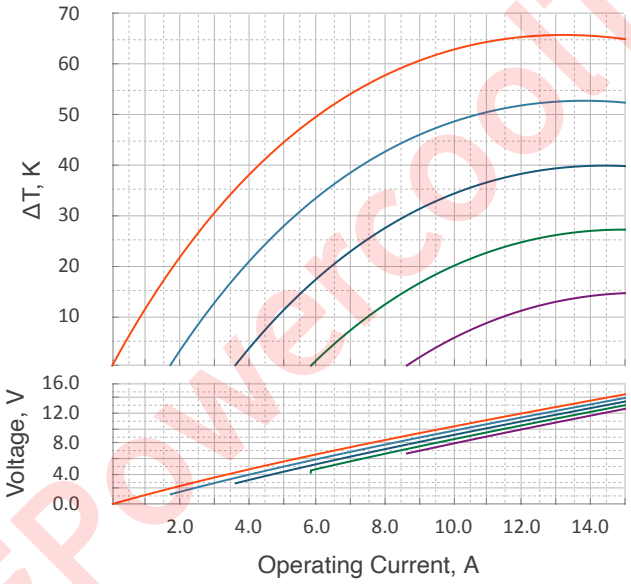
TEC DESCRIPTION

- Cold Side and Hot Side : Special Design
- Internal Assembly: Solder Sn-Sb (T_{melt}=230ºC)
- Cold Side Surface: Anodized
- Hot Side Surface: Anodized
- Terminal Contacts (4): AWG-18 Wires, silicon insulated color-coded (Red/Black), multi-strand
- Bi-Te Material (3): high-grade, hot-extruded type
- Protective Coating: available by request
- Laser marking: available by request

KEY FEATURES

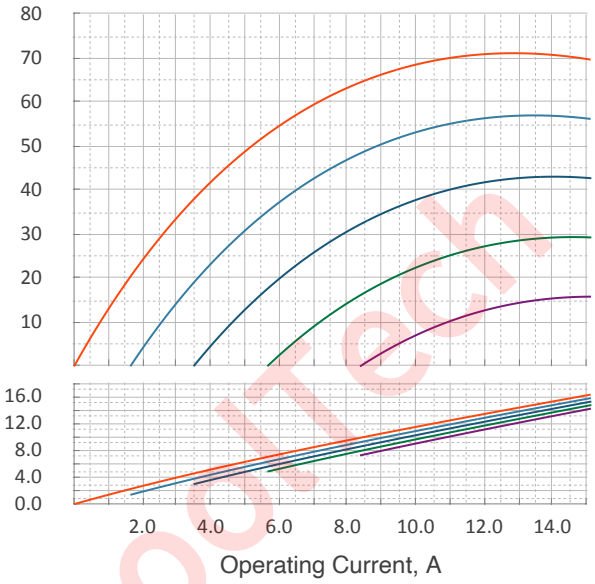
- High-Density (HD) pellets placement technology
- Up to 30W/cm² TEC Cooling Power density
- Tested to 1M cycles, ideal for cycling applications
- TELCORDIA GR-468 (MIL-883) qualified
- Aluminium (metal) plates instead of ceramics
- Up to 225ºC short time processing (for mounting)
- PT100(or PT1000) Embed into cold and hot side
- RoHS EU Compliant
- REACH EU Compliant

@27°C, Vacuum	ΔTmax K	Qmax W	Imax A	Umax V
1MA10-111-03	66	100.6	13.2	13.0



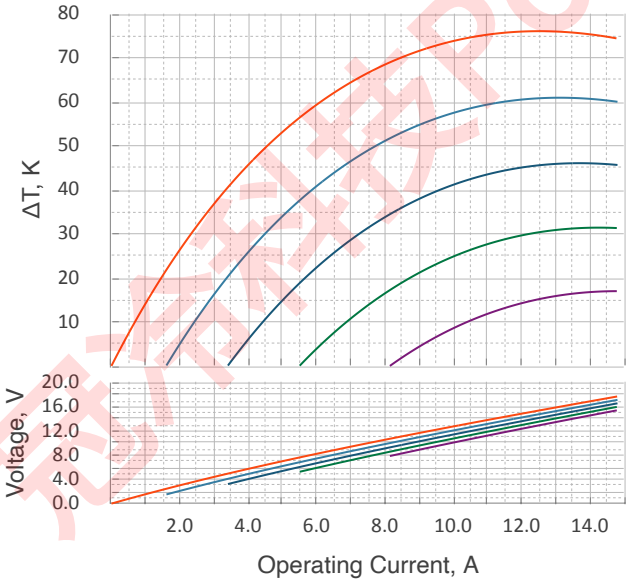
Heatload, W	0.0	20.1	40.2	60.3	80.4
% from Qmax	0%	20%	40%	60%	80%

@50°C, Dry N2	ΔTmax K	Qmax W	Imax A	Umax V
1MA10-111-03	71	108.2	12.9	14.2



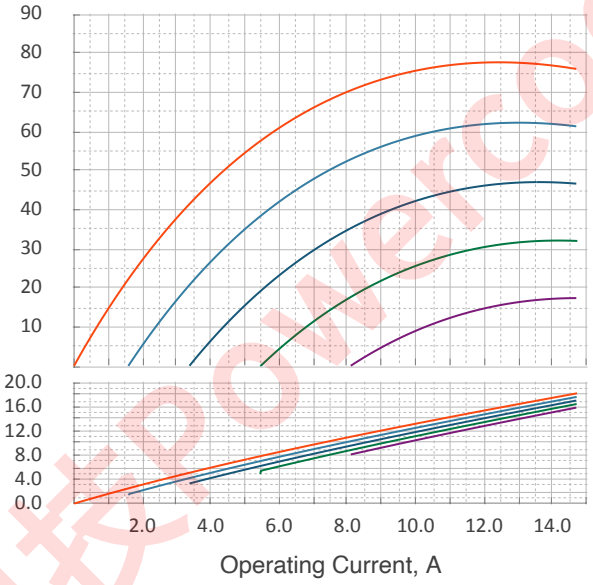
Heatload, W	0.0	21.6	43.3	64.9	86.6
% from Qmax	0%	20%	40%	60%	80%

@75°C, Dry N2	ΔTmax K	Qmax W	Imax A	Umax V
1MA10-111-03	76	115.4	12.5	15.4



Heatload, W	0.0	23.1	46.2	69.3	92.4
% from Qmax	0%	20%	40%	60%	80%

@85°C, Dry N2	ΔTmax K	Qmax W	Imax A	Umax V
1MA10-111-03	78	118.2	12.4	15.8



Heatload, W	0.0	23.6	47.3	70.9	94.6
% from Qmax	0%	20%	40%	60%	80%

Note: Thermoelectric cooler performance values and plots are specified at opPmal condiPons, assuming TEC hot side is stabilized at ambient temperature (T_{hot}=T_{amb}). The performance data is specified for four most common ambient condiPon modes. Please, contact TEC Microsystems GmbH or it's representaPve directly for esPmaPons under different condiPons.

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