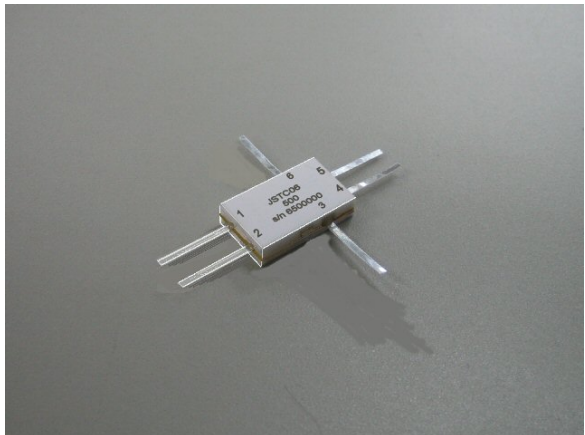


# THERMAL CONVERTER ELEMENT JSTC06



### Features and Applications

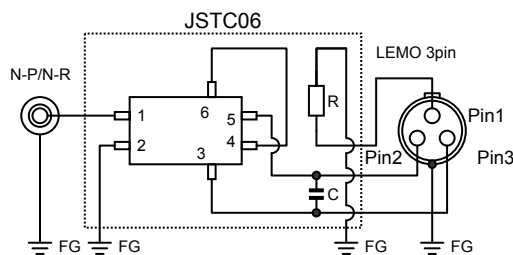
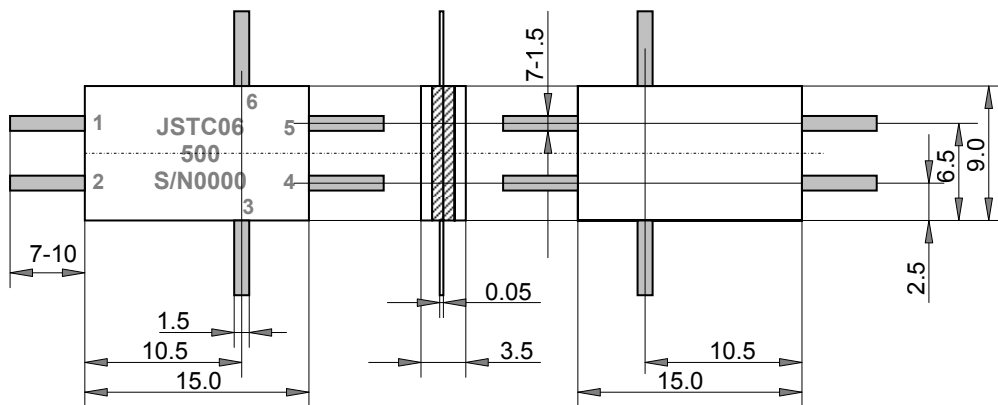
The JSTC06 is a general-purpose multi-junction thermal converter device for high-precision AC-DC transfer standards. Using NIKKOHM's unique thin-film thermopile technology, this device realizes sensitivity of  $10^{-6}$  to  $10^{-7}$  for comparing rms power between ac and dc input voltages.

The JSTC06 thermal converter is designed for the operation at wide frequency range between 10Hz to 1MHz. By the use of U-shape heater pattern, the reversal error of the JSTC06 is reduced to be smaller than 0.001%. AC-DC transfer difference of the JSTC06 is better than 0.001% in the frequency range between 10 Hz to 100 kHz, and better than 0.01% up to 1 MHz.

All the JSTC06 devices are identified by serial production numbers, and are individually inspected and guaranteed for the specifications. The inspection data include input resistance, output resistance, sensitivity (output voltage), and reversal error.

The JSTC06 thermal converter has been developed through the collaboration with AIST (National Institute of Advanced Industrial Science and Technology, Japan).

### Dimensions, Pin Configuration and Connection



pin	Descriptions
1	Input + to N connector
2	Input - to FG
3	DC output A +
4	DC output A -
5	DC output B -
6	DC output B +

THERMAL CONVERTER ELEMENT

JSTC06

Ordering Information

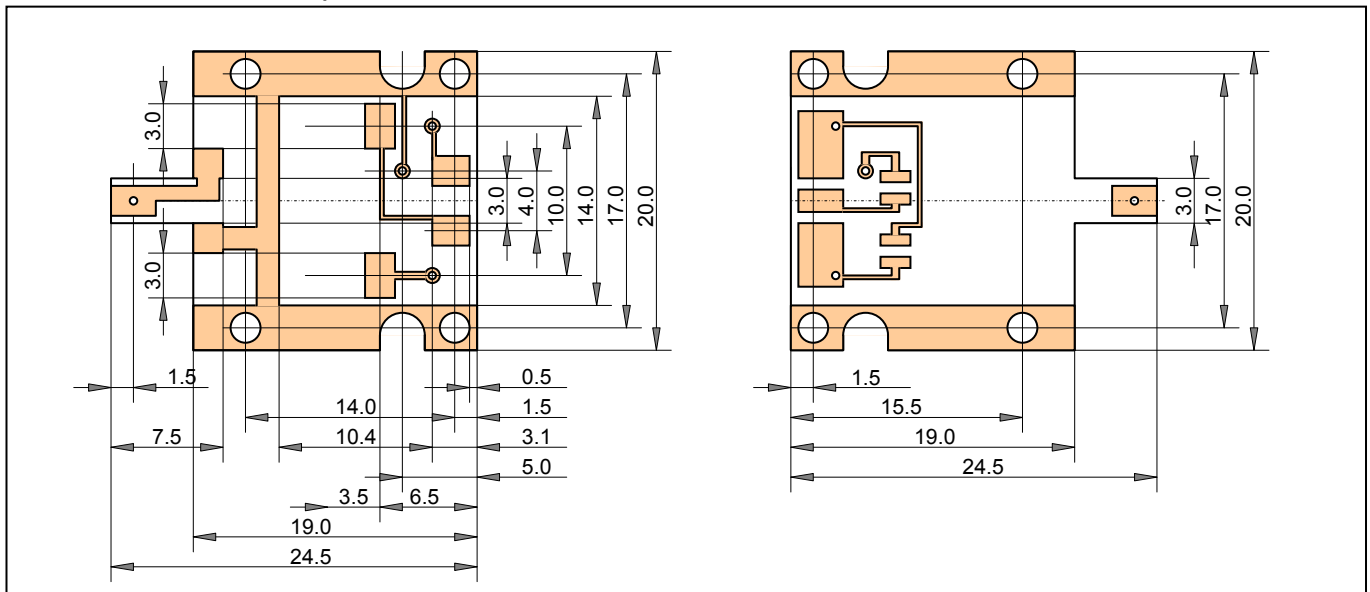
Model	TCR, input resistance	Input resistance (*)	Tolerance, Input resistance	Additional Code
JSTC06	E	500 Ohm	K	Z00
JSTC06	E (+/-25ppm/K) (*)	100 Ohm	K(+/-10%)	Z00 (RoHS)
		200 Ohm		
		500 Ohm		
		1k Ohm		
		2k Ohm		

(\*) Other input resistances, TCs, and tolerances are available on request.

Specifications and Performances

	JSTC06	Conditions
<b>INPUT</b>		
Rated Power	0.1 W	
Max Applied Power	0.5 W	
Resistance	100, 200, 500, 1K, 2K Ohms	
TCR	+/-25ppm/K (E)	
Tolerance	+/-10% (K)	
Frequency Range	DC,10Hz-1MHz	
<b>OUTPUT</b>		
Rating output voltage	More than 60mV	
Output resistance	Less than 400 Ohm	
TC of Output resistance	+/- 300ppm/K	
<b>INPUT/OUTPUT</b>		
Sensitivity	More than 0.6 V/W	
TC of Sensitivity	-0.001mV/mW/K	Typical
Response Time	2.5 +/-0.6 seconds	63% response
Reversal Error	Less than 10ppm	Typical
AC-DC Difference, 10Hz-100kHz	Less than 10ppm	Typical
AC-DC Difference, 100K-1MHz	Less than 100ppm	Typical
<b>ENVIRONMENTAL</b>		
Operating Temp.	25 +/- 5 degree C	
Storage Temp.	-20 to 80 degree C	

Recommended Foots patterns



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