Drawing Number Q-T04-0475

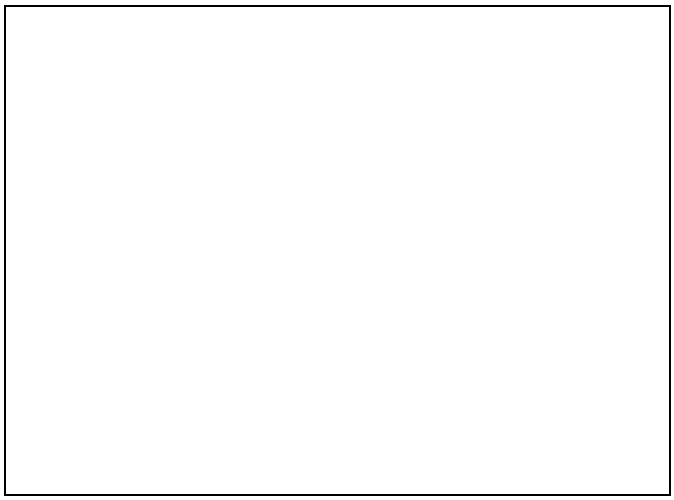
ATTN：Agilent Technologies

SPECIFICATION

DATE 2008.6.13

STYLE : Ultra-Precision Resistor
(Transfer Molded)

TYPE : MCK



Alpha Electronics Corporation

Engineer Technical Division

Drawn by : _____

Confirmed by : _____

Approved by : _____

1．SCOPE

This Specification is　ALPHA　ultra precision metal foil resistors Which has metal foil structure.

2.EXAMPLE

Type	Lead Forming	TCR	Nominal Resistance	Resistance Tolerance
MC	K	X	１０K０００	A

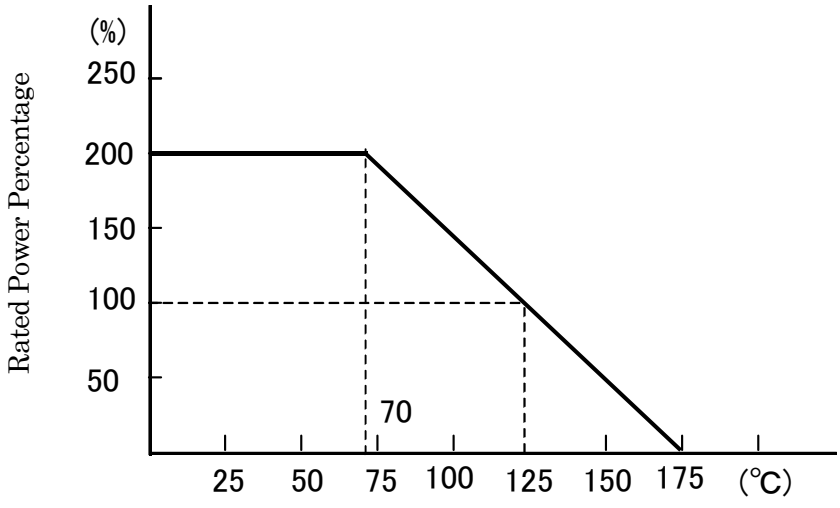
3．ELECTRICAL　SPECIFICATIONS

Shall conform to requirements shown in Table-1

Table-1

TYPE	TCR(ppm/℃) −55℃ to ＋ 125℃	Resistance Range(Ω)	Resistance Tolerance(%)	Rated Power (W) at 125℃
MCK	0±15(W)	1 to 5	±0.5(D) ±1.0(F)	0.3 0.2 at 150kΩ or above
	0±5(X)	5 to 30	±0.1(B) ±0.5(D) ±1.0(F)	
	0±5(X) 0±2.5(Y) 0±1(Z)	30 to 210k	±0.005(V) ±0.01(T) ±0.02(Q) ±0.05(A) ±0.1(B) ±0.5(D) ±1.0(F)	

Power Derating Curve



AMBIENT TEMPERATURE

Fig-1

4．MECHANICAL

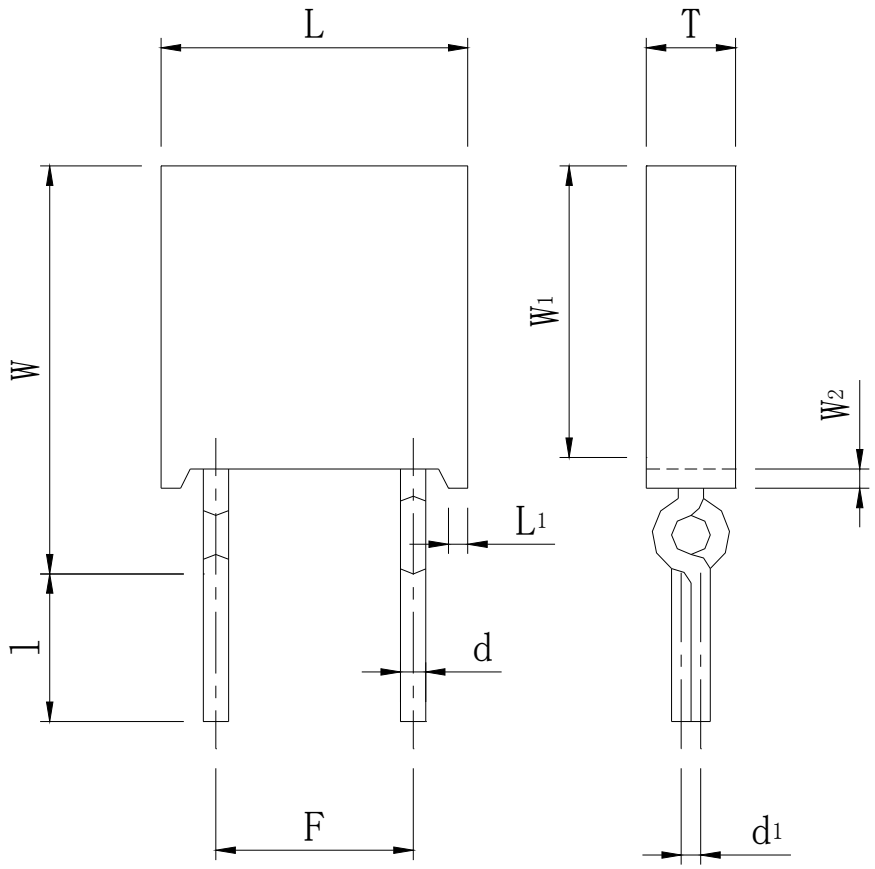
4.1 Dimension Fig-2

4.2 Materials

Element Metal Foil

Substrate Ceramic

Leads Sn 2.5Cu Plating → Sn 3.5Ag0.5Cu Dipping



TYPE	MCK
L	7.9±0.2
L_1	1.0 max
W	11.5max
W_1	8.0±0.2
W_2	0.3 max
T	2.3±0.2
F	5.08±0.25
l	3.8±1.0
d	ϕ0.65±0.05
d_1	0.5±0.5

Dimensions:mm

Fig-2

5．TYPICAL PERFORMANCE AND TEST CAPABILITIES

Shall conform to requirements shown in Table-2

Table-2

Parameters	Test condition	ALPHA Spec value
Max.Rated Operating Temperature		125℃
Working Temperature Range Max.Working Voltage		－65℃～+175℃ MC=300V
Power Conditioning Thermal Shock Overload	125℃,Rated Power,100hrs －65℃/30min.⇔+150℃/30min.,5cycles Rated Power×6.25,5sec	±(0.20%+0.01Ω) ±0.05% ±0.05%
Solderability Resistance to Solvents	Steam Aging 8hrs,245℃,5sec. ①Isopropyl Alcohol+Mineral Spirits ②Water+Butyl Cellosolve+Monoethanolamine	over 95% coverage no damage
Low Temperature Storage Low Temperature Operation Terminal Strength	－65℃,24hrs －65℃, Rated Voltage,45min. 0.908kg(2pounds),10sec	±0.05% ±0.05% ±0.02%
Dielectric Withstanding Voltage Insulation Resistance Resistance to Soldering Heat Moisture Resistance	Atmospheric:AC 300V rms. Barometric:200V rms. DC 100V,2min. +260℃,10sec +65℃ to －10℃,90%RH to 98%RH, Rated Voltage,10cycle(240hrs)	±0.02% over 10,000MΩ ±0.02% ±0.05%
Shocks(Specified pulse) Vibration,High Frequency	100G,6ms,Sawtooth wave , X,Y, each 10 shocks 20G,10Hz to 2000Hz to 10Hz,20min X,Y, each 4hrs	±0.01% ±0.02%
Life	125℃,Rated Volltage, 1.5hr.-ON,0.5hr.-OFF,2000hrs	±0.05%
Life 70 ℃ Power Rating	70℃, Rated Volltage×2, 1.5hr.-ON,0.5hr.-OFF.2000hrs	±0.05%
Storage Life	15℃ to 35℃,15%RH to 75%RH,No Load 10,000hrs	±0.005%
High Temperature Exposure	175℃,No Load,2,000hrs	±0.5%

6．Indication

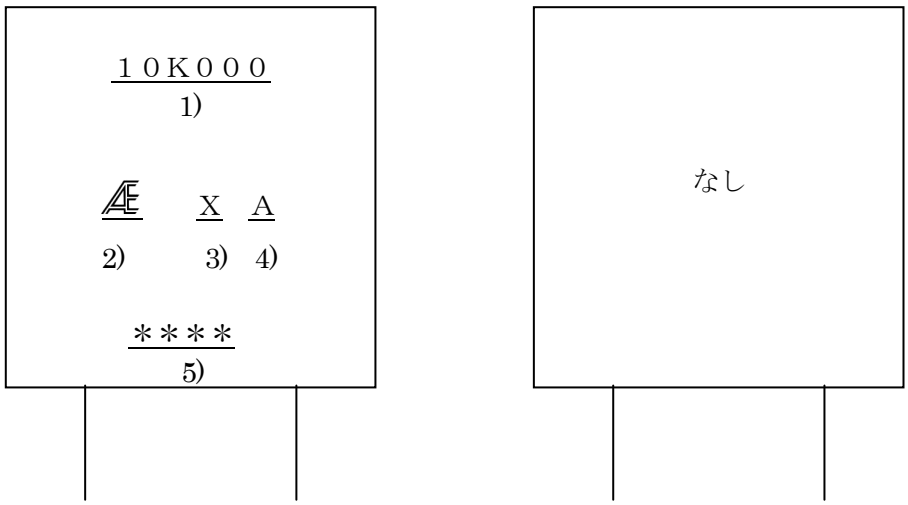


Fig-3

1) Nominal Resistance
2) Logo
3) TCR
4) Resistance Tolerance
5) Date Code

7．Packing / shipment

Will provide this resistor and store without any impairment during transfer.

8．Others　　This is a RoHS treatment article.