

Thick Film Chip Resistor Array Flat Terminal AEC-Q200

RTAA-F series

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FEATURE

- Multiple Resistors in on Package for Space-saving Design
- Improvement Assembly Efficiency
- Low Parasitic Inductance and Capacitance
- Applications: Entertainment, Communication Equipment, Power Equipment, Measuring Instrument
- Qualification Based on AEC-Q200 Standard



ELECTRICAL CHARACTERISTICS

Type	Number of Circuits	Power Rating at 70°C	Max Operating Voltage	Max Overload Voltage	Resistance Range (Ω)		TCR (±PPM/°C)
					±1%(F)	±5%(J)	
RTAA02-2F	2* 0402	1/16W	25V	50V	1 ~ 1M		200
		Jumper: 1A			-	0Ω (<50mΩ)	-
RTAA02-4F	4* 0402	1/16W	50V	100V	10 ~ 1M	1 ~ 10M	200
		Jumper: 1A			-	0Ω (<50mΩ)	-
RTAA03-4F	4* 0603	1/10W, 1/8W	50V	100V	10 ~ 1M	1 ~ 10M	200
		Jumper: 1A			-	0Ω (<50mΩ)	-

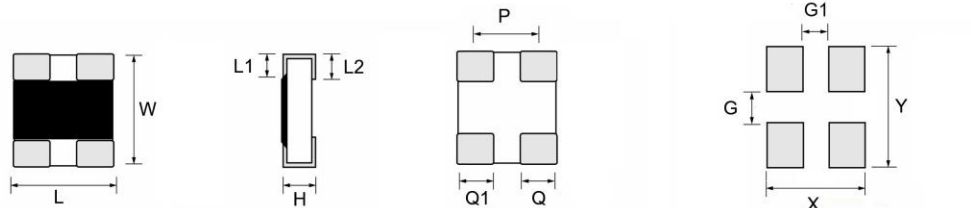
Notes:

1. Operating temperature: -55 ~ +155°C
2. Operating Voltage= $\sqrt{P \cdot R}$ or Max. operating voltage listed above, whichever is lower.
3. Overload Voltage = $2.5 \cdot \sqrt{P \cdot R}$ or Max. overload voltage listed above, whichever is lower.
4. Customized specifications might be available upon request

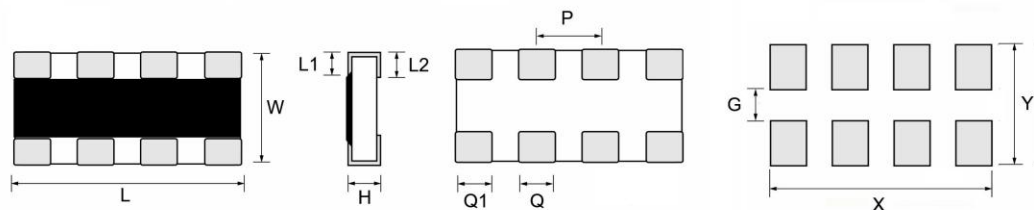
DIMENSIONS

Series	L±0.10	W ±0.10	H±0.10	L1±0.10	L2±0.15	P	Q	Q1	X	Y	G	G1
RTAA02-2F	1.20	1.00	0.35	0.22	0.30	0.82±0.05	0.43±0.10	0.60±0.10	1.50	1.25	0.35	0.20
RTAA02-4F	2.00	1.00	0.45	0.20	0.35	0.50±0.10	0.35±0.10	0.45±0.10	2.10	1.80	0.50	0.20
RTAA03-4F	3.20	1.55	0.55	0.20	0.47	0.80±0.05	0.45±0.15	0.60±0.10	3.10	2.85	0.80	0.35

RTAA02-2F



RTAA02-4F
RTAA03-4F



Unit: mm

Thick Film Chip Resistor Array

Flat Terminal AEC-Q200

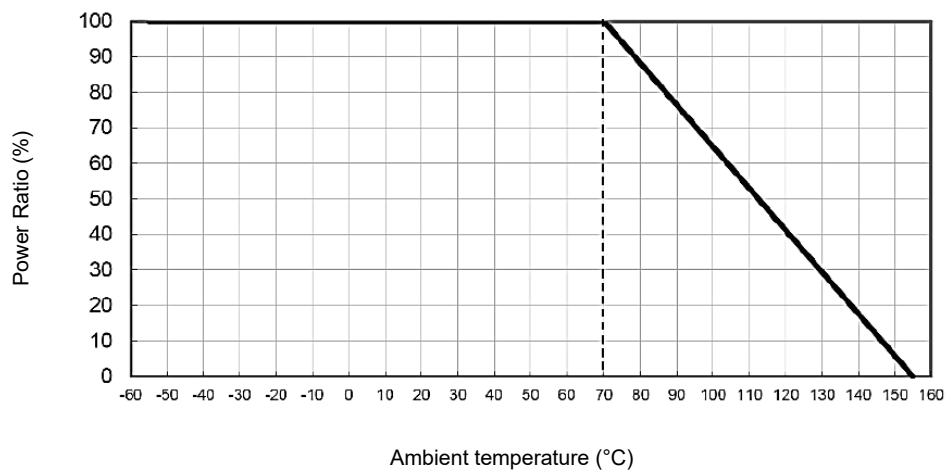
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ENVIRONMENTAL SPECIFICATION

Item	Standard	Test Method	Requirement		
			±1%	±5%	Jumper
Temperature Coefficient	JIS-C-5201-1 4.8 IEC-60115-1 4.8	-55°C ~ +125°C, 25°C is the reference temperature	As Specified		
Short Time Overload	JIS-C-5201-1 4.13 IEC-60115-1 4.13	2.5*RCWV or Max. Overload Voltage whichever is lower for 5 seconds	±(1%+0.05Ω)	±(2%+0.05Ω)	<50mΩ
Insulation Resistance	JIS-C-5201-1 4.6 IEC-60115-1 4.6	Max. Overload Voltage for 1 minute	≥10GΩ		
Voltage Proof	JIS-C-5201-1 4.7 IEC-60115-1 4.7	1.42 times Max. Operating Voltage for 1 minute	No breakdown or flashover		
Endurance	JIS-C-5201-1 4.25 IEC-60115-1 4.25.1	70±2°C, RCWV for 1000 hours with 1.5hrs "ON" and 0.5hr "OFF"	±(2%+0.10Ω)	±(3%+0.10Ω)	<50mΩ
Damp Heat with Load	JIS-C-5201-1 4.24 IEC-60115-1 4.24	40±2°C, 90~95% R.H., RCWV for 1000 hours with 1.5hrs "ON" and 0.5hr "OFF"	±(2%+0.10Ω)	±(3%+0.10Ω)	<50mΩ
Dry Heat	JIS-C-5201-1 4.23 IEC-60115-1 4.23.2	at +155°C for 1000 hours	±(1.0%+0.05Ω)	±(1.5%+0.10Ω)	<50mΩ
Rapid Change of Temperature	JIS-C-5201-1 4.19 IEC-60115-1 4.19	-55°C to +155°C, 5 cycles	±(0.5%+0.05Ω)	±(1.0%+0.05Ω)	<50mΩ
Resistance to Soldering Heat	JIS-C-5201-1 4.18 IEC-60115-1 4.18	260±5°C for 10 seconds	±(0.5%+0.05Ω)	±(1.0%+0.05Ω)	<50mΩ
Solderability	JIS-C-5201-1 4.17 IEC-60115-1 4.17	245±5°C for 3 seconds.	>95% Coverage		
Bending Strength	JIS-C-5201-1 4.33 IEC-60115-1 4.33	Bending once for 60 seconds with 3mm	±(1%+0.05Ω)	±(1%+0.05Ω)	<50mΩ
Leaching	JIS-C-5201-1 4.18 IEC-60068-2-58 8.2.1	260±5°C for 30 seconds	Individual leaching area ≤5% Total leaching area ≤10%		

POWER DERATING CURVE



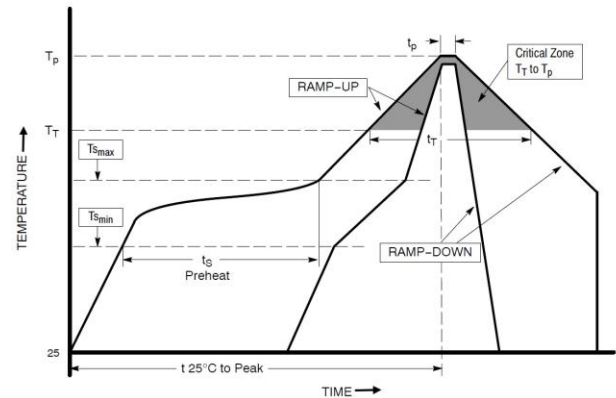
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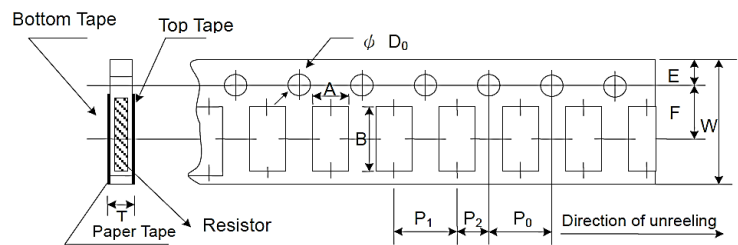
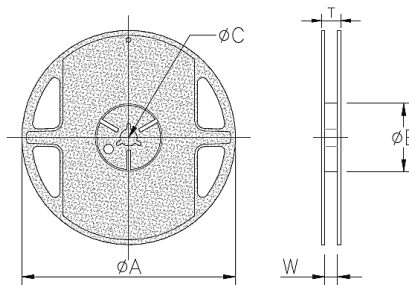
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RECOMMENDED SOLDERING PROFILES

Reflow Condition		
Pre Heat	Temp. Min $T_{s(min)}$	150°C
	Temp. Max $T_{s(max)}$	200°C
	Time (min. to max.) (t_s)	60~120 secs
Average ramp up rate (T_L) to peak		3°C/sec max.
$T_{s(max)}$ to T_L (Ramp-up rate)		3°C/sec max.
Reflow	Temp. (T_L)	217°C
	Time (min. to max.) (t_L)	60~150 secs
Peak Temperature (T_P)		260°C
Time within 5°C of actual peak Temperature (t_p)		10 secs max.
Ramp-down Rate		6°C/sec max.



PACKAGING SPECIFICATIONS



Type	Reel Dimension (mm)								
	Quantity	Type	Tape Width	Reel Size	A	B	C	W	T
RTAA02-2F	10K	Paper	8mm	7"	178.5±1.5	60±1.0	13.0±0.2	9.0±0.5	12.5±0.5
RTAA02-4F	5K	Paper	8mm	7"	178.5±1.5	60±1.0	13.0±0.2	9.0±0.5	12.5±0.5
RTAA03-4F	5K	Paper	8mm	7"	178.5±1.5	60±1.0	13.0±0.2	9.0±0.5	12.5±0.5

Type	Paper Tape Dimension (mm)									
	A	B	W	E	F	P ₀	P ₁	P ₂	ΦD ₀	T
RTAA02-2F	1.20±0.10	1.45±0.10	8.0±0.20	1.75±0.10	3.5±0.05	4.0±0.10	2.0±0.05	2.0±0.05	1.55±0.05	0.43±0.10
RTAA02-4F	1.20±0.10	2.20±0.10	8.0±0.20	1.75±0.10	3.5±0.05	4.0±0.10	2.0±0.05	2.0±0.05	1.55±0.05	0.70±0.10
RTAA03-4F	1.95±0.10	3.50±0.10	8.0±0.20	1.75±0.10	3.5±0.05	4.0±0.10	4.0±0.05	2.0±0.05	1.55±0.05	0.85±0.10

PART NUMBERING SYSTEM

RTAA **03** - **4F** **3R3J**
(1) (2) (3) (4)

No	Item	Code	Description
(1)	Product Code	RTAA	Thick Film Chip Resistor Array, Isolated type AEC-Q200 Qualified
(2)	Elements Size	03	03: 0603 02: 0402
(3)	Number of Circuits	4F	4F: 4 circuits, Flat Terminal type 2: 2 circuits
(4)	Resistance Value	3R3J	3.3Ω ±5% (J) 2491: 2490Ω, 000: Jumper, F: ±1%

*Specifications subject to change without notice.