CRCW Series — Thick Film, Rectangular Chip Resistors (Continued)

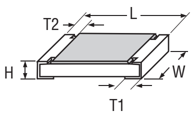
RoHS

- Metal Glaze on High Quality Ceramic
- Protective Overglaze
- Solder Contacts on Ni Barrier Layer
- Excellent Stability in Different Environmental Conditions
- High Volume Product Suitable for Commercial and Special Applications

Dimensions — mm

Size	L	W	H	T1	T2
1206	3.2 +0.10 –0.20	1.60 ±0.15	0.55 ±0.05	0.45 ±0.2	0.4 ±0.2
1210	3.2 ±0.20	2.50 ±0.20	0.55 ±0.05	0.45 ±0.2	0.4 ±0.2
2010	5.0 ±0.15	2.50 ±0.15	0.60 ±0.05	0.60 ±0.2	0.6 ±0.2
2512	6.3 ±0.2	3.15 ±0.15	0.60 ±0.05	0.60 ±0.2	0.6 ±0.2

Dimensions



1206 (1/4 W) (Continued)

Stock No.	Mfr.'s Type	Ohms	Tol. (%)	T.C. (ppm)	EACH 10-99	EACH 100-499
70201305	CRCW12064K99FKEA	4.99K	1	100	.04	.02
70202023	CRCW12065K11FKEA	5.11K	1	100	.04	.02
70241259	CRCW12066K80JNEA	6.8K	5	200	.07	.03
70202024	CRCW12067K50FKEA	7.5K	1	100	.04	.02
70201262	CRCW120610K0FKEA	10K	1	100	.04	.02
70201263	CRCW120610K0JNEA	10K	5	200	.02	.01
70201269	CRCW120615K0FKEA	15K	1	100	.04	.02
70201278	CRCW120620K0FKEA	20K	1	100	.04	.02
70204389	CRCW120622K0FKEA	22K	1	100	.06	.03
70201282	CRCW120622K0JNEA	22K	5	200	.06	.03
70201289	CRCW120630K1FKEA	30.1K	1	100	.04	.02
70201292	CRCW120633K2FKEA	33.2K	1	100	.04	.02
70201296	CRCW120640K2FKEA	40.2K	1	100	.04	.02
70201298	CRCW120647K0JNEA	47K	5	200	.02	.01
70201299	CRCW120647K5FKEA	47.5K	1	100	.04	.02
70202025	CRCW120649K9FKEA	49.9K	1	100	.04	.02
70201308	CRCW120656K2FKEA	56.2K	1	100	.04	.02
70204419	CRCW120668K0FKEA	68K	1	100	.06	.03
70204422	CRCW120675K0FKEA	75K	1	100	.06	.03
70201257	CRCW1206100KFKEA	100K	1	100	.04	.02

1206 (1/4 W) (Continued)

Stock No.	Mfr.'s Type	Ohms	Tol. (%)	T.C. (ppm)	EACH 10-99	EACH 100-499
70239087	CRCW1206121KFKEA	121K	1	100	.09	.05
70201266	CRCW1206150KFKEA	150K	1	100	.04	.02
70201277	CRCW1206200KFKEA	200K	1	100	.04	.02
70241258	CRCW1206330KJNEA	330K	5	200	.07	.03
70204440	CRCW1206470KFKEA	470K	1	100	.06	.03
70201275	CRCW12061M00FKEA	1M	1	100	.04	.02
70201276	CRCW12061M00JNEA	1M	5	200	.02	.01
70201264	CRCW120610M0FKEA	10M	1	100	.04	.02

1210 (1/3 W)

Stock No.	Mfr.'s Type	Ohms	Tol. (%)	T.C. (ppm)	EACH 10-99	EACH 100-499
70201315	CRCW12100000Z0EA	0	—	—	.22	.10
70204456	CRCW121010R0FKEA	10	1	100	.30	.09
70204458	CRCW121049R9FKEA	49.9	1	100	.30	.09
70204460	CRCW1210100RFKEA	100	1	100	.30	.09
70239088	CRCW12101K00FKEA	1K	1	100	.20	.15
70239089	CRCW121010K0FKEA	10K	1	100	.20	.15

2010 (1/2 W)

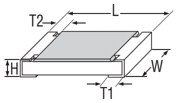
Stock No.	Mfr.'s Type	Ohms	Tol. (%)	T.C. (ppm)	EACH 1-99	EACH 100-499
70201626	CRCW20100000Z0EF	0	—	—	.10	.07
70204490	CRCW201010R0JNEF	10	5	200	.25	.10
70204492	CRCW201020R0JNEF	20	5	200	.25	.10
70239100	CRCW2010100RFKEF	100	1	100	.32	.16
70204506	CRCW2010120RJNEF	120	5	200	.25	.10
70239101	CRCW20101K00FKEF	1K	1	100	.32	.16
70204544	CRCW201010K0FKEF	10K	1	100	.25	.10

2512 (1 W)

Stock No.	Mfr.'s Type	Ohms	Tol. (%)	T.C. (ppm)	EACH 1-99	EACH 100-499
70239102	CRCW25120000Z0EG	0	—	—	.38	.17
70202027	CRCW251210R0FKEG	10	1	100	.35	.22
70204580	CRCW251210R0JNEG	10	5	200	.25	.15
70204607	CRCW2512510R0JNEG	51	5	200	.25	.15
70201316	CRCW2512100RFKEG	100	1	100	.35	.22
70204638	CRCW2512470RJNEG	470	5	200	.25	.15
70204655	CRCW25122K20JNEG	2.2K	5	200	.26	.15
70204660	CRCW25123K30JNEG	3.3K	5	200	.25	.15

TNPW Series — Thin Film, Rectangular Chip Resistors

RoHS



- Metal Film Layer on High Quality Ceramic
- Protective Top Coat
- Solder Contacts on Ni Barrier Layer (2010/2512 Size = 100% Sn on Ni Barrier)
- Excellent Stability at Different Environmental Conditions
- Low TC and Tight Tolerances

TNPW thin-film rectangular chip resistors features the industry's broadest range of sizes, value ranges, and tolerances. The TNPW nichrome thin-film semi-precision chip resistors are ideal for a wide range of applications requiring excellent stability, tight tolerances, and low TCR, including circuitry for navigation and avionics instrumentation, medical equipment, test equipment, automotive instrumentation, and telecommunications systems.

Features of the TNPW resistor family include very low electrical noise, tolerances as low as 0.1%, and TCR values ranging from 150 ppm/°C to as low as 15 ppm/°C. Standard resistance values range from 10Ω to 1MΩ. Case construction is high-quality ceramic with a metal film layer and a protective topcoat, with tin-lead (SnPb) contacts on a nickel (Ni) barrier layer.

Dimensions — mm

Size	L	W	H	T1	T2
0603	1.60 ±0.20	0.81 ±0.20	0.40 ±0.10	0.3 ±0.20	
0805	2.00 ±0.20	1.24 ±0.20	0.40 ±0.10	0.4 ±0.25	
1206	3.2 ±0.15	1.6 ±0.15	0.61 ±0.15	0.5 ±0.25	

0603 (0.1% Tol./0.1 W @ 70°C)

Stock No.	Mfr.'s Type	Ohms	T.C. (ppm)	EACH 1-49	EACH 50-99
70238394	TNPW060310R0BEEA	10	25	.50	.47
70238395	TNPW060349R9BEEA	49.9	25	.50	.47
70238396	TNPW060375R0BEEA	75	25	.50	.47
70238397	TNPW0603100RBEEA	100	25	.39	.38
70238398	TNPW06031K00BEEA	1K	25	.39	.38
70238399	TNPW06031K50BEEA	1.5K	25	.39	.38
70238415	TNPW06032K00BEEA	2K	25	.39	.38
70238416	TNPW06034K70BEEA	4.7K	25	.39	.38
70238417	TNPW060320K0BEEA	20K	25	.39	.38
70205355	TNPW060330K1BEEA	30.1K	25	.64	.46
70238418	TNPW060349K9BEEA	49.9K	25	.39	.38
70205354	TNPW0603100KBEEA	100K	25	.64	.46
70238419	TNPW0603150KBEEA	150K	25	.39	.38
70238420	TNPW0603200KBEEA	200K	25	.50	.47

0805 (0.1% Tol./0.125 W @ 70°C)

Stock No.	Mfr.'s Type	Ohms	T.C. (ppm)	EACH 1-49	EACH 50-99
70202031	TNPW080510R0BEEN	10	25	.67	.59
70238409	TNPW080524R9BEEA	24.9	25	.39	.38
70201678	TNPW080549R9BEEN	49.9	25	.67	.59
70238410	TNPW0805100RBEEA	100	25	.39	.38
70202032	TNPW0805200RBEEN	200	25	.67	.59
70205358	TNPW0805499RBEEA	499	25	.64	.46
70205356	TNPW08051K00BEEA	1K	25	.64	.46
70202033	TNPW08052K00BEEN	2K	25	.67	.59
70201709	TNPW08053K00BEEN	3K	25	.67	.59
70201713	TNPW08054K99BEEN	4.99K	25	.67	.59
70238411	TNPW08056K81BEEA	6.81K	25	.39	.38
70201648	TNPW080510K0BEEN	10K	25	.67	.59
70201732	TNPW080520K0BEEN	20K	25	.67	.59
70238412	TNPW080549K9BEEA	49.9K	25	.39	.38
70238413	TNPW080590K9BEEA	90.9K	25	.39	.38

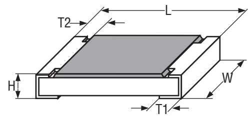
1206 (0.1% Tol./0.25 W @ 70°C)

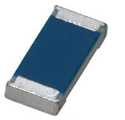
Stock No.	Mfr.'s Type	Ohms	T.C. (ppm)	EACH 1-49	EACH 50-99
70238414	TNPW120649R9BEEA	49.9	25	.54	.51
70202035	TNPW1206100RBEEN	100	25	.67	.59
70202036	TNPW12061K00BEEN	1K	25	.67	.59
70238400	TNPW12062K00BEEA	2K	25	.54	.51
70238401	TNPW12064K99BEEA	4.99K	25	.54	.51
70202037	TNPW120610K0BEEN	10K	25	.67	.59
70202038	TNPW120620K0BEEN	20K	25	.67	.59
70238402	TNPW120649K9BEEA	49.9K	25	.54	.51
70202039	TNPW1206100KBEEN	100K	25	.67	.59
70238403	TNPW1206150KBEEA	150K	25	.54	.51
70238404	TNPW1206200KBEEA	200K	25	.54	.51
70238405	TNPW12061M00BEEA	1M	25	1.10	1.05

TNPU Series — Thin Film, Rectangular Chip Resistors

NEW

RoHS





TNPU e3 High Precision Thin Film Flat Chip Resistors combine the proven reliability of TNPW e3 products with the most advanced level of precision and stability. This unique combination makes the product perfectly suited for all applications with outstanding requirements towards size, reliable precision and stability.

- Superior Moisture Resistivity ≤0.25% (85°C; 56 Days; 85% RH)
- Waster Gas Resistant
- AEC-Q200 Qualified
- Low TC and Tight Tolerances

Dimensions — mm

Size	L	W	H	T1	T2
0603	1.6 ±0.10	0.85 ±0.10	0.45 ±0.10	0.3 ±0.20	
0805	2.0 ±0.15	1.25 ±0.15	0.45 ±0.10	0.4 ±0.20	
1206	3.2 ±0.15	1.60 ±0.15	0.55 ±0.10	0.5 ±0.25	

0603 (0.1% Tol./0.1 W)

Stock No.	Mfr.'s Type	Ohms	T.C. (ppm)	EACH 1-49	EACH 50-99
70231632	TNPU0603100RBZEN00	100	5	2.40	2.23
70231629	TNPU06031K00BZEN00	1K	5	2.40	2.23
70231628	TNPU060310K0BZEN00	10K	5	2.40	2.23
70231634	TNPU060315K0BZEN00	15K	5	2.40	2.23
70231630	TNPU0603100KBZEN00	100K	5	2.40	2.23

0805 (0.1% Tol./0.125 W)

Stock No.	Mfr.'s Type	Ohms	T.C. (ppm)	EACH 1-49	EACH 50-99
70231638	TNPU0805100RBZEN00	100	5	2.45	2.28
70231635	TNPU08051K00BZEN00	1K	5	2.45	2.28
70231639	TNPU08052K00BZEN00	2K	5	2.45	2.28
70231633	TNPU080510K0BZEN00	10K	5	2.45	2.28
70231631	TNPU0805100KBZEN00	100K	5	2.45	2.28

1206 (0.1% Tol./0.25 W)

Stock No.	Mfr.'s Type	Ohms	T.C. (ppm)	EACH 1-49	EACH 50-99
70231637	TNPU1206100RBZEN00	100	5	3.28	3.05
70231640	TNPU12061K00BZEN00	1K	5	3.28	3.05
70231636	TNPU120610K0BZEN00	10K	5	3.28	3.05
70231641	TNPU1206100KBZEN00	100K	5	3.28	3.05