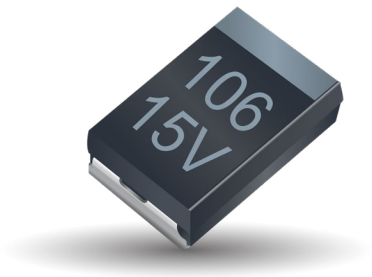
TAZ SERIES

T4Z HRC4000 Medical Grade for Non-Critical Applications



GENERAL DESCRIPTION

The T4Z HRC4000 Medical Grade series is designed for use in non-critical medical applications. The T4Z product line is based on the MIL-PRF- 55365 case sizes A-H. Statistical screening is used resulting in DC leakage levels significantly lower than commercial solid tantalum capacitors.
These components are manufactured and tested in KYOCERA AVX's high reliability tantalum capacitor plant in Biddeford, Maine which is ISO 13485 certified. Reliability grading to implantable device standards and surge current testing options per MIL-PRF-55365 are available along with several plating options including tin/lead solder, 100% tin, or gold terminations.
To request a specific rating or for more information on HRC4000 testing details please contact the factory.

APPLICATIONS

Medical Devices for Non-Critical Applications

- Implantable, Non-Life Sustaining Devices
  e.g. implanted temporary cardiac monitor, insulin pumps
- External, Life Sustaining Devices
  e.g. heart pump external controller
- External Devices
  e.g. patient monitoring, diagnostic equipment

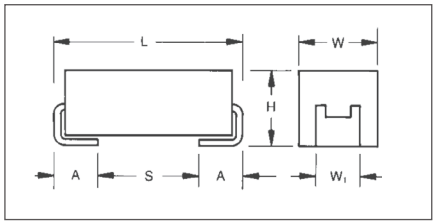
MARKING

(White marking on black body)

Polarity Stripe (+)

Capacitance Code

Rated Voltage



CASE DIMENSIONS:

millimeters (inches)

Case Code	Length (L) ±0.38 (0.015)	Width (W) ±0.38 (0.015)	Height (H) ±0.38 (0.015)	Term. Width (W_1)	Term. Length (A) +0.25/-0.13 (+0.010/-0.005)	S min	Typical Weight (g)
A	2.54 (0.100)	1.27 (0.050)	1.27 (0.050)	1.27±0.13 (0.050±0.005)	0.76 (0.030)	0.38 (0.015)	0.016
B	3.81 (0.150)	1.27 (0.050)	1.27 (0.050)	1.27±0.13 (0.050±0.005)	0.76 (0.030)	1.65 (0.065)	0.025
C	5.08 (0.200)	1.27 (0.050)	1.27 (0.050)	1.27±0.13 (0.050±0.005)	0.76 (0.030)	2.92 (0.115)	0.035
D	3.81 (0.150)	2.54 (0.100)	1.27 (0.050)	2.41+0.13/-0.25 (0.095+0.005/-0.010)	0.76 (0.030)	1.65 (0.065)	0.045
E	5.08 (0.200)	2.54 (0.100)	1.27 (0.050)	2.41+0.13/-0.25 (0.095+0.005/-0.010)	0.76 (0.030)	2.92 (0.115)	0.065
F	5.59 (0.220)	3.43 (0.135)	1.78 (0.070)	3.30±0.13 (0.130±0.005)	0.76 (0.030)	3.43 (0.135)	0.125
G	6.73 (0.265)	2.79 (0.110)	2.79 (0.110)	2.67±0.13 (0.105±0.005)	1.27 (0.050)	3.56 (0.140)	0.205
H	7.24 (0.285)	3.81 (0.150)	2.79 (0.110)	3.68+0.13/-0.51 (0.145+0.005/-0.020)	1.27 (0.050)	4.06 (0.160)	0.335

The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

CAPACITANCE AND RATED VOLTAGE, V_R (VOLTAGE CODE) RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Rated Voltage								
µF	Code	4V	6V	10V	12V	15V	20V	25V	35V	50V
0.10	104									A
0.15	154									A
0.22	224								A	
0.33	334							A		
0.47	474						A		B	
0.68	684					A				
1	105			A		A	A/B	B	D	E
1.5	155		A	A			B	D		
2.2	225	A	A	A/B		A/B/C	B/D	D/E		F
3.3	335		A/B	A/B		B/D	E	E	F	G
4.7	475	A/B	A	B/D		B/D/E	D/E	F		
6	605									
6.8	685	A	D	B/D/E			D/E	F		
10	106	D	B/D/E	B/D/E		D/E/F	E	G	H	
14	146			E						
15	156		B/D/F	D/E/F		E	F/G			
22	226		F	D/E/F	E	F/G	G/H	H		
33	336	E/F	E	F/G		F/H				
47	476	E	E/F/G	F/G/H		G	H			
68	686	E/G	E/F/G/H	G						
100	107	F	G	H		H				
150	157		G	H						
220	227			H						
300	307		H							
330	337		H							

HOW TO ORDER

T4Z	E	106	*	10	C	□	L	@	4	^	++
Type	Case Size	Capacitance Code pF code: 1st two digits represent significant figures 3rd digit represents multiplier (number of zeros to follow)	Capacitance Tolerance K = ±10% M = ±20%	Voltage Code 004 = 4Vdc 006 = 6Vdc 010 = 10Vdc 015 = 15Vdc 020 = 20Vdc 025 = 25Vdc 035 = 35Vdc 050 = 50Vdc	ESR C = Std ESR	Packaging B = Bulk R = 7" T&R W = Waffle	Inspection Level L = Group A	Reliability Grade B = Weibull B 0.1%/1000 hrs. 90% conf.	Qualification Level 4 = HRC4000	Termination Finish H = Solder Plated 0 = Solder Fused 9 = Gold Plated 7 =100% Tin	Surge Test Option 00 = None 23 = 10 Cycles,+25°C 24 = 10 Cycles, -55°C & +85°C 45 = 10 cycles, -55°C & +85°C before burn-in

LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT

For RoHS compliant products, please select correct termination style.

TECHNICAL SPECIFICATIONS

Technical Data:	Unless otherwise specified, all technical data relate to an ambient temperature of 25°C								
Capacitance Range:	0.10 µF to 330 µF								
Capacitance Tolerance:	±10%; ±20%								
Rated Voltage (V_R)	at ≤ 85°C:	4	6	10	15	20	25	35	50
Category Voltage (V_C)	at ≤125°C:	2.7	4	6.7	10	13.3	16.7	23.3	33.3
Surge Voltage (V_S)	at ≤ 85°C:	5.3	8	13.3	20	26.7	33.3	46.7	66.7
applies to Weibull parts only	at ≤125°C:	3.5	5.3	8.7	13.3	17.8	22.2	31.1	44.5
Temperature Range:	-55°C to +125°C								

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TAZ SERIES

T4Z HRC4000 Medical Grade for Non-Critical Applications

RATING & PART NUMBER REFERENCE		Parametric Specifications by Rating										Typical RMS Ripple Data by Rating					
		Cap @ 120Hz	DC Rated Voltage	ESR @ 100kHz	DCL max			DF Max			Power Dissipation	25°C Ripple Current	85°C Ripple Current	125°C Ripple Current	25°C Ripple Voltage	85°C Ripple Voltage	125°C Ripple Voltage
					+25°C	+85°C	+125°C	+25°C	+(85/125)°C	-55°C							
P/N	Case	µF @ 25°C	V @ +85°C	Ohms @ +25°C	(µA)	(µA)	(µA)	(%)	(%)	(%)	W	A (100kHz)	A (100kHz)	A (100kHz)	V (100kHz)	V (100kHz)	V (100kHz)
T4ZA225*004C□L@4^++	A	2.2	4	8	0.100	1.000	1.200	6	8	8	0.05	0.079	0.071	0.032	0.632	0.569	0.253
T4ZA475*004C□L@4^++	A	4.7	4	12	0.100	1.000	1.200	6	8	8	0.05	0.065	0.058	0.026	0.775	0.697	0.310
T4ZB475*004C□L@4^++	B	4.7	4	8	0.100	1.000	1.200	6	8	8	0.07	0.094	0.084	0.037	0.748	0.673	0.299
T4ZA685*004C□L@4^++	A	6.8	4	12	0.136	1.360	1.632	6	8	8	0.05	0.065	0.058	0.026	0.775	0.697	0.310
T4ZD106*004C□L@4^++	D	10	4	4	0.200	2.000	2.400	8	8	10	0.08	0.141	0.127	0.057	0.566	0.509	0.226
T4ZE336*004C□L@4^++	E	33	4	3	0.660	6.600	7.920	8	10	12	0.09	0.173	0.156	0.069	0.520	0.468	0.208
T4ZF336*004C□L@4^++	F	33	4	2.2	0.660	.600	7.920	8	10	12	0.1	0.213	0.192	0.085	0.469	0.422	0.188
T4ZE476*004C□L@4^++	E	47	4	3	0.940	9.400	11.280	8	10	12	0.09	0.173	0.156	0.069	0.520	0.468	0.208
T4ZE686*004C□L@4^++	E	68	4	3	1.360	13.600	16.320	8	10	12	0.09	0.173	0.156	0.069	0.520	0.468	0.208
T4ZG686*004C□L@4^++	G	68	4	1.1	1.360	13.600	16.320	10	12	12	0.125	0.337	0.303	0.135	0.371	0.334	0.148
T4ZF107*004C□L@4^++	F	100	4	2	2.000	20.000	24.000	10	12	12	0.1	0.224	0.201	0.089	0.447	0.402	0.179
T4ZA155*006C□L@4^++	A	1.5	6	8	0.100	1.000	1.200	6	8	8	0.05	0.079	0.071	0.032	0.632	0.569	0.253
T4ZA225*006C□L@4^++	A	2.2	6	12	0.100	1.000	1.200	6	8	8	0.05	0.065	0.058	0.026	0.775	0.697	0.310
T4ZA335*006C□L@4^++	A	3.3	6	12	0.100	1.000	1.200	6	8	8	0.05	0.065	0.058	0.026	0.775	0.697	0.310
T4ZB335*006C□L@4^++	B	3.3	6	8	0.100	1.000	1.200	6	8	8	0.07	0.094	0.084	0.037	0.748	0.673	0.299
T4ZA475*006C□L@4^++	A	4.7	6	12	0.141	1.410	1.692	6	8	8	0.05	0.065	0.058	0.026	0.775	0.697	0.310
T4ZD685*006C□L@4^++	D	6.8	6	4.5	0.204	2.040	2.448	6	8	8	0.08	0.133	0.120	0.053	0.600	0.540	0.240
T4ZB106*006C□L@4^++	B	10	6	8	0.300	3.000	3.600	6	8	8	0.07	0.094	0.084	0.037	0.748	0.673	0.299
T4ZD106*006C□L@4^++	D	10	6	6	0.300	3.000	3.600	6	8	8	0.08	0.115	0.104	0.046	0.693	0.624	0.277
T4ZE106*006C□L@4^++	E	10	6	3.5	0.300	3.000	3.600	8	10	12	0.09	0.160	0.144	0.064	0.561	0.505	0.224
T4ZB156*006C□L@4^++	B	15	6	8	0.450	4.500	5.400	8	10	10	0.07	0.094	0.084	0.037	0.748	0.673	0.299
T4ZD156*006C□L@4^++	D	15	6	5	0.450	4.500	5.400	8	10	12	0.08	0.126	0.114	0.051	0.632	0.569	0.253
T4ZF156*006C□L@4^++	F	15	6	0.3	0.450	4.500	5.400	6	8	8	0.1	0.577	0.520	0.231	0.173	0.156	0.069
T4ZF226*006C□L@4^++	F	22	6	2.2	0.660	6.600	7.920	8	10	12	0.1	0.213	0.192	0.085	0.469	0.422	0.188
T4ZE336*006C□L@4^++	E	33	6	3.5	0.990	9.900	11.880	6	8	8	0.09	0.160	0.144	0.064	0.561	0.505	0.224
T4ZE476*006C□L@4^++	E	47	6	5	1.410	14.100	16.920	6	8	8	0.09	0.134	0.121	0.054	0.671	0.604	0.268
T4ZF476*006C□L@4^++	F	47	6	3.5	1.410	14.100	16.920	8	10	12	0.1	0.169	0.152	0.068	0.592	0.532	0.237
T4ZG476*006C□L@4^++	G	47	6	1.1	1.410	14.100	16.920	10	12	12	0.125	0.337	0.303	0.135	0.371	0.334	0.148
T4ZE686*006C□L@4^++	E	68	6	2	2.040	20.400	24.480	10	12	12	0.09	0.212	0.191	0.085	0.424	0.382	0.170
T4ZF686*006C□L@4^++	F	68	6	1.5	2.040	20.400	24.480	10	12	12	0.1	0.258	0.232	0.103	0.387	0.349	0.155
T4ZG686*006C□L@4^++	G	68	6	1	2.040	20.400	24.480	10	12	12	0.125	0.354	0.318	0.141	0.354	0.318	0.141
T4ZH686*006C□L@4^++	H	68	6	0.9	2.040	20.400	24.480	10	12	12	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZG107*006C□L@4^++	G	100	6	1.1	3.000	30.000	36.000	10	12	12	0.125	0.337	0.303	0.135	0.371	0.334	0.148
T4ZG157*006C□L@4^++	G	150	6	1.1	4.500	45.000	54.000	10	12	12	0.125	0.337	0.303	0.135	0.371	0.334	0.148
T4ZH307*006C□L@4^++	H	300	6	0.9	9.000	90.000	108.000	15	18	18	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZH337*006C□L@4^++	H	330	6	0.9	9.900	99.000	118.800	10	12	12	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZA105*010C□L@4^++	A	1	10	10	0.100	1.000	1.200	6	8	8	0.05	0.071	0.064	0.028	0.707	0.636	0.283
T4ZA155*010C□L@4^++	A	1.5	10	12	0.100	1.000	1.200	6	8	8	0.05	0.065	0.058	0.026	0.775	0.697	0.310
T4ZA225*010C□L@4^++	A	2.2	10	12	0.110	1.100	1.320	6	8	8	0.05	0.065	0.058	0.026	0.775	0.697	0.310
T4ZB225*010C□L@4^++	B	2.2	10	8	0.110	1.100	1.320	6	8	8	0.07	0.094	0.084	0.037	0.748	0.673	0.299

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

NOTE: KYOCERA AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.

TAZ SERIES

T4Z HRC4000 Medical Grade for Non-Critical Applications

RATING & PART NUMBER REFERENCE		Parametric Specifications by Rating										Typical RMS Ripple Data by Rating					
		Cap @ 120Hz	DC Rated Voltage	ESR @ 100kHz	DCL max			DF Max			Power Dissipation	25°C Ripple Current	85°C Ripple Current	125°C Ripple Current	25°C Ripple Voltage	85°C Ripple Voltage	125°C Ripple Voltage
					+25°C	+85°C	+125°C	+25°C	+(85/125)°C	-55°C							
P/N	Case	µF @ 25°C	V @ +85°C	Ohms @ +25°C	(µA)	(µA)	(µA)	(%)	(%)	(%)	W	A (100kHz)	A (100kHz)	A (100kHz)	V (100kHz)	V (100kHz)	V (100kHz)
T4ZA335*010C□L@4^++	A	3.3	10	12	0.165	1.650	1.980	6	8	8	0.05	0.065	0.058	0.026	0.775	0.697	0.310
T4ZB335*010C□L@4^++	B	3.3	10	18	0.165	1.650	1.980	6	8	8	0.07	0.062	0.056	0.025	1.122	1.010	0.449
T4ZB475*010C□L@4^++	B	4.7	10	8	0.235	2.350	2.820	6	8	8	0.07	0.094	0.084	0.037	0.748	0.673	0.299
T4ZD475*010C□L@4^++	D	4.7	10	4.5	0.235	2.350	2.820	6	8	8	0.08	0.133	0.120	0.053	0.600	0.540	0.240
T4ZB685*010C□L@4^++	B	6.8	10	8	0.340	3.400	4.080	6	8	8	0.07	0.094	0.084	0.037	0.748	0.673	0.299
T4ZD685*010C□L@4^++	D	6.8	10	5	0.340	3.400	4.080	6	8	8	0.08	0.126	0.114	0.051	0.632	0.569	0.253
T4ZE685*010C□L@4^++	E	6.8	10	3.5	0.340	3.400	4.080	6	8	8	0.09	0.160	0.144	0.064	0.561	0.505	0.224
T4ZB106*010C□L@4^++	B	10	10	8	0.500	5.000	6.000	8	10	10	0.07	0.094	0.084	0.037	0.748	0.673	0.299
T4ZD106*010C□L@4^++	D	10	10	4	0.500	5.000	6.000	6	8	8	0.08	0.141	0.127	0.057	0.566	0.509	0.226
T4ZE106*010C□L@4^++	E	10	10	3.5	0.500	5.000	6.000	6	8	8	0.09	0.160	0.144	0.064	0.561	0.505	0.224
T4ZE146*010C□L@4^++	E	14	10	3	0.700	7.000	8.400	6	8	8	0.09	0.173	0.156	0.069	0.520	0.468	0.208
T4ZD156*010C□L@4^++	D	15	10	5	0.750	7.500	9.000	6	8	8	0.08	0.126	0.114	0.051	0.632	0.569	0.253
T4ZE156*010C□L@4^++	E	15	10	3	0.750	7.500	9.000	8	10	10	0.09	0.173	0.156	0.069	0.520	0.468	0.208
T4ZF156*010C□L@4^++	F	15	10	2.5	0.750	7.500	9.000	8	8	10	0.1	0.200	0.180	0.080	0.500	0.450	0.200
T4ZD226*010C□L@4^++	D	22	10	8	1.100	11.000	13.200	6	8	8	0.08	0.100	0.090	0.040	0.800	0.720	0.320
T4ZE226*010C□L@4^++	E	22	10	2	1.100	11.000	13.200	8	10	10	0.09	0.212	0.191	0.085	0.424	0.382	0.170
T4ZF226*010C□L@4^++	F	22	10	3	1.100	11.000	13.200	8	10	10	0.1	0.183	0.164	0.073	0.548	0.493	0.219
T4ZF336*010C□L@4^++	F	33	10	1.5	1.650	16.500	18.800	8	10	10	0.1	0.258	0.232	0.103	0.387	0.349	0.155
T4ZG336*010C□L@4^++	G	33	10	1.1	1.650	16.500	19.800	10	12	12	0.125	0.337	0.303	0.135	0.371	0.334	0.148
T4ZF476*010C□L@4^++	F	47	10	1.5	2.350	23.500	28.200	10	12	12	0.1	0.258	0.232	0.103	0.387	0.349	0.155
T4ZG476*010C□L@4^++	G	47	10	1	2.350	23.500	28.200	10	12	12	0.125	0.354	0.318	0.141	0.354	0.318	0.141
T4ZH476*010C□L@4^++	H	47	10	0.9	2.350	23.500	28.200	10	12	12	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZG686*010C□L@4^++	G	68	10	1.1	3.400	34.000	40.800	10	12	12	0.125	0.337	0.303	0.135	0.371	0.334	0.148
T4ZH107*010C□L@4^++	H	100	10	0.9	5.000	50.000	60.000	10	12	12	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZH157*010C□L@4^++	H	150	10	0.9	7.500	75.000	90.000	10	12	12	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZH227*010C□L@4^++	H	220	10	0.9	11.000	110.000	132.000	10	12	12	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZE226*012C□L@4^++	E	22	12	0.5	1.320	13.200	15.840	6	8	8	0.09	0.424	0.382	0.170	0.212	0.191	0.085
T4ZA684*015C□L@4^++	A	0.68	15	12	0.100	1.000	1.200	6	8	8	0.05	0.065	0.058	0.026	0.775	0.697	0.310
T4ZA105*015C□L@4^++	A	1	15	15	0.100	1.000	1.200	6	8	8	0.05	0.058	0.052	0.023	0.866	0.779	0.346
T4ZA225*015C□L@4^++	A	2.2	15	15	0.165	1.650	1.980	6	8	8	0.05	0.058	0.052	0.023	0.866	0.779	0.346
T4ZB225*015C□L@4^++	B	2.2	15	5.5	0.165	1.650	1.980	6	8	8	0.07	0.113	0.102	0.045	0.620	0.558	0.248
T4ZC225*015C□L@4^++	C	2.2	15	5.5	0.165	1.650	1.980	6	8	8	0.075	0.117	0.105	0.047	0.642	0.578	0.257
T4ZB335*015C□L@4^++	B	3.3	15	9	0.248	2.475	2.970	6	8	8	0.07	0.088	0.079	0.035	0.794	0.714	0.317
T4ZD335*015C□L@4^++	D	3.3	15	5	0.248	2.475	2.970	6	8	8	0.08	0.126	0.114	0.051	0.632	0.569	0.253
T4ZB475*015C□L@4^++	B	4.7	15	5	0.353	3.525	4.230	6	8	8	0.07	0.118	0.106	0.047	0.592	0.532	0.237
T4ZD475*015C□L@4^++	D	4.7	15	6	0.353	3.525	4.230	6	8	8	0.08	0.115	0.104	0.046	0.693	0.624	0.277
T4ZE475*015C□L@4^++	E	4.7	15	4	0.353	3.525	4.230	6	8	8	0.09	0.150	0.135	0.060	0.600	0.540	0.240
T4ZD106*015C□L@4^++	D	10	15	6	0.750	7.500	9.000	6	8	8	0.08	0.115	0.104	0.046	0.693	0.624	0.277
T4ZE106*015C□L@4^++	E	10	15	4	0.750	7.500	9.000	6	8	8	0.09	0.150	0.135	0.060	0.600	0.540	0.240

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

NOTE: KYOCERA AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.

The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

T4Z HRC4000 Medical Grade for Non-Critical Applications

RATING & PART NUMBER REFERENCE		Parametric Specifications by Rating										Typical RMS Ripple Data by Rating					
		Cap @ 120Hz	DC Rated Voltage	ESR @ 100kHz	DCL max			DF Max			Power Dissipation	25°C Ripple Current	85°C Ripple Current	125°C Ripple Current	25°C Ripple Voltage	85°C Ripple Voltage	125°C Ripple Voltage
					+25°C	+85°C	+125°C	+25°C	+(85/125)°C	-55°C							
P/N	Case	µF @ 25°C	V @ +85°C	Ohms @ +25°C	(µA)	(µA)	(µA)	(%)	(%)	(%)	W	A (100kHz)	A (100kHz)	A (100kHz)	V (100kHz)	V (100kHz)	V (100kHz)
T4ZF106*015C□L@4^++	F	10	15	2.5	0.750	7.500	9.000	6	8	8	0.1	0.200	0.180	0.080	0.500	0.450	0.200
T4ZE156*015C□L@4^++	E	15	15	4	1.125	11.250	13.500	6	8	8	0.09	0.150	0.135	0.060	0.600	0.540	0.240
T4ZF226*015C□L@4^++	F	22	15	3	1.650	16.500	19.800	8	10	10	0.1	0.183	0.164	0.073	0.548	0.493	0.219
T4ZG226*015C□L@4^++	G	22	15	1.1	1.650	16.500	19.800	6	8	8	0.125	0.337	0.303	0.135	0.371	0.334	0.148
T4ZF336*015C□L@4^++	F	33	15	3	2.475	24.750	29.700	6	8	8	0.1	0.183	0.164	0.073	0.548	0.493	0.219
T4ZH336*015C□L@4^++	H	33	15	0.9	2.475	24.750	29.700	8	8	10	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZG476*015C□L@4^++	G	47	15	1.1	3.525	35.250	42.300	8	10	10	0.125	0.337	0.303	0.135	0.371	0.334	0.148
T4ZH107*015C□L@4^++	H	100	15	0.9	7.500	75.000	90.000	10	12	12	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZA474*020C□L@4^++	A	0.47	20	14	0.100	1.000	1.200	8	8	10	0.05	0.060	0.054	0.024	0.837	0.753	0.335
T4ZA105*020C□L@4^++	A	1	20	15	0.100	1.000	1.200	6	8	8	0.05	0.058	0.052	0.023	0.866	0.779	0.346
T4ZB105*020C□L@4^++	B	1	20	12	0.100	1.000	1.200	6	8	8	0.07	0.076	0.069	0.031	0.917	0.825	0.367
T4ZB155*020C□L@4^++	B	1.5	20	9	0.150	1.500	1.800	6	8	8	0.07	0.088	0.079	0.035	0.794	0.714	0.317
T4ZB225*020C□L@4^++	B	2.2	20	9	0.220	2.200	2.640	6	8	8	0.07	0.088	0.079	0.035	0.794	0.714	0.317
T4ZD225*020C□L@4^++	D	2.2	20	5	0.220	2.200	2.640	6	8	8	0.08	0.126	0.114	0.051	0.632	0.569	0.253
T4ZE335*020C□L@4^++	E	3.3	20	4	0.330	3.300	3.960	6	8	8	0.09	0.150	0.135	0.060	0.600	0.540	0.240
T4ZD475*020C□L@4^++	D	4.7	20	6	0.470	4.700	5.640	6	8	8	0.08	0.115	0.104	0.046	0.693	0.624	0.277
T4ZE475*020C□L@4^++	E	4.7	20	6	0.470	4.700	5.640	6	8	8	0.09	0.122	0.110	0.049	0.735	0.661	0.294
T4ZD685*020C□L@4^++	D	6.8	20	4	0.680	6.800	8.160	6	8	8	0.08	0.141	0.127	0.057	0.566	0.509	0.226
T4ZE685*020C□L@4^++	E	6.8	20	5	0.680	6.800	8.160	6	8	8	0.09	0.134	0.121	0.054	0.671	0.604	0.268
T4ZE106*020C□L@4^++	E	10	20	5	1.000	10.000	12.000	6	8	8	0.09	0.134	0.121	0.054	0.671	0.604	0.268
T4ZF156*020C□L@4^++	F	15	20	3	1.500	15.000	18.000	6	8	8	0.1	0.183	0.164	0.073	0.548	0.493	0.219
T4ZG156*020C□L@4^++	G	15	20	1.1	1.500	15.000	18.000	6	8	8	0.125	0.337	0.303	0.135	0.371	0.334	0.148
T4ZG226*020C□L@4^++	G	22	20	2.5	2.200	22.000	26.400	6	8	8	0.125	0.224	0.201	0.089	0.559	0.503	0.224
T4ZH226*020C□L@4^++	H	22	20	0.9	2.200	22.000	26.400	6	8	8	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZH476*020C□L@4^++	H	47	20	0.9	4.700	47.000	56.400	8	10	10	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZA334*025C□L@4^++	A	0.33	25	15	0.100	1.000	1.200	6	8	8	0.05	0.058	0.052	0.023	0.866	0.779	0.346
T4ZB105*025C□L@4^++	B	1	25	10	0.125	1.250	1.500	6	8	8	0.07	0.084	0.075	0.033	0.837	0.753	0.335
T4ZD155*025C□L@4^++	D	1.5	25	6.5	0.188	1.875	2.250	6	8	8	0.08	0.111	0.100	0.044	0.721	0.649	0.288
T4ZD225*025C□L@4^++	D	2.2	25	6	0.275	2.750	3.300	6	8	8	0.08	0.115	0.104	0.046	0.693	0.624	0.277
T4ZE225*025C□L@4^++	E	2.2	25	3.5	0.275	2.750	3.300	6	8	8	0.09	0.160	0.144	0.064	0.561	0.505	0.224
T4ZE335*025C□L@4^++	E	3.3	25	4	0.413	4.125	4.950	6	8	8	0.09	0.150	0.135	0.060	0.600	0.540	0.240
T4ZF475*025C□L@4^++	F	4.7	25	2.5	0.588	5.875	7.050	6	8	8	0.1	0.200	0.180	0.080	0.500	0.450	0.200
T4ZF685*025C□L@4^++	F	6.8	25	3	0.850	8.5001	0.200	6	8	8	0.1	0.183	0.164	0.073	0.548	0.493	0.219
T4ZG106*025C□L@4^++	G	10	25	1.4	1.250	12.500	15.000	6	8	8	0.125	0.299	0.269	0.120	0.418	0.376	0.167
T4ZH226*025C□L@4^++	H	22	25	0.9	2.750	27.500	33.000	6	8	8	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZA224*035C□L@4^++	A	0.22	35	18	0.100	1.000	1.200	6	8	8	0.05	0.053	0.047	0.021	0.949	0.854	0.379
T4ZB474*035C□L@4^++	B	0.47	35	10	0.100	1.000	1.200	6	8	8	0.07	0.084	0.075	0.033	0.837	0.753	0.335
T4ZD105*035C□L@4^++	D	1	35	6.5	0.175	1.750	2.100	6	8	8	0.08	0.111	0.100	0.044	0.721	0.649	0.288
T4ZF335*035C□L@4^++	F	3.3	35	2.5	0.578	5.775	6.930	6	8	8	0.1	0.200	0.180	0.080	0.500	0.450	0.200

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

NOTE: KYOCERA AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.

T4Z HRC4000 Medical Grade for Non-Critical Applications

RATING & PART NUMBER REFERENCE		Parametric Specifications by Rating										Typical RMS Ripple Data by Rating					
		Cap @ 120Hz	DC Rated Voltage	ESR @ 100kHz	DCL max			DF Max			Power Dissipation	25°C Ripple Current	85°C Ripple Current	125°C Ripple Current	25°C Ripple Voltage	85°C Ripple Voltage	125°C Ripple Voltage
					+25°C	+85°C	+125°C	+25°C	+(85/125)°C	-55°C							
P/N	Case	µF @ 25°C	V @ +85°C	Ohms @ +25°C	(µA)	(µA)	(µA)	(%)	(%)	(%)	W	A (100kHz)	A (100kHz)	A (100kHz)	V (100kHz)	V (100kHz)	V (100kHz)
T4ZH106*035C□L@4^++	H	10	35	0.9	1.750	17.500	21.000	8	10	10	0.15	0.408	0.367	0.163	0.367	0.331	0.147
T4ZA104*050C□L@4^++	A	0.1	50	22	0.100	1.000	1.200	6	8	8	0.05	0.048	0.043	0.019	1.049	0.944	0.420
T4ZA154*050C□L@4^++	A	0.15	50	17	0.100	1.000	1.200	6	8	8	0.05	0.054	0.049	0.022	0.922	0.830	0.369
T4ZE105*050C□L@4^++	E	1	50	6	0.250	2.500	3.000	6	8	8	0.09	0.122	0.110	0.049	0.735	0.661	0.294
T4ZF225*050C□L@4^++	F	2.2	50	2.5	0.550	5.500	6.600	6	8	8	0.1	0.200	0.180	0.080	0.500	0.450	0.200
T4ZG335*050C□L@4^++	G	3.3	50	2	0.825	8.250	9.900	6	8	8	0.125	0.250	0.225	0.100	0.500	0.450	0.200

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

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