



TZ SERIES ■ HIGH TEMP., HIGH RIPPLE, AUTOMOTIVE 125°C TYPE

KEY FEATURES



- ALUMINUM ELECTROLYTIC CAPACITOR • THT type
- Endurance: 125°C ■ 2000 hours up to 5000 hours
- Especially for applications with high ambient temperatures
- AEC-Q200 version available



SPECIFICATIONS

Items		Performance Characteristics									
Operating Temperature Range		-40 ~ +125°C									
Rated Voltage Range	V_R	10 ~ 100V DC									
Surge Voltage	V_S	$V_S = 1.15 \cdot V_R$									
Capacitance Range	C_R	4.7 ~ 1000 μ F									
Cap. Tolerance	ΔC	$\pm 20\%$ (120Hz ■ 20°C)									
Leakage Current (20°C ■ V_R applied)	I_{LEAK}	$\leq 0.03 \cdot C_R \cdot V_R$ or 4 μ A, whichever is greater ■ After 2 minutes [I_{LEAK} (μ A) ; C_R (μ F) ; V_R (V)]									
Dissipation Factor % (20°C ■ 120Hz)	$\tan \delta$	V_R (V DC)	10	16	25	35	50	63	80	100	
		$\tan \delta$ (%)	20	16	14	12	10	10	8	8	
For $C_R \geq 1000\mu$ F, add 2% per every multiple 1000 μ F of rated capacitance value											
Low Temperature Characteristics at 120Hz	Z ratio max.	V_R (V DC)	10	16	25	35	50	63	80	100	
		Z-25°C/Z+20°C	3	2	2	2	2	2	2	2	
		Z-40°C/Z+20°C	6	4	4	4	4	4	4	4	
Lifetime Test											
Endurance 125°C (V_R & I_R applied)	Test	2000 hours						$\phi D = 8$ mm			
		3000 hours						$\phi D = 10$ mm			
		5000 hours						$\phi D = 13$ to 16 mm			
	$\Delta C/C_R$	$\leq \pm 30\%$ of initial measured value									
	$\tan \delta$	$\leq 300\%$ of initial specified value									
Shelf Life 125°C ($V_R = 0$)	Test	1000 hours									
		$\Delta C/C_R$	$\leq \pm 30\%$ of initial measured value								
		$\tan \delta$	$\leq 300\%$ of initial specified value								
	I_{Leak}	\leq initial specified value									
	Before measurement: Restore capacitor to 20°C, apply V_R for 30 min according JIS-C-5101-4										



ALUMINUM ELECTROLYTIC CAPACITOR - TZ SERIES

STANDARD RATINGS

Part number shows bulk version with straight leads

V _R (V)	C _R (μF)	∅ D (mm)	L (mm)	Z - Max. Impedance +20°C - 100kHz (mΩ)	I _R - Max. Ripple Current +125°C - 100kHz (mA rms)	CapXon Part Number
10	220	8	11.5	320	340	TZ221M010F115A□
	330	10	12.5	150	620	TZ331M010G125A□
	470	10	12.5	150	620	TZ471M010G125A□
	1000	10	20	75	950	TZ102M010G200A□
16	100	8	11.5	320	340	TZ101M016F115A□
	220	10	12.5	150	620	TZ221M016G125A□
	330	10	12.5	150	620	TZ331M016G125A□
25	100	8	11.5	320	340	TZ101M025F115A□
	220	10	12.5	150	620	TZ221M025G125A□
	330	10	16	94	790	TZ331M025G160A□
35	100	8	11.5	320	340	TZ101M035F115A□
	220	10	16	94	790	TZ221M035G160A□
50	10	8	11.5	750	180	TZ100M050F115A□
	22	8	11.5	500	250	TZ220M050F115A□
	33	8	11.5	500	280	TZ330M050F115A□
	47	8	11.5	500	280	TZ470M050F115A□
	100	10	12.5	200	520	TZ101M050G125A□
	220	10	20	98	880	TZ221M050G200A□
	330	13	20	81	990	TZ331M050I200A□
63	33	8	11.5	1500	150	TZ330M063F115A□
	47	10	12.5	590	530	TZ470M063G125A□
	100	10	16	410	690	TZ101M063G160A□
	220	13	20	160	1050	TZ221M063I200A□
	330	13	25	120	1290	TZ331M063I250A□
	470	13	30	97	1460	TZ471M063I300A□
80	22	8	11.5	1500	150	TZ220M080F115A□
	33	10	12.5	800	480	TZ330M080G125A□
	47	10	12.5	800	480	TZ470M080G125A□
	100	10	20	390	790	TZ101M080G200A□
	220	13	25	180	1240	TZ221M080I250A□
	330	13	30	160	1390	TZ331M080I300A□
	470	16	25	110	1500	TZ471M080J250A□
100	4.7	8	11.5	2000	130	TZ4R7M100F115A□
	10	8	11.5	1500	150	TZ100M100F115A□
	22	10	12.5	800	480	TZ220M100G125A□
	33	10	12.5	800	480	TZ330M100G125A□
	47	10	16	550	630	TZ470M100G160A□
	100	13	20	250	990	TZ101M100I200A□
	220	16	25	110	1500	TZ221M100J250A□
	330	16	31.5	79	1790	TZ331M100J315A□

□: Enter blank for Standard version

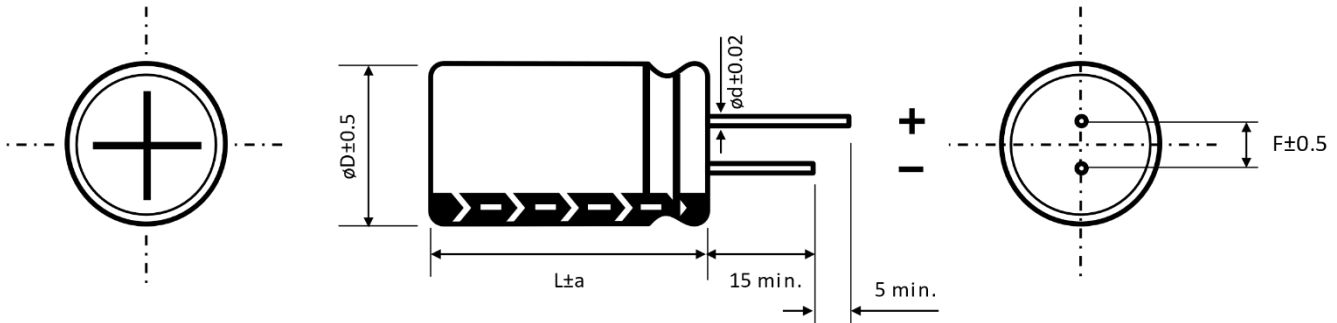
□: Enter X for AEC-Q200 version

See "PACKAGING INFORMATION" to taped or formed products.



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DIMENSIONS ▪ All dimensions in mm



$\varnothing D$	8	10	13	16
F	3.5	5	5	7.5
$\varnothing d$	0.5	0.6	0.6	0.8
a	1.5			L = 25 to 35.5
				L < 25 and L ≥ 40
			1.5	2

MULTIPLIER K_f for RIPPLE CURRENT vs. FREQUENCY

C_R (μF) / Frequency (Hz)	120	1k	10k	50k ~ 100k
$4.7 < C_R \leq 100$	0.4	0.75	0.90	1
$220 < C_R \leq 470$	0.5	0.85	0.94	1
1000	0.6	0.87	0.95	1

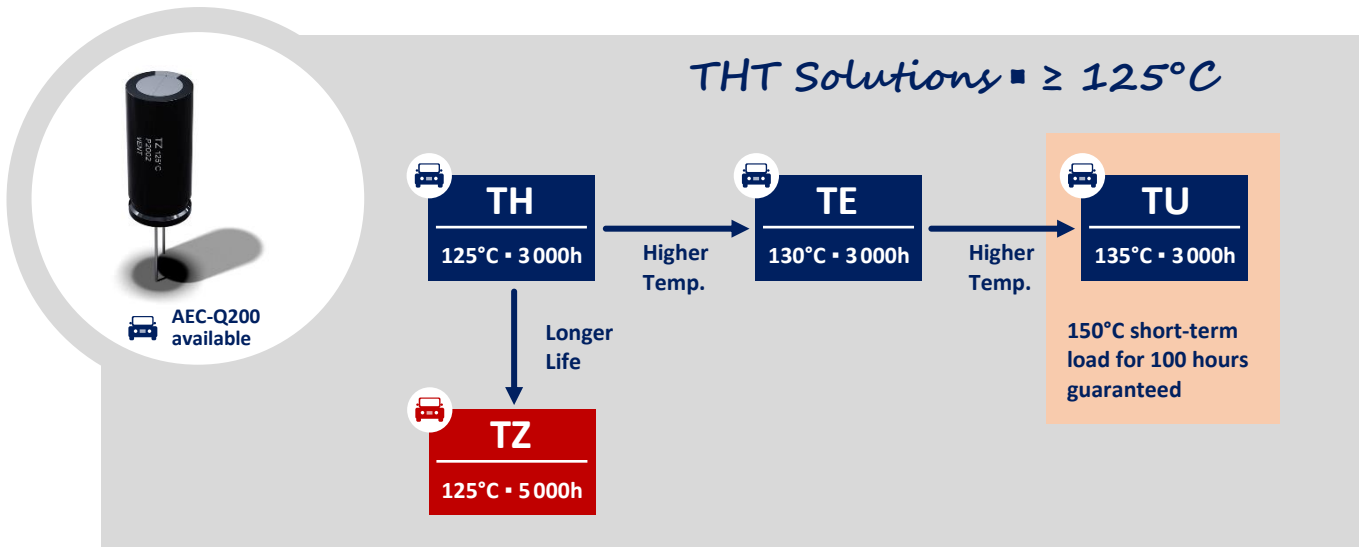
PRECAUTIONS, GUIDELINES AND PACKAGING INFORMATION

Unless otherwise agreed in individual specifications, all products are subject to our “General Precautions and Guidelines” as well as our “Packaging Information”. Please refer to the following links in the table.

General Precautions & Guidelines	Packaging Information	3D Models	Reliability Tests



GROUP CHART



DISCLAIMER

All product related data (e.g. specification, statements and general information) are subject to change without any notice. It is necessary that the customer observes all product related technical / application information and handling instructions.

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Particular operating conditions (ambient temperature, ripple current, voltage, thermal resistance, etc.) as well as storage, production or assembly may affect the performance and the lifetime of the capacitor. Please consult CapXon for lifetime estimation, failure mode considerations or worst-case scenarios according to the product technology, product tolerances / deviations or change of the characteristics of the capacitor due to shipment, storage, handling, production and usage.

For aerospace or military application, life-saving, life-sustaining, safety critical applications or any application where failure may cause severe personal injury or death, please consult us before design-in the capacitor in your application.

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