

### GT SERIES ■ MINIATURIZED, AUTOMOTIVE 105°C TYPE

#### KEY FEATURES



- ALUMINUM ELECTROLYTIC CAPACITOR ■ THT type
- Endurance: 105°C ■ 10000 hours
- Miniaturized for space critical applications
- High reliability
- AEC-Q200 version available



#### SPECIFICATIONS

Items		Performance Characteristics							
Operating Temperature Range		-40 ~ +105°C							
Rated Voltage Range	$V_R$	10 ~ 100V DC							
Surge Voltage	$V_S$	$V_S = 1.15 \cdot V_R$							
Capacitance Range	$C_R$	1 ~ 330 $\mu$ F							
Cap. Tolerance	$\Delta C$	$\pm 20\%$ (120Hz ■ 20°C)							
Leakage Current (20°C ■ $V_R$ applied)	$I_{LEAK}$	$\leq 0.01 \cdot C_R \cdot V_R$ or 3 $\mu$ A, whichever is greater ■ After 2 minutes [ $I_{LEAK}$ ( $\mu$ A) ; $C_R$ ( $\mu$ F) ; $V_R$ (V) ]							
Dissipation Factor % (20°C ■ 120Hz)	tan $\delta$	$V_R$ (V DC)	10	16	25	35	50	63	100
		tan $\delta$ (%)	45	35	30	22	19	17	15
Low Temperature Characteristics at 120Hz	Z ratio max.	$V_R$ (V DC)	10	16	25	35	50	63	100
		Z-25°C/Z+20°C	10	8	6	6	5	5	5
		Z-40°C/Z+20°C	14	10	8	8	8	8	6

Lifetime Test			
Endurance 105°C ( $V_R$ & $I_R$ applied)	Test	<b>10 000 hours</b>	
	$\Delta C/C_R$	$\leq \pm 25\%$ of initial measured value	
	tan $\delta$	$\leq 300\%$ of initial specified value	
	$I_{Leak}$	$\leq$ the initial specified value	
Shelf Life 105°C ( $V_R = 0$ )	Test	<b>1 000 hours</b>	
	$\Delta C/C_R$	$\leq \pm 25\%$ of initial measured value	
	tan $\delta$	$\leq 300\%$ of initial specified value	
	$I_{Leak}$	$\leq$ the initial specified value	
Before measurement: Restore capacitor to 20°C, apply $V_R$ for 30 min according JIS-C-5101-4			

**STANDARD RATINGS**

Part number shows bulk version with straight leads

$V_R$ (V)	$C_R$ ( $\mu F$ )	$\phi D$ (mm)	L (mm)	$I_R$ • Max. Ripple Current +105°C • 100kHz (mA rms)	CapXon Part Number
10	100	5	11	140	GT101M010C110A □
	220	6.3	11	220	GT221M010E110A □
	330	8	11.5	340	GT331M010F115A □
16	47	5	11	140	GT470M016C110A □
	100	6.3	11	220	GT101M016E110A □
	220	8	11.5	340	GT221M016F115A □
25	33	5	11	140	GT330M025C110A □
	47	5	11	140	GT470M025C110A □
	100	6.3	11	220	GT101M025E110A □
35	33	5	11	90	GT330M035C110A □
	47	6.3	11	220	GT470M035E110A □
	100	8	11.5	340	GT101M035F115A □
50	1	5	11	26	GT010M050C110A □
	2.2	5	11	36	GT2R2M050C110A □
	3.3	5	11	75	GT3R3M050C110A □
	4.7	5	11	85	GT4R7M050C110A □
	10	5	11	95	GT100M050C110A □
	22	5	11	140	GT220M050C110A □
	33	6.3	11	200	GT330M050E110A □
	47	6.3	11	200	GT470M050E110A □
100	8	11.5	280	GT101M050F115A □	
63	10	5	11	85	GT100M063C110A □
	22	6.3	11	180	GT220M063E110A □
	33	6.3	11	180	GT330M063E110A □
	47	8	11.5	250	GT470M063F115A □
100	1	5	11	40	GT010M100C110A □
	2.2	5	11	50	GT2R2M100C110A □
	3.3	5	11	60	GT3R3M100C110A □
	4.7	5	11	70	GT4R7M100C110A □
	10	6.3	11	150	GT100M100E110A □
	22	8	11.5	230	GT220M100F115A □

 □: Enter **blank** for Standard version

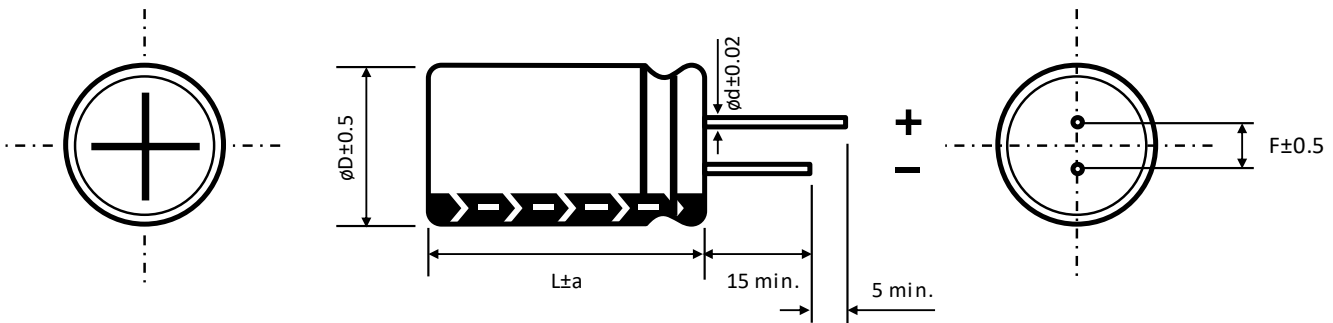
 □: Enter **X** for AEC-Q200 version

See "PACKAGING INFORMATION" to taped or formed products.

**MULTIPLIER  $K_f$  for RIPPLE CURRENT vs. FREQUENCY**

$C_R$ ( $\mu F$ ) / Frequency (Hz)	100/120	1k	10k	100k
1 ~ 10	0.42	0.6	0.8	1
22 ~ 33	0.55	0.75	0.9	1
47 ~ 330	0.7	0.85	0.95	1

## DIMENSIONS ▪ All dimensions in mm



ø D	5	6.3	8
F	2	2.5	3.5
ø d	0.5	0.5	0.5
a	1.5	1.5	1.5

## 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.

<a href="#">General Precautions &amp; Guidelines</a>	<a href="#">Packaging Information</a>	<a href="#">3D Models</a>

### 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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