

### SW SERIES ■ 5MM HEIGHT, AUDIO 85°C TYPE

#### KEY FEATURES



- ALUMINUM ELECTROLYTIC CAPACITOR ■ THT type
- Endurance: 85°C ■ 1000 hours
- Optimized for high density insertion
- Low height ■ 5mm
- Especially for audio applications



#### SPECIFICATIONS

Items		Performance Characteristics							
Operating Temperature Range		-40 ~ +85°C							
Rated Voltage Range	$V_R$	4 ~ 50V DC							
Surge Voltage	$V_S$	$V_S = 1.15 \cdot V_R$							
Capacitance Range	$C_R$	1 ~ 470 $\mu$ 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)	4	6.3	10	16	25	35	50
		$\tan \delta$ (%)	35	24	20	16	14	12	10
Low Temperature Characteristics at 120Hz	Z ratio max.	$V_R$ (V DC)	4	6.3	10	16	25	35	50
		Z-25°C/Z+20°C	7	4	3	2	2	2	2
		Z-40°C/Z+20°C	15	8	6	4	4	3	3

Lifetime Test									
Endurance 85°C ( $V_R$ applied)	Test	<b>1000 hours</b>							
	$\Delta C/C_R$	$\leq \pm 20\%$ of initial measured value							
	$\tan \delta$	$\leq 200\%$ of initial specified value							
	$I_{Leak}$	$\leq$ the initial specified value							
Shelf Life 85°C ( $V_R = 0$ )	Test	<b>1000 hours</b>							
	$\Delta C/C_R$	$\leq \pm 20\%$ of initial measured value							
	$\tan \delta$	$\leq 200\%$ 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						

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

$C_R$ ( $\mu$ F) / Frequency (Hz)	50/60	100/120	300	1k	$\geq 10k$
1 ~ 470	0.7	1	1.17	1.36	1.5

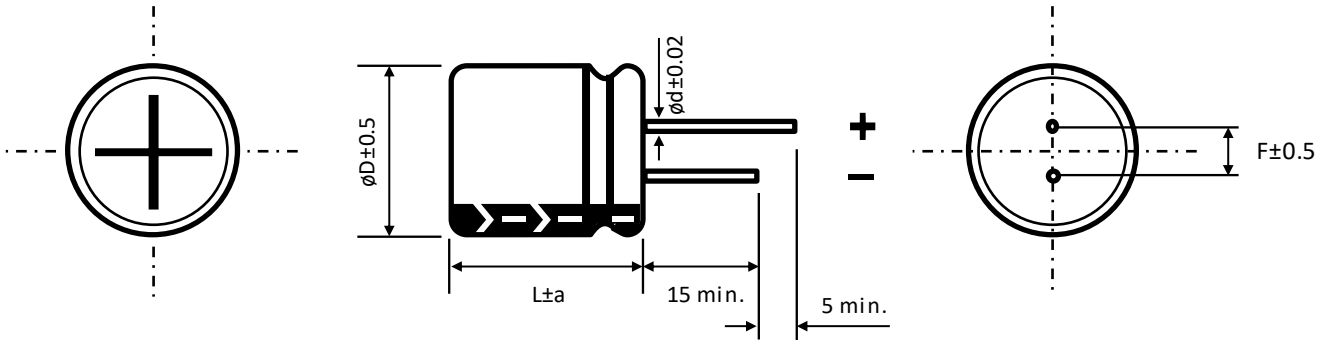
**STANDARD RATINGS**

Part number shows bulk version with straight leads

V <sub>R</sub> (V)	C <sub>R</sub> (μF)	∅ D (mm)	L (mm)	I <sub>r</sub> - Max. Ripple Current +85°C • 120Hz (mA rms)	CapXon Part Number
4	33	4	5	30	SW330M004B050A
	47	4	5	33	SW470M004B050A
	100	5	5	54	SW101M004C050A
	220	6.3	5	87	SW221M004E050A
	330	8	5	143	SW331M004F050A
	470	8	5	185	SW471M004F050A
6.3	22	4	5	26	SW220M6R3B050A
	33	5	5	37	SW330M6R3C050A
	47	5	5	42	SW470M6R3C050A
	100	6.3	5	67	SW101M6R3E050A
	220	8	5	112	SW221M6R3F050A
	330	8	5	170	SW331M6R3F050A
10	22	5	5	33	SW220M010C050A
	33	5	5	40	SW330M010C050A
	47	6.3	5	49	SW470M010E050A
	100	8	5	80	SW101M010F050A
	220	8	5	136	SW221M010F050A
16	10	4	5	21	SW100M016B050A
	22	5	5	36	SW220M016C050A
	33	6.3	5	47	SW330M016E050A
	47	6.3	5	58	SW470M016E050A
	100	8	5	92	SW101M016F050A
25	4.7	4	5	15	SW4R7M025B050A
	10	5	5	27	SW100M025C050A
	22	6.3	5	43	SW220M025E050A
	33	6.3	5	52	SW330M025E050A
	47	8	5	70	SW470M025F050A
	100	8	5	109	SW101M025F050A
35	3.3	4	5	13	SW3R3M035B050A
	4.7	4	5	18	SW4R7M035B050A
	10	5	5	29	SW100M035C050A
	22	6.3	5	46	SW220M035E050A
	33	8	5	62	SW330M035F050A
	47	8	5	81	SW470M035F050A
50	1	4	5	7.3	SW010M050B050A
	2.2	4	5	11	SW2R2M050B050A
	3.3	4	5	15	SW3R3M050B050A
	4.7	5	5	20	SW4R7M050C050A
	10	6.3	5	31	SW100M050E050A
	22	8	5	52	SW220M050F050A
	33	8	5	70	SW330M050F050A

See "PACKAGING INFORMATION" to taped or formed products.





### DIMENSIONS ▪ All dimensions in mm



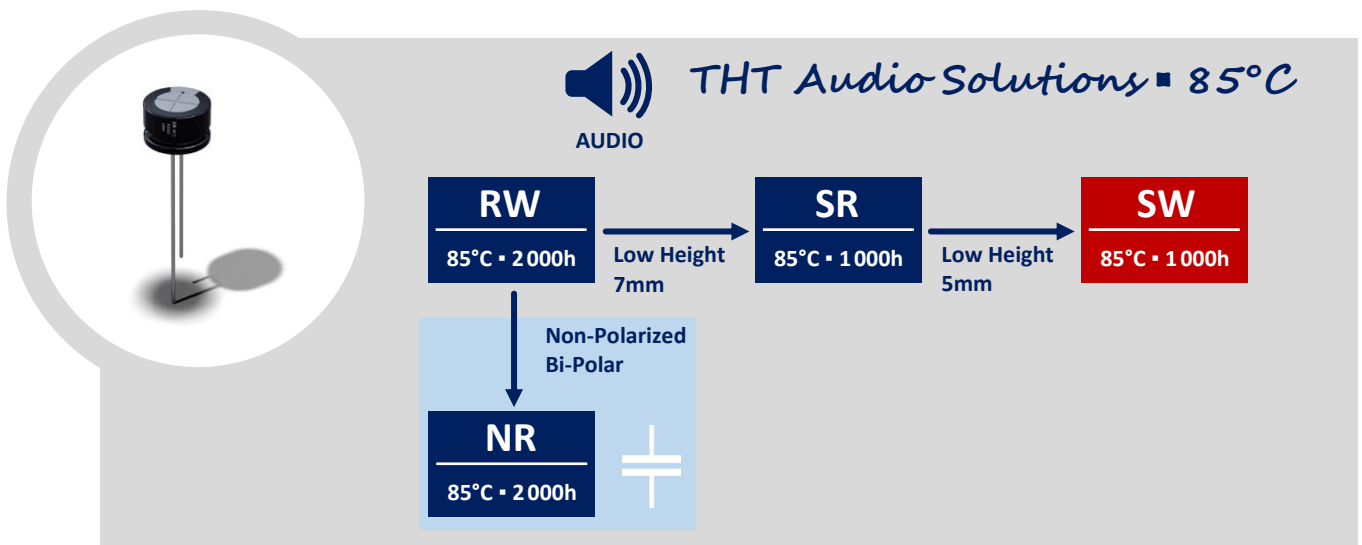
$\phi D$	4	5	6.3	8
F	1.5	2	2.5	3.5
$\phi d$	0.45	0.45	0.45	0.45
a	1	1	1	1

### 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.

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

### 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.

CapXon products are designed and manufactured according to severe quality and safety standards. Under no circumstance, CapXon warrants that any CapXon product is suitable for the purposes intended for your application, even CapXon knows the application. It is customer's duty and obligation to check and make sure that CapXon products are suitable for the purposes intended and select the correct and proper CapXon product. Customers are requested to perform a sufficient validation and reliability evaluation to assure needed safety level and reliability performance by suitable designs and to apply proper safeguards (e.g. redundancies, protective circuits).

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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