

SH SERIES

FEATURES: NONPOLAR RADIAL LEAD TYPE FOR HORIZONTAL DEFLECTION EQUALIZATION, IN TV RECEIVERS & VIDEO MONITOR DISPLAYS.

ENDURANCE: +85°C, 2000 Hrs.

REFERENCE STANDARDS: IS4317/ IEC 384-4.

PRODUCT MARKING

PROVIDED WITH ORANGE COLOUR SLEEVE AND BLACK PRINT

■ SPECIFICATIONS

PARAMETERS.	PERFORMANCE CHARACTERISTICS																		
Operating Temperature	- 40° C to +85°C																		
Working Voltage	25 Vdc and 50 Vdc																		
Capacitance Range	1 to 18µF (at +27°C, 100 Hz)																		
Capacitance Tolerance	±20%																		
Leakage Current (After 3mt charging in both direction through 1000 Ω resistor) IL in µA	IL ≤ 0.2 CV Where IL = Leakage current in µA C= Capacitance(µF) , V= Working Voltage in Volt																		
Dissipation factor (Tan δ) Max (at + 27°C, 100 Hz)	4% (at 27°C, 100 Hz)																		
Life Tests																			
(i). Endurance Test at High Temperature +85°C at WV.	<table border="1"> <thead> <tr> <th>Tests</th> <th>Endurance DC Life Test</th> <th>Storage Shelf Life Test</th> </tr> </thead> <tbody> <tr> <td>Test Condition</td> <td>Capacitor at rated voltage and At +85°C for 2000 Hrs, Polarity reversal after 1000 Hrs Measurements after recovery to +27°C</td> <td>Capacitor under no voltage At +85°C for 1000 Hrs Measurements after recovery to +27°C</td> </tr> <tr> <td>Parameters</td> <td></td> <td></td> </tr> <tr> <td>Δ Capacitance</td> <td>Within ± 15% of initial measured Value</td> <td>Within ± 10% of initial measured Value</td> </tr> <tr> <td>Tan δ</td> <td>Within 200% of initial limit</td> <td>Within 150% of initial limit</td> </tr> <tr> <td>D.C Leakage Current</td> <td>Within initial limit</td> <td>Within 200% of initial limit</td> </tr> </tbody> </table>	Tests	Endurance DC Life Test	Storage Shelf Life Test	Test Condition	Capacitor at rated voltage and At +85°C for 2000 Hrs, Polarity reversal after 1000 Hrs Measurements after recovery to +27°C	Capacitor under no voltage At +85°C for 1000 Hrs Measurements after recovery to +27°C	Parameters			Δ Capacitance	Within ± 15% of initial measured Value	Within ± 10% of initial measured Value	Tan δ	Within 200% of initial limit	Within 150% of initial limit	D.C Leakage Current	Within initial limit	Within 200% of initial limit
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(ii). Storage Test at High Temperature +85°C at 0V.																			

■ OTHER INFORMATION

Capacitor Codification System	For details refer to page no. 2
Dimensional Specification	For details refer to page no. 3
Marking Specification	For details refer to page no. 4
Type of Packing and Lead Configuration	(1) Bulk Packing - Straight Lead / Lead Formed and Cut / Kinking and Cut. For details refer to page no.5 &6

STANDARD RATING TABLE: -

Provides detailed information regarding applicable case size and the appropriate ripple current handling capability of the defined case size;

WV	Items	Cap(µF)										
		1	2.2	3.3	3.9	4.7	5.6	6.8	10	12	15	18
25V	CC		DG	DK	DK	EK	EK	ER	EU	SH	SJ	SJ
	RC		3	4	4.5	5	6	7	9	11	12.5	14
50V	CC	DG	EK	EK	ER	EU	SH	SJ	SJ			
	RC	2	4	4.5	5	5.5	7	8	8.5			

Abbreviations used:

WV: Working voltage of the capacitor in Volts.

Cap: Capacitance in microfarad.

RC : Maximum Ripple current allowed in ampere at 15.75 KHz/ +85°C.

SV: Surge voltage in volts.

CC: Case code

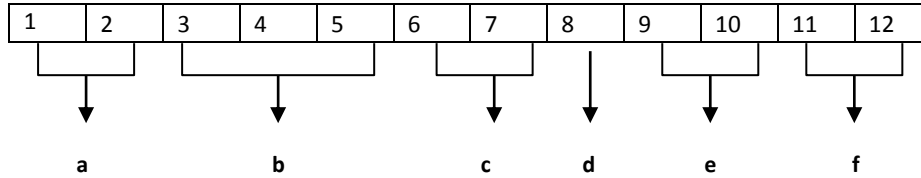
Temperature Multiplier For Ripple Current

Temp (°C)	40	60	70	85
Multipliers	1.3	1.28	1.15	1

SH SERIES

1. CAPACITOR ORDERING INFORMATION:

Capacitors are identified with the help of 12-digit code. Expansion of Part Nos. for SH series capacitors are detailed below.



a														
Series Code. Eg: SH														
b														
Capacitance Value Code														
Capacitance (µF)	1	0.22	2.2	22	220									
Code	010	R22	2R2	220	221									
c														
Voltage Code														
Working Voltage (V)	6.3	10	12	16	25	35	40	50	63	100				
Code	0J	1A	1B	1C	1E	1V	1G	1H	1J	2A				
d														
Tolerance Code														
Tolerance	Capacitance Tolerance						Spec. Cap Tolerance	Spec. Tanδ Tolerance						
	±5%	± 10%	± 20%	± 30%	-10% +30%	-10% +50%			A	S				
Code	J	K	M	N	Q	T								
e						f								
Size Code						Capacitor Lead wire Termination Code								
Follow respective Dimensional specification. Eg: HS, AS, BB etc.						Provided by the factory based on customer requirements. Eg:								
						Item	Taped 5mm pitch	Taped 2.5mm pitch	Formed & cut	Kinking & cut	Bulk packing straight lead			
						Code	T0	T2	F0	FD	B0			

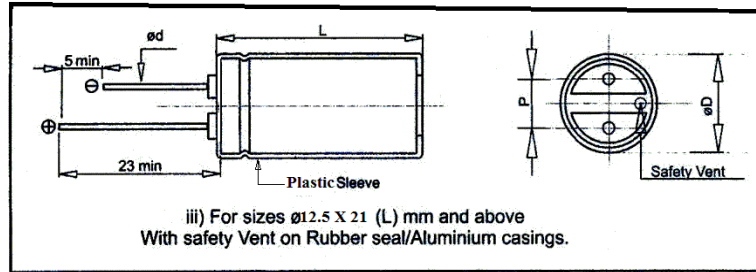
2. DIMENSIONAL SPECIFICATION FOR RADIAL LEAD TYPE CAPACITORS

Dimensions of SH series capacitors are detailed below.

Case Code	Diameter ØD ± 0.5 (mm)	Length L ± 1.0 (mm)	Pitch P ± 0.5 (mm)	Lead Dia Ød ± 0.05 (mm)
CG	10	21	5	0.6
CK	10	25	5	0.6
DG	12.5	21	5	0.6
DK	12.5	25	5	0.6
EK	16	25	7.5	0.8
ER	16	31	7.5	0.8
EU	16	36	7.5	0.8
SR	18	31	7.5	0.8
SH	18	37	7.5	0.8
SJ	18	41	7.5	0.8

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PHYSICAL OUTLINES



(All Dimensions in mm)

3. MARKING ON THE CAPACITOR

Marking specifications of SH series capacitors are detailed below. Below mentioned details are printed on orange colored vinyl sleeve with black print

- a) Manufacturer’s name and logo **KELTRON®**
- b) Capacitor series & upper category temperature
- c) Nominal capacitance value in μF
- d) Capacitance tolerance code
- e) Rated working voltage in V
- f) Date code (Year-Month)
- g) Negative terminals are indicated on the sleeve

Note: Manufacturer’s logo, capacitor series, upper category temperature and date code are marked only for sizes $\phi 8$ mm and above.

Date Code:

Date code is provided on the capacitor sleeve in Year – Month format for sizes $\phi 8$ mm and above. Year & Month code of SH capacitor of diameter $\phi 8$ mm & above are detailed below.

Year code

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Letter Code	M	N	P	R	S	T	U	V	W	X

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Letter Code	A	B	C	D	E	F	H	J	K	L

Year codes repeats after each cycle of 20 years.

Month Code

Month	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug	Sep.	Oct.	Nov	Dec.
Code	1	2	3	4	5	6	7	8	9	O	N	D

SH SERIES

4. LEAD CONFIGURATION AND PRIMARY PACKING STANDARD FOR RADIAL ALUMINIUM ELECTROLYTIC CAPACITORS LEAD CONFIGURATION

SH capacitors are available in the following lead configuration.

- STRAIGHT LEAD – Applicable to case code starting from DG (Size $\Phi 12.5 \times 21$ mm) to SJ (Size $\Phi 18 \times 41$ mm).

PRIMARY PACKING STANDARD BULK PACKING

SH series capacitors are generally BULK PACKED in thick polythene bags which are heat sealed to avoid direct atmospheric exposure. Individual primary packing in polythene bag is provided with a LABEL which carries outgoing Inspection Report No, Work Order No, Capacitor Series, Capacitance Value, Working Voltage, Capacitor tolerance, Capacitor size, Capacitor Part No, Temperature, Quantity and Date of packing. **IT IS CUSTOMARY TO RETURN THE PACKING LABEL TO THE FACTORY IN CASE OF QUANTITY/QUALITY NON-CONFORMANCE.**

BULK PACKING QUANTITY DETAILS.

Size (Φ D x Lmm)	12.5X21	12.5x25	16x25	16x31	16x36	18x31	18x37	18x41
Case code	DG	DK	EK	ER	EU	SR	SH	SJ
Nos/ Bag	200	200	100	100	100	50	50	50
Nos/ Carton	800	600	400	300	300	200	200	200
Wt. (Kg) 1000 Nos (Approx)	3.2	2.8	2.7	2.9	3.3	2.4	2.8	3.2

PHYSICAL DIMENSIONS; UNIT (mm)

Case Diameter	H \pm 0.5	H1	F \pm 0.3	P \pm 0.5	$\Phi d \pm 0.05$	K (min)
$\Phi 12.5$	5.0	2.7	1.3	5.0	0.6	2.8
$\Phi 16$	5.0	2.7	1.3	7.5	0.8	5.5
$\Phi 18$	5.0	2.7	1.3	7.5	0.8	5.5

Packing Methods of Lead Formed & Cut Capacitors and Kinking & Cut Capacitors

Capacitors are packed in primary cardboard carton using separators and then filled into appropriate Mother & Master carton for dispatch.