



# DATA SHEET

**HIP High Reliability 125°C and 5000hrs for Automotive Equipmer**

**Serie: I15007**

Voltage: 16Volt

Range: 680 $\mu$ F

Impedance: 0,14 $\Omega$

Dimension 12,5x13,5mm

Ripple Current: 750mA

**CHIP High Reliability 125°C and  
5000hrs for Automotive  
Equipment**

Serie No.: **I15007**

DRW:	Jason	CHKD	Wilson	MATL:	Wilson	TOLERANCE	Mason	DATE	03.06.2014	Customer:
APPD:	Schumi			FINISH	Jamy		Sheet No.	1 from 7		

# EDCON-COMPONENTS



Designed for surface mounting on high density circuit board

Emboss carrier tape packing systems is available for automatic insertion



## Technical Informations

Voltage:	<b>16Volt</b>
Range:	<b>680µF</b>
Dimension; D x L mm	<b>12,5x13,5mm</b>
Impedance (Ω) max., at 20°C, 100kHz	<b>0,14Ω</b>
Ripple Current (mA rms) at 105°C, 100kHz	<b>750mA</b>

Ordering Code			
<b>160</b>	<b>Voltage</b>		
<b>681</b>	<b>Range</b>		
<b>D=</b>	<b>I</b>	<b>L=</b>	<b>5</b>

Operating Temperatur Range of -40°C ~ +125°C  
Load Life of 1000~5000 hours

<b>Leakage current max.</b>	WV ≤ 100	I = 0,03CV or 4µA whichever is greater ( after 2 minutes)													
	WV ≥ 100	I = 0,04CV or 100µA whichever is greater ( after 2 minutes)													
<b>Capacitance tolerance</b>	± 20% at 120Hz, 20°C														
<b>Dissipation factor max. (at 120Hz, 20°C)</b>	WV		10	16	25	35	50	63	100	160	200	250	400	450	
	Tan δ	Ø6,3 ~ Ø10mm	0,24	0,20	0,16	0,14	0,14	0,18	0,18						
		Ø12,5 ~ Ø16mm	0,22	0,18	0,16	0,14	0,12	0,14	0,10	0,20	0,20	0,20	0,20	0,20	0,20

<b>Low Temperatur characteristics ( Impedance ratio at 120Hz )</b>	WV		10	16	25	35	50	63	100	160	200	250	400	450
	Ø6,3 ~ Ø10mm	Z-25°C / Z+20°C	4	3	2	2	2	2	2					
		Z-40°C / Z+20°C	10	8	6	4	4	4	4					
	Ø12,5 ~ Ø16mm	Z-25°C / Z+20°C	4	3	2	2	2	2	2	3	3	3	6	6
Z-40°C / Z+20°C		8	6	4	3	3	3	3	6	6	6	10	10	

<b>Load Life ( after application of the rated voltage for 5000hrs at 125°C</b>	Leakage current	Less than specified value
	Capacitance Change	Within ±30% of initial value
	Tan δ	Less than 300% of specified value
	Ø8x10,5 ~ Ø10 (10~100V) 2000hours , Ø8x6,2 ~ Ø6,3: 1000hours	
	Ø 12,5 ~ Ø16 ( 160~450V) : 2000hours	

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**Shell life (at 125°C)** After 1000hours no load test, leakage current, capacitance and tan $\delta$  are same as load life value.

<b>Resistance to soldering heat</b>	After reflow soldering and resistance at room temperature, they meet the characteristics requirements listed at underside	
	Leakage current	Less than specified value
	Capacitance Change	Within $\pm 10\%$ of initial value
	Tan $\delta$	Less than specified value

FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT					
Capacitance $\mu\text{F}$	Frequency				
	50Hz	120Hz	1KHz	10KHz	100KHz $\leq$
10 ~100	0,35	0,40	0,75	0,90	1,00
220 ~470	0,35	0,50	0,85	0,94	1,00
680 ~2200	0,40	0,60	0,85	0,95	1,00

coefficient	Frequency					
	50Hz	120Hz	300Hz	1KHz	10KHz	100KHz $\leq$
160~450V	0,75	1,00	1,25	1,50	1,75	1,80

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## Technical Drawing

### Dimension of Size $\varnothing 8 \times 10,5 \sim 16 \text{mm}$



### Dimension of Size $\varnothing 4 \sim 8 \times 6,2 \text{mm}$



D x L	$\varnothing 4 \times 5,8$	$\varnothing 5 \times 5,8$	$\varnothing 6,3 \times 5,8$	$\varnothing 6,3 \times 7,7$	$\varnothing 8 \times 6,2$	$\varnothing 8 \times 10,5$	$\varnothing 10 \times 10,5$	$\varnothing 10 \times 13,5$	$\varnothing 12,5 \times 13,5$	$\varnothing 12,5 \times 16$	$\varnothing 16 \times 16,5$
A	2,0	2,2	2,6	2,6	3,4	3,0	3,3	3,3	4,9	4,9	5,8
B	4,3	5,3	6,6	6,6	8,4	8,4	10,4	10,4	13,0	13,0	17,0
C	4,3	5,3	6,6	6,6	8,4	8,4	10,4	10,4	13,0	13,0	17,0
E +/-0.2	1,0	1,3	1,9	1,9	2,3	3,1	4,7	4,7	4,7	4,7	6,4
L	5,8	5,8	5,8	7,7	6,2	10,5	10,5	13,5	13,5	16,0	16,5

\*1 Voltage mark (6V) represents 6,3V for  $\varnothing 4 \sim 10 \text{mm}$

\*3 (L +/- 0.5) is applicable to  $\varnothing 8 \times 10,5 \sim \varnothing 10 \text{mm}$

\*2 (L +/- 0.3) is applicable to  $\varnothing 6,3 \sim 7,7$  and  $\varnothing 8 + 6,2 \text{mm}$

\*4 (L +/- 1.0) is applicable to  $\varnothing 12,5 \sim \varnothing 16 \text{mm}$

RE. Date code and seriew type -1st digit for Year 2nd digit for Quarter, 4 quarter codes in one year area 1,4,7,0

3rd character for Serie S

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email: [info@edcon-components.com](mailto:info@edcon-components.com)

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Voltage Ordering Code	Code
4,0	4V0
6,3	6V3
10	100
16	160
25	250
35	350
50	500
63	630
80	800
100	101

Diameter ordering Code D	Code
3mm	3
4mm	A
5mm	B
6,3mm	C
8mm	E
10mm	G
12,5mm	I
16mm	K

Height ordering Code L	Code
4mm	A
5,4mm	0
5,8mm	1
6,2mm	2
7,7mm	3
10,5mm	4
13,5mm	5
16mm	6
16,5mm	7

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## Ordering Informations

Serie	Voltage Code	Tolerance Code	Range Code	Size Code D	Size Code L	Special function	ROHS	Packing Code		
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<b>I15007</b>	<b>160</b>	<b>M</b>	<b>681</b>	<b>I</b>	<b>5</b>	<b>XX</b>	<b>R</b>	<b>TR</b>		
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look table Voltage Code	<b>M= ±20%</b>	Ordering Code Range	Look table Code D	Look table Code L	<b>XX= No function</b>	<b>R= ROHS Conform</b> <b>N= NON ROHS Conform</b>	<b>TR= Tape Reel Packing</b> <b>BU= Bulk-Ware</b>		
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## Soldering Profile Curve

### Classification Reflow Profile (JEDEC J-STD-020C)



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