



DATA SHEET

CHIP Wide Temperature Range 105°C

Serie: I15005

Voltage:	16Volt	Range:	220µF
Impedance:	no specified	Dimension	6,3x7,7mm
Ripple Current:	105mA		

**CHIP Wide Temperature
Range 105°C**

Serie No.: **I15005**

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

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Designed for surface mounting on high density circuit board

Emboss carrier tape packing systems is available for automatic insertion



Technical Informations

Voltage:	16Volt
Range:	220µF
Dimension; D x L mm	6,3x7,7mm
Impedance (Ω) max., at20°C, 100hKz	no specified
Ripple Current (mA rms) at 105°C, 100kHz	105mA

Ordering Code			
160	Voltage		
221	Range		
D=	C	L=	3

Operating Temperatur Range of -40°C ~ +85°C

Load Life of 1000~2000 hours at 85°C

Leakage current max.	Ø4 ~ Ø10mm	I= 0,01CV or 3µA whichever is greater (after 2 minutes)									
	Ø12,5 ~ Ø16mm	I= 0,03CV or 4µA whichever is greater (after 1 minutes)									
Capacitance tolerance	± 20% at 120Hz, 20°C										
Dissipation factor max. (at 120Hz, 20°C)	WV		4,0	6,3	10	16	25	35	50	63	100
	Tanδ	Ø4 ~ Ø10mm	0,42	0,30	0,26	0,22	0,16	0,14	0,21	0,12	0,12
		Ø12,5 ~ Ø16mm	0,45	0,38	0,34	0,30	0,26	0,22	0,18	0,14	0,12

Low Temperatur characteristics (Impedance ratio at 120Hz)	WV		4,0	6,3	10	16	25	35	50	63	100
	Ø4 ~ Ø10mm	Z-25°C / Z+20°C	7	4	3	2	2	2	2	2	2
		Z-40°C / Z+20°C	15	8	6	4	4	3	3	3	4
	Ø12,5 ~ Ø16mm	Z-25°C / Z+20°C	7	5	4	3	2	2	2	2	2
Z-40°C / Z+20°C		17	12	10	8	5	4	3	3	3	

Load Life (after application of the rated voltage for 1000hrs at 105°C	Leakage current	Less than specified value									
	Capacitance Change	Within ±20% of initial value									
		Within ±30% of initial value for 4V & 6,3V									
	Tanδ	Less than 200% of specified value									
Shell life (at 85°C)	After 1000hours no load test, leakage current, capacitance and tanδ are same as load life value.										

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Resistance to soldering heat	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 δ	Less than specified value

FREQUENCY COEFFICIENT OF PERMISSIBLE RIPPLE CURRENT						
Diameter	Capacitance	Frequency				
	μF	50Hz	120Hz	300Hz	1KHz	10KHz \leq
$\varnothing 4 \sim \varnothing 10\text{mm}$	0,1 ~68	0,70	1,00	1,17	1,36	1,50
	100 ~3300	0,85	1,00	1,08	1,20	1,30
$\varnothing 12,5 \sim \varnothing 16\text{mm}$	~68	0,75	1,00	1,35	1,57	2,00
	100 ~680	0,80	1,00	1,23	1,34	1,50
	1000 ~6800	0,85	1,00	1,10	1,13	1,15

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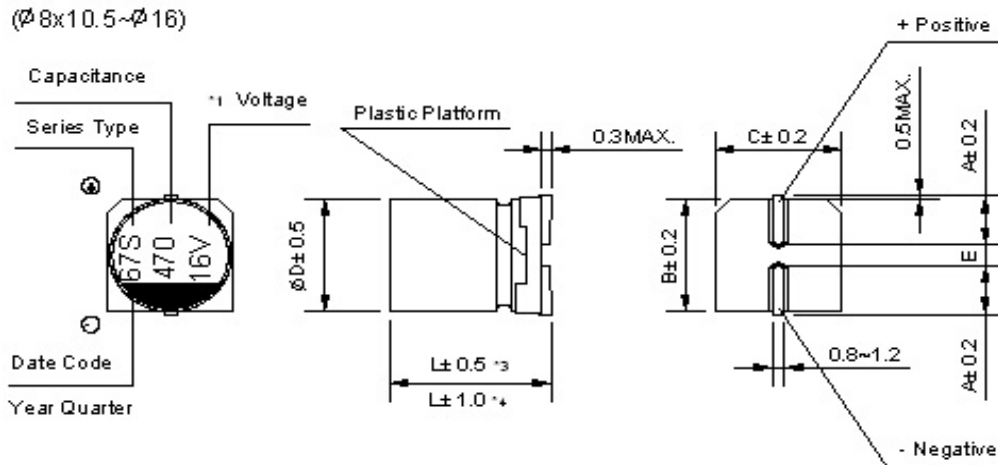


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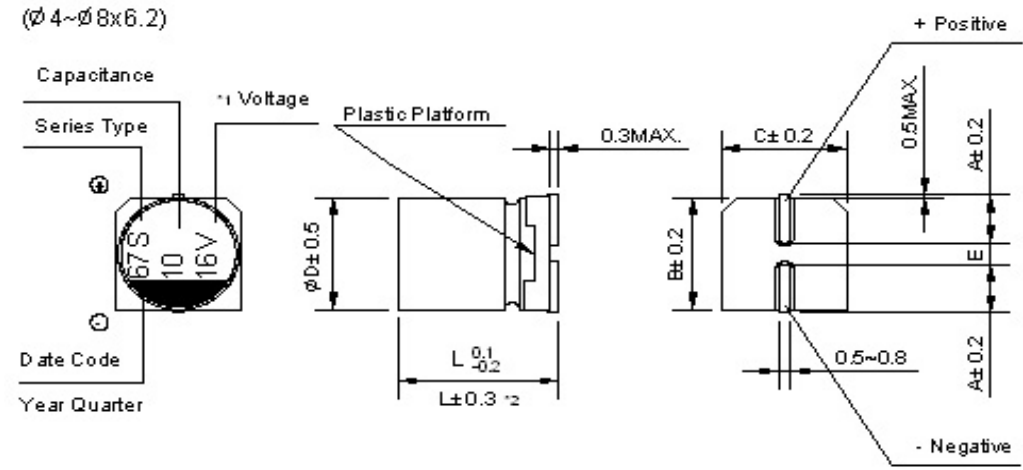


Technical Drawing

Dimension of Size \varnothing 8x10,5 ~ 16mm



Dimension of Size \varnothing 4~ 8x6,2mm



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

*3 (L +/- 0.5) is applicable to \varnothing 8x10,5 ~ \varnothing 10mm

*2 (L +/- 0.3) is applicable to \varnothing 6,3 ~ 7.7 and \varnothing 8 + 6,2mm

*4 (L +/- 1.0) is applicable to \varnothing 12,5 ~ \varnothing 16mm

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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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		
I15005	160	M	221	C	3	XX	R	TR		

look table Voltage Code	M= ±20%	Ordering Code Range	Look table Code D	Look table Code L	XX= No function	R= ROHS Conform N= NON ROHS Conform	TR= Tape Reel Packing BU= Bulk-Ware		
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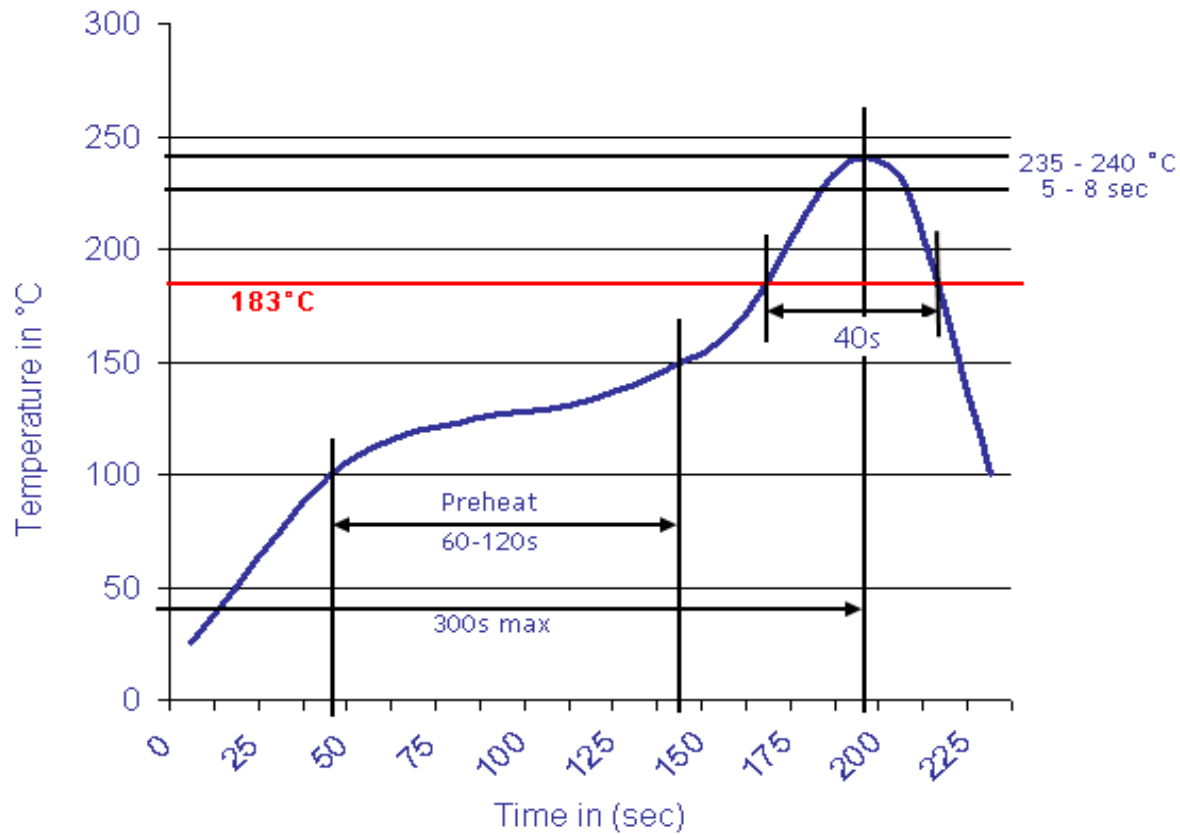


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Soldering Profile Curve

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



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