## **Series KG**

## 7mm height miniature size/+105°C



#### **Features**

- Low profile 7mm height for  $\phi 4 \sim \phi 8$  mm
   Long life: 1000 hours at +105°C
- Various lead taping configurations for high density insertion

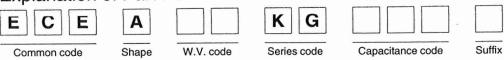
### **Specifications**

Item		Performance Characteristics								
Operating Temperature Range		-55 to +105°C								
Rated Working Voltage F	Range	6.3 to 50V DC								
Nominal Capacitance Ra	nge	0.1 to 220μF								
Capacitance Tolerance		±20% (120Hz, +20°C)								
Leakage Current	gran g	I ≤ 0.01CV or 3 [μA] Whichever is greater measured after 2 minutes application of rated working voltage at +20°C.						cation of		
tan δ		Working voltage [V]	6.3	10	16	25	35	50		
tarro	(120Hz, +20°C)	tan δ max.	0.22	0.19	0.16	0.14	0.12	0.10		
- 1		Impedance ratio max. at 120Hz								
Characteristics at Low Temperature		Working voltage [V]	6.3	10	16	25	35	50		
		-25°C/+20°C	3	2	2	2	2	2		
		-40°C/+20°C	6	5	3	3	3	3		
		-55°C/+20°C	8	6	4	4	4	4		
Impedance		Refer to standard prod	ucts table (1	00kHz, +20°C	;)					
Endurance		Test conditions  Duration : 1000 hours  Ambient temperature : +105°C  Applied voltage : Rated DC working voltage								
		Post test requirements at +20°C  Leakage current : ≤ Initial specified value  Capacitance change : ±20% of initial measured value  tan δ : ≤ 200% of initial specified value								
Shelf Life		Test conditions Duration Ambient temperature Applied voltage	9 : +10	Post test requirements at +20°C : 1000 hours Same limits for "Endurance". : +105°C : (None)						

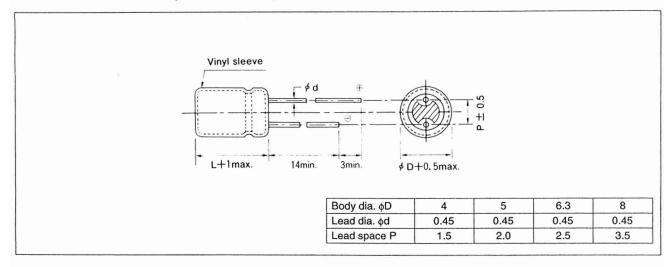
(See page:17~20)

# **Panasonic**

### **Explanation of Part Numbers**



### Dimensions in mm (not to scale)



Case Size

W.V.[V.DC]	6.3	10	16	25	35	50
Cap.[μF]	(OJ)	(1A)	(1C)	(1E)	(1V)	(1H)
0.1 (0R1)						4 × 7
0.15 (R15)						4 × 7
0.22 (R22)						4 × 7
0.33 (R33)						4 ×7
0.47 (R47)						4 ×7
0.68 (R68)						4 ×7
1 (010)						4 ×7
1.5 (1R5)						4 × 7
2.2 (2R2)						4 × 7
3.3 (3R3)						4 × 7
4.7 (4R7)					4 ×7	4 × 7
6.8 (6R8)			4 × 7	4 ×7	4 ×7	5 × 7
10 (100)			4 ×7	4 ×7	5 ×7	6.3×7
15 (150)			4 ×7	5 × 7	6.3×7	6.3×7
22 (220)	4 ×7	4 ×7	5 × 7	5 × 7	6.3×7	8 × 7
33 (330)	5 ×7	5 × 7	6.3×7	6.3×7	8 ×7	8 × 7
47 (470)	5 ×7	6.3×7	6.3×7	8 × 7	8 ×7	
68 (680)	6.3×7	6.3×7	8 ×7	8 ×7		
100 (101)	6.3×7	6.3×7	8 ×7			
220 (221)	8 ×7					

<sup>( )</sup> indicates W.V. and capacitance code.

# **Panasonic**

#### Standard Products

W.V. Cap. [μF]		Part No.	D.C.L. (+20*C/2 min)	tan δ (120Hz/+20°C)	Impedance (100kHz/+20°C)	Ripple current (100kHz/+105°C) [mA] rms	Dimensions [mm]	
		[μA] max.	max.	[Ω] max.	max.	φD	L	
	22	ECEA0JKG220	3.0	0.22	10	47	4	
6.3	33	ECEA0JKG330	3.0	0.22	5	70	5	
	47	ECEA0JKG470	3.0	0.22	5	70	5	
	68	ECEA0JKG680	4.2	0.22	2	121	6.3	
	100	ECEA0JKG101	6.3	0.22	2	121	6.3	
	220	ECEA0JKG221	13.8	0.22	1.2	190	8	
	22	ECEA1AKG220	3.0	0.19	10	47	4	
10	33	ECEA1AKG330	3.3	0.19	5	70	5	
	47	ECEA1AKG470	4.7	0.19	2	121	6.3	
	68	ECEA1AKG680	6.8	0.19	2	121	6.3	
	100	ECEA1AKG101	10.0	0.19	2	121	6.3	
	6.8	ECEA1CKG6R8	3.0	0.16	10	47	4	
	10	ECEA1CKG100	3.0	0.16	10	47	4	
	15	ECEA1CKG150	3.0	0.16	10	47	4	
16	22	ECEA1CKG220	3.5	0.16	5	70	5	
	33	ECEA1CKG330	5.2	0.16	2	121	6.3	
	47	ECEA1CKG470	7.5	0.16	2	121	6.3	
	68	ECEA1CKG680	10.8	0.16	1.2	190	8	
	100	ECEA1CKG101	16.0	0.16	1.2	190	8	
	6.8	ECEA1EKG6R8	3.0	0.14	10	47	4	
25	10	ECEA1EKG100	3.0	0.14	10	47	4	
	15	ECEA1EKG150	3.7	0.14	5	70	5	-
	22	ECEA1EKG220	5.5	0.14	5	70	5	
	33	ECEA1EKG330	8.2	0.14	2	121	6.3	
	47	ECEA1EKG470	11.7	0.14	1.2	190	8	
	68	ECEA1EKG680	17.0	0.14	1.2	190	8	
	4.7	ECEA1VKG4R7	3.0	0.14	10	47	4	
-	6.8	ECEATVKG4R7	3.0	0.12	10	47	4	
	10	ECEATVKG100	3.5	0.12	5	70	5	
35	15	ECEATVKG100	5.2	0.12	2	121	6.3	
	22	ECEATVKG130	7.7	0.12	2	121	6.3	
	33	ECEA1VKG330	11.5	0.12	1.2	190	8	
	0.1	ECEA1VKG470 ECEA1HKG0R1	3.0	0.12	1.2	190	8	
50		ECEATHKGONT ECEATHKGR15			22	1.7		_
	0.15		3.0	0.10	16	2.5	4	
	0.22	ECEA1HKGR22	3.0	0.10	12	3.5	4	
	0.33	ECEA1HKGR33	3.0	0.10	10	5.4	4	
	0.47	ECEA1HKGR47	3.0	0.10	10	7.6	4	
	0.68	ECEA1HKGR68	3.0	0.10	10	10	4	
	1.0	ECEA1HKG010	3.0	0.10	10	16	4	
	1.5	ECEA1HKG1R5	3.0	0.10	10	24	4	
	2.2	ECEA1HKG2R2	3.0	0.10	10	36	4	
	3.3	ECEA1HKG3R3	3.0	0.10	10	47	4	
	4.7	ECEA1HKG4R7	3.0	0.10	10	47	4	
	6.8	ECEA1HKG6R8	3.4	0.10	5.	70	5	
	10	ECEA1HKG100	5.0	0.10	2	121	6.3	
	15	ECEA1HKG150	7.5	0.10	2	121	6.3	
	22	ECEA1HKG220	11.0	0.10	1.2	190	8	
	33	ECEA1HKG330	16.5	0.10	1.2	190	8	