







DATA SHEET

Y1 AC Ceramic Capacitor 400VAC

Serie: 122002

Mat. Code E Material: B= Y5P

Voltage Code 401 Voltage: 401= 400VAC

Range Code 222 Range: 222= 2200pf

Y1 AC Ceramic Capacitor 400VAC

Serie No.: **I22002**

Customer:

DRW: Jason **CHKD** Wilson MATL: Wilson **TOLERANCE** Mason DATE 01.11.2010 APPD: Schumi **FINISH** Sheet No. 1 from 13 Jamv









Technical Specifications

Temperature Characteristics Y5P and Y5U Capacitance Change of Temperature Y5P = $\pm 10\%$

Coeffizient $Y5U = \pm 20\% \sim -55\%$ Temperature Range: $-25^{\circ}\text{C} \sim +85^{\circ}\text{C}$

Capacitance Tolerance: $K= \pm 10\%$ $M= \pm 20\%$

Nominal Capacitance Code (Example)

 Code
 Capacitance (pf)

 101
 100

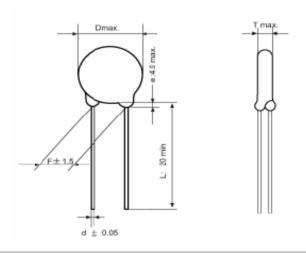
 102
 1000

 222
 2200

 103
 10000

Nominal capacitance shall consist of three numbers in the unit of picofard(pf). The frist and the second numbers mean the signifibant figures and the third number shall presendt the number of zeros flowing the significant figures.

Lead Style Informations



Lead Code Style (A) (mm)

Pitch Code	Α	В	С	D	Е				
F	2,5	5,0	7,5	10	12,5				
L		only 20	mm lor	ng lead					
d		0,5 or	0,6 or 0),8mm					
е	max. 4,0mm								

Y1 AC Ceramic Capacitor 400VAC

Part No.: **I22002**

Customer:

MATL: DRW: CHKD Wilson Wilson Mason 01.11.2010 Jason **TOLERANCE** DATE APPD: Schumi FINISH Sheet No. 2 from 13 Jamy





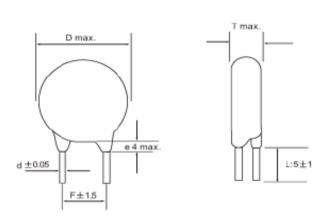


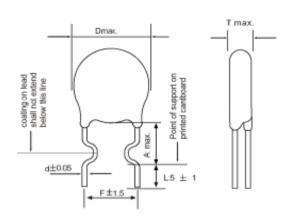


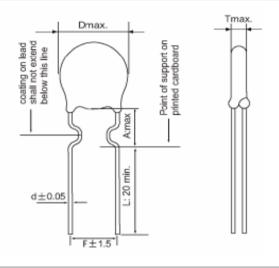
Lead Style Informations

Lead Style Informations

Lead Style Informations







Lead Code Style (B) Unit (mm)

Lead Code Style (C) Unit (mm)

Lead Code Style (D) Unit (m	m
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Pitch Code	Α	В	C	D	Е			
F	2,5	5,0	7,5	10	12,5			
L	5,0mm or on customer request							
d	0,5 or 0,6 or 0,8mm							
е	max. 4,0mm							

Pitch Code		В	С	D	Е
F		5,0	7,5	10	12,5
Α		5,0	5,0	6,5	6,5
L	5,0n	quest			
d		0,5 or	0,6 or 0),8mm	

Pitch Code		В	С	D	Е			
F		5,0	7,5	10	12,5			
Α		5,0	5,0	6,5	6,5			
L	20mm min.							
d	0,5 or 0,6 or 0,8mm							

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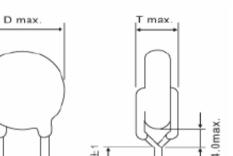
F±1.5





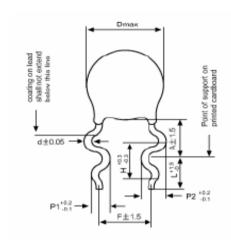


Lead Style Informations



 $\Phi d \pm 0.05$

Lead Style Informations



Lead Code Style (H) Unit (mm)

Pitch Code		В	С	D	Е				
F		5,0	7,5	10	12,5				
Г	5,0m	nm or o	n custo	mer rec	uest				
d	0,5 or 0,6 or 0,8mm								

Lead Code Style (M) Unit (mm)

Pitch Code		В	C	D	Е				
F		5,0	7,5	10	12,5				
Н		2,6	2,6	3,3	3,3				
P1		1,3	1,25	1,65	1,65				
P2		1,7	1,65	1,95	1,95				
Α	D<8	3: 6,0±	1,5, D>	8: 7,0±	: 1,5				
L	3,0 ~ 30mm								
d		0,5 or	0,6 or 0),8mm					

Y1 AC Ceramic Capacitor 400VAC

Part No.: **122002**

Customer:

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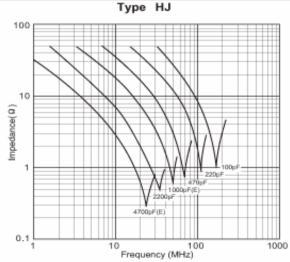


Specification and test method

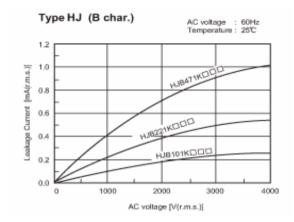
Operating Temperature range -25°C ~ +105°C But temperature range is -25% ~ +85°C at safety standard specification.

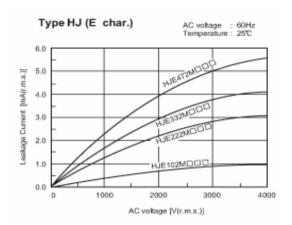
Test and measurement shall be made at the standard condition. (Temperature 15 ~ 35°C relative humidity 45 ~ 75% and athmospheric pressure 860~1060hpa). Unless otherwise specified herein it doubt accurated on the value of measurement, and remesuarement was requested by customer capacitor shall be measuremed at the reference condition (Temperature 20 ±2°C, relative humidity 60~70% and atmospheric pressure 860~1060hpa), unless otherwise specified herein.

Impedance vs. Frequency Characteristics

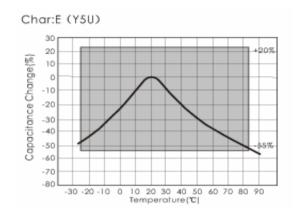


Leakage Current Characteristics

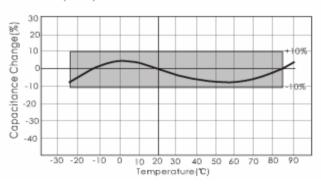




Capacitance Temperature Characteristics



Char: B(Y5P)



400VAC

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Y1 AC Ceramic Capacitor

Customer:

Wilson DRW: CHKD MATL: Mason 01.11.2010 Jason Wilson **TOLERANCE** DATE **FINISH** APPD: Schumi Sheet No. 5 from 13 Jamy









	Item		Sp	pecification			Testing Me	thod			Item		Specif	ication		Testi	ing Method
An	perance and	1		d defect on app			pacitor shall be irspes for visible evider	•				Cha	r. Capaci	tance Change			e measurement shall be step specified in table 3.
	Dimensions			dimension are becified range.	within	,	sions shall be mea					В		ithin ± 10%		Step	Temperature (°C)
			sp	becilied range.			calipers.			Т.	emperature	Е	withi	n + 20% -55%		1	.+ 20 ±2
						The car	pacitor shall be irsp	pected by nacked			aracteristics				1	2	25 ±2
	Marking		lob	oe easily legible) .		eyes	,				Tem	perature	characteristics		3	.+ 20 ±2
С	apacitance		Within	spefied tolerar	nce									-25 to +85°C		4	.+ 85 ±2
			Cha	ar. Specification	n		capacitance, dissi									5	.+ 20 ±2
Dissipa	ation Factor ((D,F)	B=	D,F= ≤ 2,5%	·	measur	ed at 25 \pm 2°C with AC1 \pm 0,1V (r	*									
			E=	D,F= ≤ 2,5%	·)	1	7.01 ± 0,1 v (1				Apperance		No mark	ed defect.			narge in made 50 times at m the capacitor (Cd)
Insulation	on Resistand R)	ce (10	0000M Ω min.			ulation resistance s DC 500 ± 50V with charging	in 60 ±5sec. Of			I.R.		1000M	Ω min.		ged at DC vol	tage of specified
	Between I wires			No failure		AC 500	apacitor shall not b DV (r.m.s.) are app lead wires for	lied between the 600s.		Discharge test (1)						Vs. R3	S RI
Dielectric Strength	Body Insul	lation		No failure		First, the terminals of the capacitor shall be connected together. Then as shown in Figure right, a metal foil shall be closely wrapped around the body of the capacitor to the distance of about 3-4mm from each terminal. Then the capacitor shall be insetedinto a container filed with ballsof about				Discharg	Dielectric Strength	per Item 6.		em 6.	Ct: Capacitor under Test Cd: 0,001μF S: high voltage switch R1: 1000Ω R2: 1000ΜΩ R3: Surge resistance Vs: DC 10KV		vitch
						AC400 for 60 capacit	ameter. Finally AC (r.m.s.) is applied 0s between the or lead wires and metal balls.	Metal balls									ramic Capacitor 00VAC 122002
DR	RW:	Jaso	on	CHKD	Wil	son	MATL:	Wilson	TOLER	RANCE	Mason	DA	TE	01.11.2010			
AP	PD:	Schu	mi				FINISH	Jamy			Shee	t No.		6 from 13	Cus	tomer:	

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III.	1												ER OF EDCON-GROUP
Item			Specification			Testing Me	thod			Item	Spe	cification	Testing Method
				F C	placed a capacito four dich	arges from a dum	the test to be subjected to p capacitor		Disc	charge Trest II		loth around cpacitors t glow or flame.	Capacitance value and D.F. are follo Cap. Value Cd to 0,005µF 0,0051 0,05µF Cap. Value CD 0,005µF 0,05µ D.F of Cd. 0,5% max. 0,5%max
				t 0 0	placed D test. The discharg 60Hz po capacito	OC 5KV across the interval between the is to be 5s. AC2 tential is to applied r under test and is	successive 240V (r.m.s.)- d across the		Solde	rability of leads	uniformly c direction	nall be soldered with oated on the axial over 3/4 of the rential direction.	The lead wire of capacitor shall be dipp into molten solder of 235 ± 5°C for 2 ± 1. The depth of immersion is up to about 2,0mm from the root of lead wires.
				d	circiut is	opened in a short	ter time by			Apperance		arket defect	
						wn of the capacito			ø.		Within the s	specified tolerance	The capacitor shall firmly be soldered t
		 1		ŀ		in accordance wi	usted to provide a th the following.		stance	Capacitance	Char.	Specification	supporting lead wire and vibration whit 10 to 55Hz in the vibration frequency ra
Discharge Tr	est II		cheese-cloth ard tors shall not glo flame.	ow or	Vdc= ⁵⁰⁰	0(Cd+Ct) (V)	Ct Cd Vdc		Vibration Resistance	D, F.	B E	D,F, ≤ 2,5% D,F, ≤ 2,5%	1,5mm in total amplitude, and about 1n the rate of vibration change from 10H 55Hz and back to 10Hz is applied for a of 6H; 2H each in 3 mutually perpendic directions.
				\$ [s: High v L: Choke	raible direct-currer roltage switch e coil of appr. 3ml- use rated 30A and	nt voltage source.						
						pply source rated acitor under test.	240V 60Hz 30A						Y1 AC Ceramic Capacit 400VAC
					Cd: Dum	np Capacitor							Part No.: I22002
DRW:	Jas	son	CHKD	Wils	son	MATL:	Wilson	TOLER	RANCE	Mason	DATE	01.11.2010	Customer:
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	Item	Specification	Testing Method
	Apperance	No marked defect	As in figure, the lead wires shall be immersed solder of 350 ± 10°C or 260 ±
	Capacitance change	Within ± 10%	5°C up to 1,5 ~ 2,0mm from the root of the terminal for 3,5 \pm 0,5s. (10 \pm 1s for 260 \pm 5°C).
	I.R.	1000M Ω min.	5 6).
Soldering Effect	Dielectric Strength	Pre Item 6.	Pre-treatment: Capacitor shall be stored at 85 ± 2°C for 1h. Then placed at room conditions for 24 ± 2h before initial measurements. Post-treatment: Capacitor shall be stored for 1 to 2 h ar room conditions.

	Item		Specification	Testing Method				
(e)	Appearance		No marked defect.					
Stat	0	Cha	r. Capacitance Change					
87 87	Capacitance Change	В	within ± 10%					
rea	Change	E	within ± 15%	Set the capacitor for $500 \pm 12h$ at $40 \pm 2^{\circ}C$				
r St		Char.	Specification	in 90 ~ 95% relative humidity. Post-				
nde	D,F,	В	D.F. ≤ 5,0%	treatment: Capacitor shall be stored for 1 to				
n O		Е	D.F. ≤ 5,0%	2h at room condition.				
dity	I.R.		3000M Ω min.					
Humidity (Under Stready State)	Dielectric Strength		Per Item 6					
	Appearance		No marked defect.					
		Cha	r. Capacitance Change					
ō	Capacitance Change	В	within ± 10%					
adin	Change	Е	within ± 15%	Apply the rated voltage for 500 ± 12h at 40				
Humidity Loading		Char.	Specification	± 2°C in 90 ~ 95% relative humidity. Post-				
dity	D,F,	В	D.F. ≤ 5,0%	treatment: Capacitor shall be stored for 1 to				
i E		Е	D.F. ≤ 5,0%	2h at room condition.				
エ	I.R.		3000M Ω min.					
	Dielectric Strength		Per Item 6					

Y1 AC Ceramic Capacitor
400VAC

Part No.: 122002

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DRW:	Jason	CHKD	Wilson	MATL:	Wilson	TOLERANCE	Mason	DATE	01.11.2010
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	Item	Specification	Testing Method
	Appearance	No marked defect.	Impulse Voltage
	Capacitance Change	Within ± 20%	Each individual Capacity shall be subjected
	I.R.	3000M Ω min.	to 8KV impulses for three times. After the capacitance are supplied to life test.
	Dielectric Strength	Per Item 6.	100/%)
Life	Discharge Test (II)	Per Item 9.	Apply a voltage of table 4 for 1000h at 105 +2/0°C, and relative humidity of 50% max. (table 4) Applied Voltage
			AC 425V (r.m.s.). Except that once each hour the oltage is increased to AC 1000V (r.m.s.) for 0,1s.
			Post-treatment: Cpapcitor shall be stared for 1 to 2h at room temperature.

	Item	Specif	ication	Testing Method		
		The capacitor flan follows.	ne discontinue as	The Capacitor shall be subjected to applied flame for 15s and then removed for 15 s		
		Cycle Time		until 5 cycle.		
		1 to 4	30s max.	II Conneiter		
	lame Test	5	60s. Max	19x (4—Capacitor		
Traine rest				Gas Burner (in mm)		
ess of ation	Tensile	Lead wire shall		As a figure, fix the body of capacitor apply a		
Robustness of Termination	Bending	Capacitor shall noit be broken.	T.	tensile weight gradually to each lead wire in the radila direction of capacitor up to 10N and keep it for 10± 1s.		
Activ	e Flammability	The chees-cloth fir	n shall not be on e.	Each lead wire shall be subjected to 5N weight and then a 90° bend, at the point of egress, in one direction, return to original position, and then a 90° bend in the opposite direction at the rate of one bend in 2 to 3s.		

Y1 AC Ce	eramic Capacitor
	400VAC
Part No :	122002

Part No.: **122002**

Customer:

DRW:	Jason	CHKD	Wilson	MATL:	Wilson	TOLERANCE	Mason	DATE	01.11.2010
APPD:	Schumi			FINISH	Jamy		Shee	t No.	9 from 13









Item	S	pecification	T	esting Metho	d		Item	Specif	fication	Testing Method	
	_	cheese-cloth shall not be on fire.	one but more that cloth. The capacit discharges. The it	n two complete lay tor shall be subject nterval between so be 5s. The UAC sh	ted to 20			exceeded the	me shall not be time 30s. The shall not ignite.	The capacitor under test shall be held in the flame in the position which best promotes burning. Each specimen shall only be exposed once to the flame. Time of exposure to flame: 30s. Length of flame: 12± 1mm.	
	1	ST CT S2 UAC	C2 C3 Cx L3 L4 ↓	CI CI	J Ut	Pass	ive Flammability	noodoc paper	onali not ignice.	Gas bumer: Length 35mm min. Inside Dia: 0,5 ± 0,1mm- Outside Dia. 0,9mm max. Gas: Butane gas Purity 95% min.	
			C1,2: 1µF ±10%	Oscilloscop	e e				1 5	→ Test specimen	
Active Flammabili	у		C3: 0,033µ ± 5% 10KV Ct: 3µF ± 5% 10KV Cx: Capacitor under test					Appout 8mm	Las.	# STITE	
			F: Fuse rated 10, L1 to 4: 1,5mH ± 16A Rod core cho	A 20%					-	Tissue About 10 mm ithak baard	
	The c	chees-cloth shall not be on fire	R: 1000 +2%								
										Y1 AC Ceramic Capacitor 400VAC	
DRW:	Jason	CHKD	Wilson	MATL:	Wilson	TOLERANCE	Mason	DATE	01.11.2010	Part No.: I22002	
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	Item	Sp	ecification	Testing Method				
	Appearance	No r	marked defect	The capacitor shall be subjected to 5 temperature				
	Conscitones	Char. Capaci.Change			hen consecutively	•	'	
	Capacitance Change	В	Within ± 10%	oyonoo, i	. ioir corioccuaveij	, 10 2 11111	norolon oyoloo.	
	Onlango	Е	Within ± 20%		Tempera	ture cycl	е	
				Step	Temperature	: (°C)	Time	
				1	25 +0/-	3	30min	
Φ		Char.	Specification	2	Room temper	rature	3min	
Styl	D.F.	В	D.F. ≤ 5,0%	3	.+ 105 +3/0		30min	
ion	D.1 .	E	D.F. ≤ 5,0%	4	Room temperature		3min	
Temperature and Immersion Style				Cycle time: 5cycle Immersion cycle				
ature ar	I.R.	30	000M Ω min.	Step	Temperature (°C)	Time	Immersion Water	
empera				1	. +65 +/-0	15min	Clean Water	
	Dielectric			2	Room Temp.	15min.	Salt Water	
	Strength	Per Item 6		Pre-tratment: Capacitor shall be stored at 85 ±2°C for 1h, thenplaced at room conditions for 24 ± 2h.				
				Post-treatment: Capacitor shall be stored for 24 ± 2h at room conditions.				

[&]quot;Room Condition" Temperature 15 to 35°C, Relative humidity; 45 to 75%, Atmospheric pressure: 6 to 106KPa.

Y1 AC Ceramic Capacitor 400VAC

Part No.: **I22002**

Customer:

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Ordering Informations

Serie		Range	Temperature Character.	Voltage	Tolerance Code	Lead Style Code	Lead Length Code	Lead Space Code	ROHS	Packing Code
122002	-	222	E	401	M	Α	20	D	R	BU
		222= 2200pf		401= 400VAC		A= Style A	20= 20mm	A= 2,50mm	R= ROHS Conform	BU= Bulk Ware
			E= Y5U		M= 20%	B= Style B	05= 5mm / ±1mm	B= 5,00mm	N = NON ROHS	TA= Tape Ammo Pack
						C= Style C		C= 7,50mm	Conform	TR= Tape Reel
						D= Style D		D= 10,0mm		
						H= Style H		E= 12,5mm		
						M= Style M				

Y1 AC Ceramic Capacitor 400VAC

Part No.: **122002**

DRW: Jason CHKD Wilson MATL: Wilson TOLERANCE Mason DATE 01.11.2010 APPD: FINISH Sheet No. 12 from 13 Schumi Jamy

Customer:



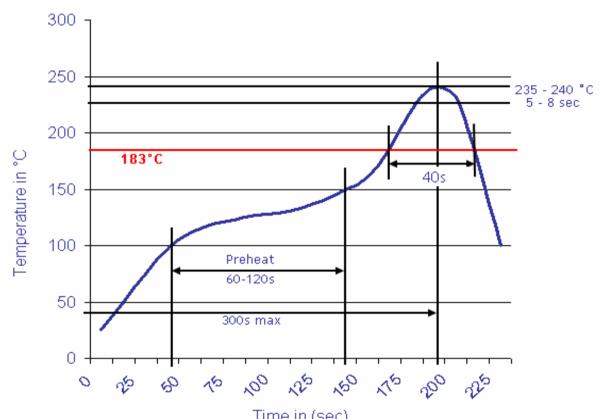






Soldering Profile Curve

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



Time in (sec)

Y1 AC Ceramic Capacitor 400VAC

Part No.: 122002

Customer:

MATL: DRW: CHKD Wilson Wilson TOLERANCE Mason DATE 01.11.2010 Jason APPD: FINISH Schumi Sheet No. 13 from 13 Jamy