ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *TDK-Lambda / Nemic-Lambda ZUP10-20/U* at our website: ***Click HERE***

ZUP-200 SERIES
RELIABILITY DATA

DWG: IA548-79-01			
QA APPD	APPD	CHK	DWG
MARIANNA BACHBUCH	Dorow Peled	[illegible]	MICHAEL [illegible]
NOV-3-99	Nov-3-99	Nov/3/99	03.11.1999

NEMIC-LAMBDA LTD.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

INDEX

1.MTBF; Calculated Value of MTBF	R-1
2.Component Derating	R-2~12
3.Main Components Temperature Rise	R-13~14
4.Elec. Capacitor Computed Life	R-15~16
5.Abnormal Test	R-17~30
6.Vibration Test	R-31

The above data is typical value. As all units have nearly the same characteristics,the data to be considered as ability value.

NEMIC-LAMBDA

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

M.T.B.F.

1. Method of calculation according to EIAJ (RCR-9102)
based on part count reliability projection of MIL-HDBK-217F.
Individual failure rates is given to each part and M.T.B.F. is calculated by the count of each part.

$$MTBF = \frac{1}{\lambda \ equip}$$

$$= \frac{1}{\sum_{i=1}^{n} Ni(\lambda_G \pi_Q)i} \times 10^6(Hours)$$

Where:

λ equip = Total Equipment Failure Rate (Failures /10^6 Hours)
λ_G = Generic Failure Rate For The ith Generic Part (Failure/10^6 Hours)
Ni = Quantity of ith Generic Part
n = Number of Different Generic Part Categories
π_Q = Generic Quality factor for the ith Generic Part (π_Q =1)

2. M.T.B.F. Values

G_F (GROUND, FIXED)

M.T.B.F. =81135 (HOURS)

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

2. Component Derating

Model:ZUP 6-33

(1) Calculation method

(a) Condition

Input :	100Vac , 200Vac
Output :	6V,33A (100%)
Ambient temperature:	50℃
Mounting Method:	Standard Mounting

(b) Semiconductors

Compared with maximum junction temperature and actual one which is calculated based on case temperature, power dissipation and thermal impedance.

(c) IC, Resistors, Capacitors, etc.

Ambient temperature, operating condition,power dissipation and so on are within derating criteria.

(d) Calculation method of thermal impedance

$$\Theta_{j\text{-}c} = \frac{Tj(max)-Tc}{Pc(max)} \qquad \Theta_{j\text{-}a} = \frac{Tj(max)-Ta}{Pc(max)} \qquad \Theta_{j\text{-}l} = \frac{Tj(max)-Tl}{Pc(max)}$$

Tc : Case Temperature at Start Point of Derating;25 C in General

Ta : Ambient Temperature at Start Point of Derating; 25 C in General

Pc(max):Maximum Power Dissipation

Tj(max): Maximum Junction temperature

$\Theta_{j\text{-}c}$: Thermal Impedance between Junction and Case

$\Theta_{j\text{-}a}$: Thermal Impedance between Junction and Air

$\Theta_{j\text{-}l}$: Thermal Impedance between Junction and lead

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Vin = 100Vac Load = 100% Ta=50°C

ZUP-200

Q101	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0 W
2SK2699	P_d =	13	W	ΔT_c =	21.2	°C	T_c =	71.2 °C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				82.0	°C	D.F. =	54.7 %
Q104	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0 W
2SK2611	P_d =	11	W	ΔT_c =	17.4	°C	T_c =	67.4 °C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				76.6	°C	D.F. =	51.0 %
D101	T_{jmax}=	150	°C	θ_{j-c} =	1.9	°C/W	P_{max} =	
D10XB60H	P_d =	4.5	W	ΔT_c=	26.8	°C	T_c =	76.8 °C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				85.4	°C	D.F. =	56.9 %
D104	T_{jmax}=	150	°C	θ_{j-c} =	3.5	°C/W	P_{max} =	
YG911S3R	P_d =	1	W	ΔT_c =	9.6	°C	T_c =	59.6 °C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				63.1	°C	D.F. =	42.1 %
D105	T_{jmax}=	150	°C	θ_{j-c} =	3.5	°C/W	P_{max} =	
YG911S3R	P_d =	1	W	ΔT_c =	7.8	°C	T_c =	57.8 °C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				61.3	°C	D.F. =	40.9 %
D107	T_{jmax}=	150	°C	θ_{j-a} =	60	°C/W	P_{max} =	
1NU41	P_d =	0.2	W	ΔT_a =	7.8	°C	T_a =	57.8 °C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				69.8	°C	D.F. =	46.5 %
D108	T_{jmax}=	150	°C	θ_{j-a} =	60	°C/W	P_{max} =	
1NU41	P_d =	0.2	W	ΔT_a =	7.8	°C	T_a =	57.8 °C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				69.8	°C	D.F. =	46.5 %
D110	T_{jmax}=	125	°C	θ_{j-c} =	1.2	°C/W	P_{max} =	
ESAD83-004	P_d =	6	W	ΔT_c =	24.9	°C	T_c =	74.9 °C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				82.1	°C	D.F. =	65.7 %
D111	T_{jmax}=	125	°C	θ_{j-c} =	1.2	°C/W	P_{max} =	
ESAD83-004	P_d =	6	W	ΔT_c =	24.9	°C	T_c =	74.9 °C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				82.1	°C	D.F. =	65.7 %
D112	T_{jmax}=	125	°C	θ_{j-c} =	1.2	°C/W	P_{max} =	
ESAD83-004	P_d =	6	W	ΔT_c =	21.2	°C	T_a =	71.2 °C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				78.4	°C	D.F. =	62.7 %

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Vin = 100Vac Load = 100% Ta=50°C

ZUP-200

A102	T_{jmax}=	150	°C	θ_{j-c} =	27	°C/W	P_{max} =	1.0 W
UC3854DW	P_d =	0.29	W	ΔT_c =	14	°C	T_c =	64.0 °C
UNITRODE	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				71.8	°C	D.F. =	47.9 %
A104	T_{jmax}=	150	°C	θ_{j-a} =	83.3	°C/W	P_{max} =	1.5 W
M51995AFP-600C	P_d =	0.26	W	ΔT_a =	30.6	°C	T_c =	80.6 °C
MITSUBISHI	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				102.3	°C	D.F. =	68.2 %

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Vin = 100Vac Load = 100% Ta=50°C

ZUP- 200

Q205	T_{jmax}=	150	°C	θ_{j-c} =	1	°C/W	P_{max} =	125.0	W
2SK1937	P_d =	3.3	W	ΔT_c =	23	°C	Tc=	73.0	°C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				76.3	°C	D.F. =	50.9	%
D201	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	3.8	°C	Tc =	53.8	°C
SHINDENGEN	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				59.8	°C	D.F. =	39.9	%
D202	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	3.8	°C	Tc =	53.8	°C
SHINDENGEN	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				59.8	°C	D.F. =	39.9	%
D221	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	80	mW	ΔT_a =	5.4	°C	Tc =	55.4	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				67.9	°C	D.F. =	45.3	%
D222	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	80	mW	ΔT_a =	3.8	°C	Tc =	53.8	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				66.4	°C	D.F. =	44.3	%
D229	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	3.8	°C	Tc =	53.8	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				59.8	°C	D.F. =	39.9	%
D230	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	2	°C	Tc =	52.0	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				58	°C	D.F. =	38.6	%
D231	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	3.8	°C	Tc =	53.8	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				59.8	°C	D.F. =	39.9	%
D232	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	3.8	°C	Tc =	53.8	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				59.8	°C	D.F. =	39.9	%
A201	T_{jmax}=	125	°C	θ_{j-a} =	227	°C/W	P_{max} =	440m	W
UPC814G2	P_d =	0.036	W	ΔT_a =	10.4	°C	Tc =	60.4	°C
NEC	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				68.6	°C	D.F. =	54.9	%

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Vin = 100Vac Load = 100% Ta=50°C

ZUP- 200

A202	T_{jmax}=	125	°C	θ_{j-a} =	189	°C/W	P_{max} =	550m	W
UPC324G2	P_d =	0.02	W	ΔT_a =	9	°C	Tc =	59.0	°C
NEC	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				62.8	°C	D.F. =	50.2	%
A208	T_{jmax}=	150	°C	θ_{j-c} =	3	°C/W	P_{max} =	125.0	W
MIPO224SY	P_d =	0.55	W	ΔT_c =	18	°C	Tc =	68.0	°C
MATSUSHITA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				69.7	°C	D.F. =	46.5	%
A209	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0	W
UPC7805AHF	P_d =	0.7	W	ΔT_c =	11.6	°C	Tc=	61.6	°C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				65.1	°C	D.F. =	43.4	%
A210	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0	W
UPC7805AHF	P_d =	0.51	W	ΔT_c =	5.9	°C	Tc =	55.9	°C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				58.5	°C	D.F. =	39.0	%
A211	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0	W
UPC7805AHF	P_d =	0.51	W	ΔT_c =	15.4	°C	Tc =	65.4	°C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				68.0	°C	D.F. =	45.3	%
A212	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0	W
UPC78M12AHF	P_d =	0.2	W	ΔT_c =	5.4	°C	Tc=	55.4	°C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				56.4	°C	D.F. =	37.6	%
A213	T_{jmax}=	125	°C	θ_{j-a} =	27	°C/W	P_{max} =	15.0	W
AN79M12	P_d =	0.2	W	ΔT_a =	3.8	°C	Tc=	53.8	°C
MATSUSHITA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				59.2	°C	D.F. =	47.4	%
PC201-LED	T_{jmax}=	100	°C	ΔIf/ °C	-0.7	mA/ °C	If_{max} =	60m	A
TLP621(D4-GRH-LF4)	If =	1.5	mA	ΔT_a =	2	°C	Tc=	52.0	°C
TOSHIBA	If (Ta)=	50.9	mA				D.F. =	3.0	%
PC201-DET	T_{jmax}=	100	°C	θ_{j-a} =	400	°C/W	P_{max} =	0.15	W
TLP621(D4-GRH-LF4)	P_d =	1	mW	ΔT_a =	2	°C	Tc=	52.0	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				52.4	°C	D.F. =	52.4	%
PC202-LED	T_{jmax}=	100	°C	ΔIf/ °C	-0.7	mA/ °C	If_{max} =	60m	A
TLP621(D4-GRH-LF4)	If =	0	A	ΔT_a =	1.2	°C	Tc=	51.2	°C
TOSHIBA	If (Ta)=	51.5	mA		51.2	°C	D.F. =	0.0	%

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Vin = 100Vac Load = 100% Ta=50°C

ZUP- 200

PC202-DET	T_{jmax}=	100	°C	θ_{j-a} =	400	°C/W	P_{max} =	0.15	W
TLP621(D4-GRH-LF4)	P_d =	0	W	ΔT_a =	2	°C	Tc=	52.0	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				52.0	°C	D.F. =	52.0	%
PC203-LED	T_{jmax}=	100	°C	ΔIf/ °C	-0.7	mA/ °C	I_{fmax} =	60m	A
TLP621(D4-GRH-LF4)	If =	0	A	ΔT_a =	2	°C	Tc=	52.0	°C
TOSHIBA	If (Ta)=	51.5	mA		52.0	°C	D.F. =	0.0	%
PC203-DET	T_{jmax}=	100	°C	θ_{j-a} =	400	°C/W	P_{max} =	0.15	W
TLP621(D4-GRH-LF4)	P_d =	0	W	ΔT_a =	2	°C	Tc=	52.0	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				52.0	°C	D.F. =	52.0	%

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Vin = 200Vac Load = 100% Ta=50°C

ZUP-200

Q101	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	Pmax =	150.0	W
2SK2699	P_d =	6	W	ΔT_c =	4	°C	T_c =	54.0	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				59.0	°C	D.F. =	39.3	%
Q104	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	Pmax =	150.0	W
2SK2611	P_d =	11	W	ΔT_c =	17.4	°C	T_c =	67.4	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				76.6	°C	D.F. =	51.0	%
D101	T_{jmax}=	150	°C	θ_{j-c} =	1.9	°C/W	Pmax =		
D10XB60H	P_d =	2.3	W	ΔT_c=	13.5	°C	T_c =	63.5	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				67.9	°C	D.F. =	45.2	%
D104	T_{jmax}=	150	°C	θ_{j-c} =	3.5	°C/W	Pmax =		
YG911S3R	P_d =	0.9	W	ΔT_c =	2	°C	T_c =	52.0	°C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				55.2	°C	D.F. =	36.8	%
D105	T_{jmax}=	150	°C	θ_{j-c} =	3.5	°C/W	Pmax =		
YG911S3R	P_d =	0.9	W	ΔT_c =	2	°C	T_c =	52.0	°C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				55.2	°C	D.F. =	36.8	%
D107	T_{jmax}=	150	°C	θ_{j-a} =	60	°C/W	Pmax =		
1NU41	P_d =	0.2	W	ΔT_a =	5.9	°C	T_a =	55.9	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				67.9	°C	D.F. =	45.3	%
D108	T_{jmax}=	150	°C	θ_{j-a} =	60	°C/W	Pmax =		
1NU41	P_d =	0.2	W	ΔT_a =	4	°C	T_a =	54.0	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				66.0	°C	D.F. =	44.0	%
D110	T_{jmax}=	125	°C	θ_{j-c} =	1.2	°C/W	Pmax =		
ESAD83-004	P_d =	6	W	ΔT_c =	24.9	°C	T_c =	74.9	°C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				82.1	°C	D.F. =	65.7	%
D111	T_{jmax}=	125	°C	θ_{j-c} =	1.2	°C/W	Pmax =		
ESAD83-004	P_d =	6	W	ΔT_c =	23	°C	T_c =	73.0	°C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				80.2	°C	D.F. =	64.2	%
D112	T_{jmax}=	125	°C	θ_{j-c} =	1.2	°C/W	Pmax =		
ESAD83-004	P_d =	6	W	ΔT_c =	19.2	°C	T_a =	69.2	°C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				76.4	°C	D.F. =	61.0	%

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Vin = 200Vac Load = 100% Ta=50°C

ZUP-200

A102	T_{jmax}=	150	°C	θ_{j-c} =	27	°C/W	P_{max} =	1.0 W
UC3854DW	P_d =	0.33	W	ΔT_c =	13.5	°C	T_c =	63.5 °C
UNITRODE	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				72.4	°C	D.F. =	48.3 %
A104	T_{jmax}=	150	°C	θ_{j-a} =	83.3	°C/W	P_{max} =	1.5 W
M51995AFP-600C	P_d =	0.26	W	ΔT_a =	28.7	°C	T_c =	78.7 °C
MITSUBISHI	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				100.4	°C	D.F. =	66.9 %

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Vin = 200Vac Load = 100% Ta=50°C

ZUP- 200

Q205	T_{jmax}=	150	°C	θ_{j-c} =	1	°C/W	P_{max} =	125.0	W
2SK1937	P_d =	3.3	W	ΔT_c =	19.2	°C	Tc=	69.2	°C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				72.5	°C	D.F. =	48.3	%
D201	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	1.8	°C	Tc =	51.8	°C
SHINDENGEN	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				57.8	°C	D.F. =	38.5	%
D202	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	1.8	°C	Tc =	51.8	°C
SHINDENGEN	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				57.8	°C	D.F. =	38.5	%
D221	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	80	mW	ΔT_a =	3.8	°C	Tc =	53.8	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				66.4	°C	D.F. =	44.3	%
D222	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	80	mW	ΔT_a =	1.8	°C	Tc =	51.8	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				64.4	°C	D.F. =	42.9	%
D229	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	3	°C	Tc =	53.0	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				59.0	°C	D.F. =	39.3	%
D230	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	2	°C	Tc =	52.0	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				58	°C	D.F. =	38.7	%
D231	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	1.8	°C	Tc =	51.8	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				57.8	°C	D.F. =	38.5	%
D232	T_{jmax}=	150	°C	θ_{j-a} =	157	°C/W	P_{max} =		W
D1FL20U	P_d =	38	mW	ΔT_a =	1.8	°C	Tc =	51.8	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				57.8	°C	D.F. =	38.5	%
A201	T_{jmax}=	125	°C	θ_{j-a} =	227	°C/W	P_{max} =	440m	W
UPC814G2	P_d =	0.036	W	ΔT_a =	9.2	°C	Tc =	59.2	°C
NEC	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				67.4	°C	D.F. =	53.9	%

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Vin = 200Vac Load = 100% Ta=50°C

ZUP- 200

A202	T_{jmax}=	125	°C	θ_{j-a} =	189	°C/W	P_{max} =	550m	W
UPC324G2	P_d =	0.02	W	ΔT_a =	7.2	°C	Tc =	57.2	°C
NEC	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				61.0	°C	D.F. =	48.8	%
A208	T_{jmax}=	150	°C	θ_{j-c} =	3	°C/W	P_{max} =	125.0	W
MIPO224SY	P_d =	0.55	W	ΔT_c =	16.2	°C	Tc =	66.2	°C
MATSUSHITA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				67.8	°C	D.F. =	45.2	%
A209	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0	W
UPC7805AHF	P_d =	0.7	W	ΔT_c =	9.6	°C	Tc=	59.6	°C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				63.1	°C	D.F. =	42.0	%
A210	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0	W
UPC7805AHF	P_d =	0.51	W	ΔT_c =	5.9	°C	Tc =	55.9	°C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				58.5	°C	D.F. =	39.0	%
A211	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0	W
UPC7805AHF	P_d =	0.51	W	ΔT_c =	11.6	°C	Tc =	61.6	°C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				64.2	°C	D.F. =	42.7	%
A212	$T_j = T_c$	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0	W
UPC78M12AHF	P_d =	0.2	W	ΔT_c =	1.8	°C	Tc=	51.8	°C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				54.8	°C	D.F. =	36.5	%
A213	T_{jmax}=	125	°C	θ_{j-a} =	27	°C/W	P_{max} =	15.0	W
AN79M12	P_d =	0.2	W	ΔT_a =	1.8	°C	Tc=	51.8	°C
MATSUSHITA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				57.4	°C	D.F. =	45.8	%
PC201-LED	T_{jmax}=	100	°C	ΔIf/ °C	-0.7	mA/ °C	If_{max} =	60m	A
TLP621(D4-GRH-LF4)	If =	2.5	mA	ΔT_a =	2	°C	Tc=	52.0	°C
TOSHIBA	If (Ta)=	50.9	mA				D.F. =	4.9	%
PC201-DET	T_{jmax}=	100	°C	θ_{j-a} =	400	°C/W	P_{max} =	0.15	W
TLP621(D4-GRH-LF4)	P_d =	1	mW	ΔT_a =	2	°C	Tc=	52.0	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				52.4	°C	D.F. =	52.4	%
PC202-LED	T_{jmax}=	100	°C	ΔIf/ °C	-0.7	mA/ °C	If_{max} =	60m	A
TLP621(D4-GRH-LF4)	If =	0	A	ΔT_a =	1.2	°C	Tc=	51.2	°C
TOSHIBA	If (Ta)=	51.5	mA		51.2	°C	D.F. =	0.0	%

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Vin = 200Vac Load = 100% Ta=50°C

ZUP- 200

PC202-DET	T_{jmax}=	100	°C	θ_{j-a} =	400	°C/W	P_{max} =	0.15	W
TLP621(D4-GRH-LF4)	P_d =	0	W	ΔT_a =	1.2	°C	Tc=	51.2	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				51.2	°C	D.F. =	51.2	%
PC203-LED	T_{jmax}=	100	°C	ΔIf/ °C	-0.7	mA/ °C	I_{fmax} =	60m	A
TLP621(D4-GRH-LF4)	If =	0	A	ΔT_a =	2	°C	Tc=	52.0	°C
TOSHIBA	If (Ta)=	51.5	mA		52.0	°C	D.F. =	0.0	%
PC203-DET	T_{jmax}=	100	°C	θ_{j-a} =	400	°C/W	P_{max} =	0.15	W
TLP621(D4-GRH-LF4)	P_d =	0	W	ΔT_a =	2	°C	Tc=	52.0	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				52.0	°C	D.F. =	52.0	%

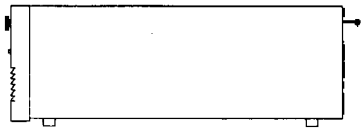
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

3.MAIN COMPONENTS TEMPERATURE RISE

Model:ZUP 6-33

Location No.	Parts Name	DT Temperature Rise (°C)
		Standard Mounting
Q101	MOSFET	21.2
Q104	MOSFET	17.4
Q205	MOSFET	28.7
D101	BRIDGE	26.8
D104	DIODE	9.6
D107	DIODE	7.8
D110	DIODE	24.9
T101	TRANSFORMER	32.5
T201	TRANSFORMER	11.6
C114	ELEC.CAP.	4
C145	ELEC.CAP.	15.4
L102	BALUN COIL	17.4
L103	BALUN COIL	13.5
L105	CHOKE COIL	19.2
L106	CHOKE COIL	36.3
L107	CHOKE COIL.	24.9
A102	IC	15.4
A104	IC	30.6

Conditions:

Standard Mounting	
Input Voltage	100VAC
Output Voltage	6V
Output Current	33A

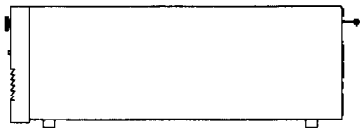
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

3.MAIN COMPONENTS TEMPERATURE RISE

Model:ZUP 6-33

Location No.	Parts Name	DT Temperature Rise (°C)
		Standard Mounting
Q101	MOSFET	4
Q104	MOSFET	17.4
Q205	MOSFET	24.9
D101	BRIDGE	13.5
D104	DIODE	2
D107	DIODE	5.9
D110	DIODE	24.9
T101	TRANSFORMER	28.7
T201	TRANSFORMER	5.9
C114	ELEC.CAP.	4
C145	ELEC.CAP.	11.6
L102	BALUN COIL	5.9
L103	BALUN COIL	7.8
L105	CHOKE COIL	11.6
L106	CHOKE COIL	32.5
L107	CHOKE COIL.	21.2
A102	IC	13.5
A104	IC	28.7

Conditions:

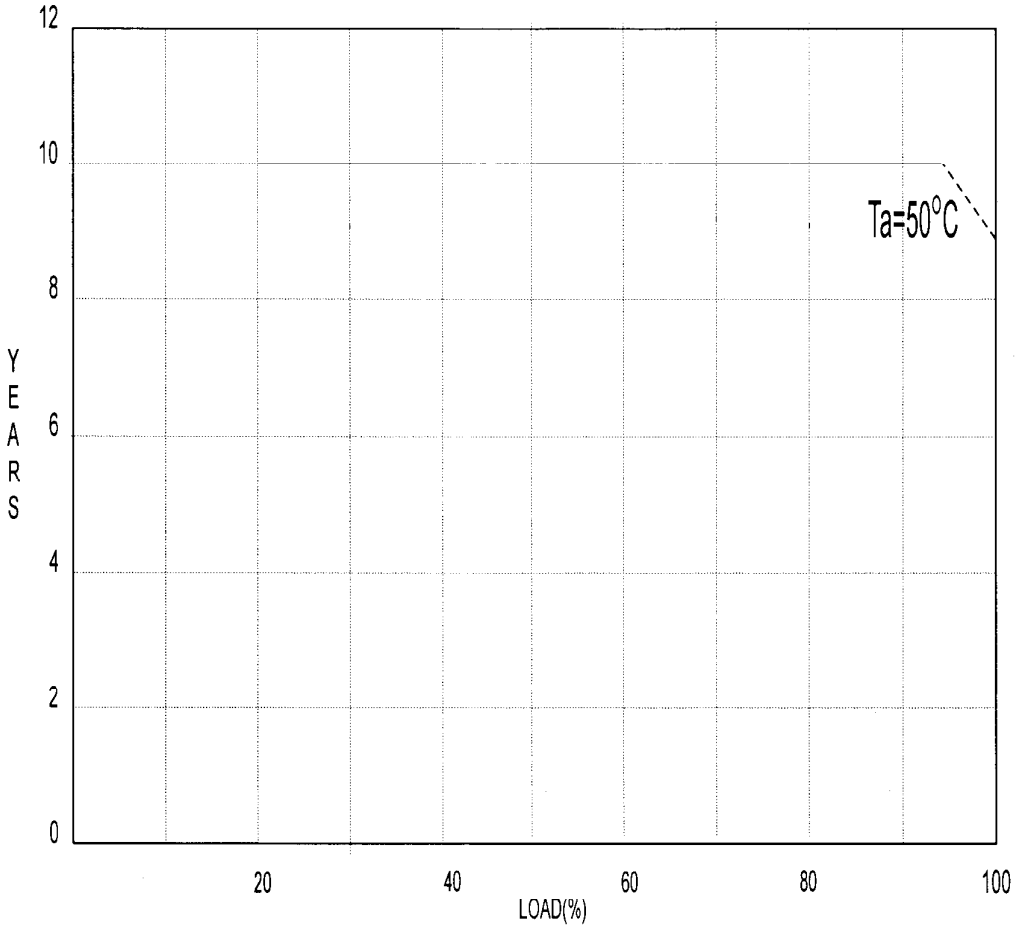
Standard Mounting	
Input Voltage	200VAC
Output Voltage	6V
Output Current	33A

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

4. E-CAP LIFETIME VERSUS LOAD

Model:ZUP 6-33

GRAPH OF ELECTROLYTIC CAPACITOR LIFETIME VERSUS LOAD

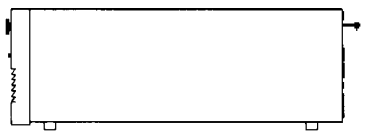


FORMULA: $L = Lo \times 2^{\frac{105-Tc}{10}}$ (years)

L - Elec.capacitor computed life
(24 hours per day, 365 days operation)

Lo- Guarantee life for Elec.capacitor

Tc- Case temperature of Elec. capacitor

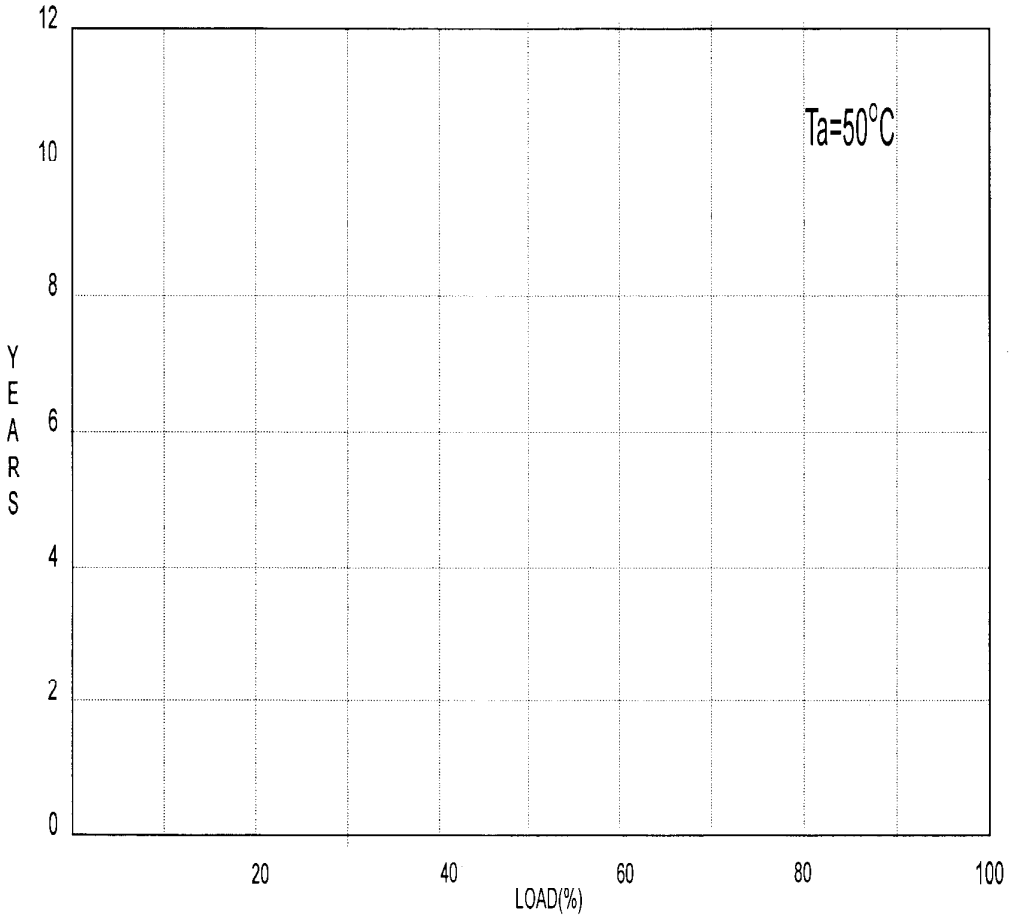
Standard Mounting	
Input Voltage	100VAC
Output Voltage	6V
Output current	33A

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

4. E-CAP LIFETIME VERSUS LOAD

Model:ZUP 6-33

GRAPH OF ELECTROLYTIC CAPACITOR LIFETIME VERSUS LOAD

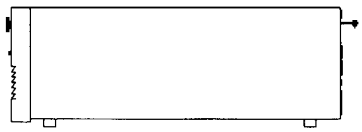


FORMULA: $L=Lo \times 2^{\frac{105-Tc}{10}}$ (years)

L - Elec.capacitor computed life
(24 hours per day, 365 days operation)

Lo- Guarantee life for Elec.capacitor

Tc- Case temperature of Elec. capacitor

Standard Mounting	
Input Voltage	200VAC
Output Voltage	6V
Outputr current	33A

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:100VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
1	Q101	D-S	o								o			o			
2		D-G	o							o	o			o			Da:Q101,ZD101-short,R110 - open.
3		G-S	o											o			
4		D		o										o			
5		S		o						o	o			o			Da:Q101,ZD101-short.
6		G		o						o	o			o			Da:Q101,ZD101-short.
7	Q104	D-S	o							o	o			o			Da:ZD106,ZD108-short.
8		D-G	o							o	o			o			Da:Q104,ZD102,R117-open,ZD106,ZD108-short.
9		G-S	o											o			
10		D		o										o			
11		S		o										o			
12		G		o						o	o			o			Da:Q104,ZD106,ZD108-short.
13	D101	AC-AC	o								o			o			
14		AC-DC	o								o			o			
15		AC		o										o			
16		DC		o										o			
17	D102		o											o			
18				o										o			
19	D104		o												o		
20				o						o	o			o			Da:Q101-short.
21	D105		o												o		
22				o						o	o			o			Da:Q101-short.
23	D107		o												o		
24				o											o		
25	D108		o												o		
26				o											o		
27	D110		o											o			
28				o											o		
29	D111		o											o			
30				o											o		
31	D112		o											o			
32				o											o		
33	PC101	1 - 2	o									o		o			
34		3 - 4	o											o			
35		1		o								o		o			
36		3		o								o		o			
37	C106		o							o				o			Da:FR101-open
38				o										o			

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:100VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
39	C107		o							o							Da:R112-open
40				o											o		
41	C108		o								o			o			
42				o											o		
43	C109		o							o							Da:R114-open
44				o											o		
45	C111		o												o		
46				o											o		
47	C112		o												o		
48				o											o		
49	C114		o												o		
50				o											o		
51	C117		o											o			
52				o											o		
53	C119		o												o		
54				o											o		
55	C124		o											o			
56				o												o	Vo not stable
57	C142		o							o							Da:R121-open
58				o											o		
59	C143		o							o							Da:R122-open
60				o											o		
61	C144		o											o			
62				o											o		
63	C145		o											o			
64				o											o		
65	C146		o											o			
66				o											o		
67	C147		o											o			
68				o											o		
69	C148		o											o			
70				o											o		
71	FR101			o										o			
72	R103			o												o	Vo not stable
73	R104			o												o	Vo not stable
74	R105			o												o	Vo not stable
75	R106			o											o		
76	R110			o						o	o			o			Da:Q101,ZD101-short

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:100VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
77	R111			o										o			
78	R112			o											o		
79	R113			o										o			
80	R116			o										o			
81	R117			o						o	o			o			Da:Q104,ZD106,ZD108-short
82	R120			o										o			
83	R121			o											o		
84	R122			o											o		
85	R123			o											o		
86	R124			o											o		
87	R125			o											o		
88	R133			o										o			
89	R134			o											o		
90	R142			o												o	Vo not stable
91	R143			o												o	Vo not stable
92	R144			o												o	Vo not stable
93	R151			o											o		
94	R160			o										o			
95	R161			o										o			
96	R171			o										o			
97	R176			o										o			
98	T101	4 - 6	o											o			
99		13 - 14	o											o			
100		1 - 3	o											o			
101		4		o											o		
102		13		o										o			
103		1		o										o			
104	L105		o							o	o			o			Da:F101,Q101,ZD10-short
105				o										o			
106	L106		o													o	Vo not stable
107				o										o			

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input.100VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
108	A208	D - S	o							o				o			Da:R105,R106-open.
109		D - C	o							o				o			105,R106,ZD214,A208-open.
110		C - S	o											o			
111		D		o										o			
112		S		o										o			
113		G		o										o			
114	Q201	B - E	o												o		
115		B - C	o											o			
116		C - E	o											o			
117		B		o											o		
118		C		o											o		
119		E		o											o		
120	Q202	B - E	o												o		
121		B - C	o											o			
122		C - E	o											o			
123		B		o											o		
124		C		o											o		
125		E		o											o		
126	Q203	D - S	o												o		
127		D - G	o												o		
128		G - S	o												o		
129		D		o											o		
130		S		o											o		
131		G		o											o		
132	Q204	D - S	o												o		
133		D - G	o												o		
134		G - S	o												o		
135		D		o											o		
136		S		o											o		
137		G		o											o		
138	Q205	D - S	o											o			
139		D - G	o											o			
140		G - S	o												o		
141		D		o											o		
142		S		o											o		
143		G		o											o		
144	Q206	B - E	o												o		
145		B - C	o												o		

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:100VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
146	Q206	C - E	o												o		
147		B		o											o		
148		C		o											o		
149		E		o											o		
150	D201		o											o			
151				o											o		
152	D204		o												o		
153				o								o		o			
154	D205		o									o		o			
155				o											o		
156	D207		o											o			
157				o											o		
158	D221		o													o	HICC-UP
159				o											o		
160	D227		o												o		
161				o						o				o			Da:A102,R111,Q102,R105,R106-open.
162	D228		o												o		
163				o											o		
164	D229		o											o			
165				o											o		
166	D231		o													o	HICC-UP
167				o											o		
168	D233		o												o		
169				o											o		
170	D235		o											o			
171				o											o		
172	PC201	1 - 2	o												o		
173		3 - 4	o												o		
174		1		o										o			
175		3		o										o			
176	PC202	1 - 2	o												o		
177		3 - 4	o											o			
178		1		o											o		
179		3		o											o		
180	PC203	1 - 2	o												o		
181		3 - 4	o											o			
182		1		o											o		
183		3		o											o		

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:100VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
184	C218		o											o			
185				o											o		
186	C219		o											o			
187				o											o		
188	C221		o											o			
189				o											o		
190	C222		o													o	OTP
191				o											o		
192	C223		o												o		
193				o											o		
194	C224		o													o	HICC-UP
195				o											o		
196	C225		o												o		
197				o											o		
198	C227		o											o			
199				o											o		
200	C228		o											o			
201				o											o		
202	C230		o													o	HICC-UP
203				o											o		
204	C231		o													o	OTP
205				o											o		
206	C233		o													o	HICC-UP
207				o											o		
208	C234		o											o			
209				o											o		
210	C236		o							o				o			Da:D233-short.
211				o											o		
212	C261		o							o				o			Da:D224-short.
213				o											o		
214	R201			o								o		o			
215	R202			o											o		Max Io=0A
216	R206			o											o		
217	R208			o										o			
218	R211			o												o	Vo=3.9V.
219	R213			o												o	Vo=3.5V
220	R220			o								o		o			
221	R227			o												o	Vo=4V
222	R231			o												o	P.S. in C.C. MODE.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:100VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
223	R241			o											o		
224	R243			o										o			
225	R253			o										o			
226	R263			o											o		
227	R290			o											o		
228	R291			o											o		
229	R292			o								o		o			
230	R293			o											o		
231	R294			o											o		
232	ZD204		o											o			
233	ZD205		o											o			
234	T201	1 - 3	o											o			
235		5 - 6	o											o			
236		7 - 8	o											o			
237		8 - 9	o											o			
238		8 - 10	o											o			
239		11 - 12	o											o			
240		13 - 14	o												o		
241		3		o										o			
242		5		o										o			
243		7		o										o			
244		9		o												o	OTP
245		10		o										o			
246		11		o										o			
247		13		o										o			

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:200VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
1	Q101	D-S	o								o			o			
2		D-G	o							o	o			o			Da:Q101,ZD101-short,R110 - open.
3		G-S	o											o			
4		D		o										o			
5		S		o						o	o			o			Da:Q101,ZD101-short.
6		G		o						o	o			o			Da:Q101,ZD101-short.
7	Q104	D-S	o							o	o			o			Da:ZD106,ZD108-short.
8		D-G	o							o	o			o			Da:Q104,ZD102,R117-open,ZD106,ZD108-short.
9		G-S	o											o			
10		D		o										o			
11		S		o										o			
12		G		o						o	o			o			Da:Q104,ZD106,ZD108-short.
13	D101	AC-AC	o								o			o			
14		AC-DC	o								o			o			
15		AC		o										o			
16		DC		o										o			
17	D102		o											o			
18				o										o			
19	D104		o												o		
20				o						o	o			o			Da:Q101-short.
21	D105		o												o		
22				o						o	o			o			Da:Q101-short.
23	D107		o												o		
24				o											o		
25	D108		o												o		
26				o											o		
27	D110		o											o			
28				o											o		
29	D111		o											o			
30				o											o		
31	D112		o											o			
32				o											o		
33	PC101	1 - 2	o									o		o			
34		3 - 4	o											o			
35		1		o								o		o			
36		3		o								o		o			
37	C106		o							o				o			Da:FR101-open
38				o										o			

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:200VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
39	C107		o							o							Da:R112-open
40				o											o		
41	C108		o								o			o			
42				o											o		
43	C109		o							o							Da:R114-open
44				o											o		
45	C111		o												o		
46				o											o		
47	C112		o												o		
48				o											o		
49	C114		o												o		
50				o											o		
51	C117		o											o			
52				o											o		
53	C119		o												o		
54				o											o		
55	C124		o											o			
56				o												o	Vo not stable
57	C142		o							o							Da:R121-open
58				o											o		
59	C143		o							o							Da:R122-open
60				o											o		
61	C144		o											o			
62				o											o		
63	C145		o											o			
64				o											o		
65	C146		o											o			
66				o											o		
67	C147		o										o	o			
68				o											o		
69	C148		o										o	o			
70				o											o		
71	FR101			o										o			
72	R103			o											o		
73	R104			o											o		
74	R105			o											o		
75	R106			o											o		
76	R110			o						o	o			o			Da:Q101,ZD101-short

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:200VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
77	R111			o										o			
78	R112			o											o		
79	R113			o										o			
80	R116			o										o			
81	R117			o						o	o			o			Da:Q104,ZD106,ZD108-short
82	R120			o										o			
83	R121			o											o		
84	R122			o											o		
85	R123			o											o		
86	R124			o											o		
87	R125			o											o		
88	R133			o										o			
89	R134			o											o		
90	R142			o											o		
91	R143			o											o		
92	R144			o											o		
93	R151			o											o		
94	R160			o										o			
95	R161			o										o			
96	R171			o										o			
97	R176			o										o			
98	T101	4 - 6	o											o			
99		13 - 14	o											o			
100		1 - 3	o											o			
101		4		o											o		
102		13		o										o			
103		1		o										o			
104	L105		o							o	o			o			Da:F101,Q101,ZD10-short
105				o										o			
106	L106		o													o	Vo not stable
107				o										o			

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:200VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
108	A208	D - S	o							o				o			Da:R105,R106-open.
109		D - C	o							o				o			Da:R105,R106,ZD214,A208-open.
110		C - S	o											o			
111		D		o										o			
112		S		o										o			
113		C		o										o			
114	Q201	B - E	o												o		
115		B - C	o											o			
116		C - E	o											o			
117		B		o											o		
118		C		o											o		
119		E		o											o		
120	Q202	B - E	o												o		
121		B - C	o											o			
122		C - E	o											o			
123		B		o											o		
124		C		o											o		
125		E		o											o		
126	Q203	D - S	o												o		
127		D - G	o												o		
128		G - S	o												o		
129		D		o											o		
130		S		o											o		
131		G		o											o		
132	Q204	D - S	o												o		
133		D - G	o												o		
134		G - S	o												o		
135		D		o											o		
136		S		o											o		
137		G		o											o		
138	Q205	D - S	o											o			
139		D - G	o											o			
140		G - S	o												o		
141		D		o											o		
142		S		o											o		
143		G		o											o		
144	Q206	B - E	o												o		
145		B - C	o												o		

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Condition:

Input:200VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
146	Q206	C - E	o												o		
147		B		o											o		
148		C		o											o		
149		E		o											o		
150	D201		o											o			
151				o											o		
152	D204		o												o		
153				o								o		o			
154	D205		o									o		o			
155				o											o		
156	D207		o											o			
157				o											o		
158	D221		o													o	HICC-UP
159				o											o		
160	D227		o												o		
161				o						o				o			Da:A102,R111,Q102,R105,R106-open.
162	D228		o												o		
163				o											o		
164	D229		o											o			
165				o											o		
166	D231		o													o	HICC-UP
167				o											o		
168	D233		o												o		
169				o											o		
170	D235		o											o			
171				o											o		
172	PC201	1 - 2	o												o		
173		3 - 4	o												o		
174		1		o										o			
175		3		o										o			
176	PC202	1 - 2	o												o		
177		3 - 4	o											o			
178		1		o											o		
179		3		o											o		
180	PC203	1 - 2	o												o		
181		3 - 4	o											o			
182		1		o											o		
183		3		o											o		

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Condition:

Input:200VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
184	C218		o											o			
185				o											o		
186	C219		o											o			
187				o											o		
188	C221		o											o			
189				o											o		
190	C222		o													o	OTP
191				o											o		
192	C223		o												o		
193				o											o		
194	C224		o													o	HICC-UP
195				o											o		
196	C225		o												o		
197				o											o		
198	C227		o											o			
199				o											o		
200	C228		o											o			
201				o											o		
202	C230		o													o	HICC-UP
203				o											o		
204	C231		o													o	OTP
205				o											o		
206	C233		o													o	HICC-UP
207				o											o		
208	C234		o											o			
209				o											o		
210	C236		o							o				o			Da:D233-open.
211				o											o		
212	C261		o							o				o			Da:D224-open.
213				o											o		
214	R201			o								o		o			
215	R202			o											o		Max Io=0A.
216	R206			o											o		
217	R208			o										o			
218	R211			o												o	Vo=3.9V
219	R213			o												o	Vo=3.5V
220	R220			o								o		o			
221	R227			o												o	Vo=4V
222	R231			o												o	P.S. in C.C. MODE.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ZUP-200

Condition:

Input:200VAC Output:6V 33A Ta:25°C 70%RH Da: Damaged

No	Test Position		Test Mode		Test Result												
					1	2	3	4	5	6	7	8	9	10	11	12	
	Location No.	Test Point	Short	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
223	R241			o											o		
224	R243			o										o			
225	R253			o										o			
226	R263			o											o		
227	R290			o											o		
228	R291			o											o		
229	R292			o								o		o			
230	R293			o											o		
231	R294			o											o		
232	ZD204		o											o			
233	ZD205		o											o			
234	T201	1 - 3	o											o			
235		5 - 6	o											o			
236		7 - 8	o											o			
237		8 - 9	o											o			
238		8 - 10	o											o			
239		11 - 12	o											o			
240		13 - 14	o												o		
241		3		o										o			
242		5		o										o			
243		7		o										o			
244		9		o												o	OTP
245		10		o										o			
246		11		o											o		
247		13		o											o		

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

6. VIBRATION TEST

Model:ZUP 6-33

(1) Vibration test class

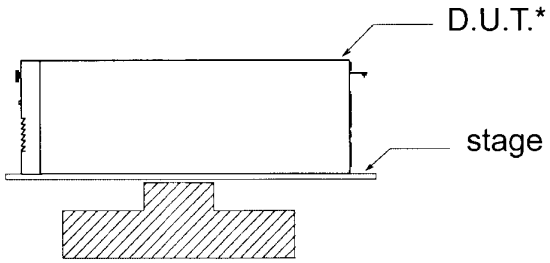
Frequency variable endurance test

(2) Equipment used

Controller: GENRAD-2503.

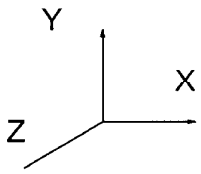
Vibrator: ULHOLTZ-DICKIE TA1000.

(3) Testing method



Test condition:

Sweep frequency	10~55HZ
Sweep time	1min.
Acceleration	2G const.
Direction	X,Y,Z.
Test time	1H. each



D.U.T. Direction

*D.U.T. is fixed to vibrator surface by mounting screws

(4) Test Result

Vin=100Vac;Iout=33A

OK NG

Check item	Vout	Ripple (mVp-p)	D.U.T.state
Initial / Directions	6.004	30	O.K.
X	6.004	30	O.K.
Y	6.004	30	O.K.
Z	6.004	30	O.K.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP