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-800 SERIES

RELIABILITY DATA

DWG: IA550-79-01			
QA APPD	APPD	CHK	DWG
[illegible]	Doron Pelal	Oleg. B	MICHAEL G.
Oct/20/00	Sep-29-00	7.08.2000	7.08.2000

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-13~16
4.Elec. Capacitor Computed Life	R-17~18
5.Abnormal Test	R-19~36
6.Vibration Test	R-37

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.

MODEL: ZUP 6-132

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.

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

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

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. =48003 (HOURS)

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

2. Component Derating

Model:ZUP 6-132

(1) Calculation method

(a) Condition

Input :	100Vac , 200Vac
Output :	6V 132A (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

T_j (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- 800

Q101	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0	W
2SK2699	P_d =	13	W	ΔT_c =	28.8	°C	T_c =	78.8	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				89.6	°C	D.F. =	59.8	%
Q102	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0	W
2SK2699	P_d =	13	W	ΔT_c =	24.2	°C	T_c=	74.2	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				85.0	°C	D.F. =	56.7	%
Q103	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0	W
2SK2611	P_d =	11	W	ΔT_c =	24.4	°C	T_c =	74.4	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				83.6	°C	D.F. =	55.7	%
Q104	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0	W
2SK2611	P_d =	11	W	ΔT_c =	29.4	°C	T_c =	79.4	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				88.6	°C	D.F. =	59.0	%
D101	T_{jmax}=	150	°C	θ_{j-c} =	1	°C/W	P_{max} =		
D25XB60	P_d =	8	W	ΔT_c =	38.6	°C	T_c =	88.6	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				96.6	°C	D.F. =	64.4	%
D105	T_{jmax}=	150	°C	θ_{j-c} =	1.5	°C/W	P_{max} =		
20GL2C41A	P_d =	2	W	ΔT_c =	13.1	°C	T_c =	63.1	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				66.1	°C	D.F. =	44.1	%
D107	T_{jmax}=	150	°C	θ_{j-c} =	37	°C/W	P_{max} =		
2NU41	P_d =	0.46	W	ΔT_c =	17.9	°C	T_c =	67.9	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				84.9	°C	D.F. =	56.6	%
D108	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =		
S60SC4M	P_d =	7.2	W	ΔT_c =	42.4	°C	T_c =	92.4	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				96.0	°C	D.F. =	64.0	%
D110	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =		
S60SC4M	P_d =	7.2	W	ΔT_c =	43	°C	T_c =	93.0	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				96.6	°C	D.F. =	64.4	%
D112	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =		
S60SC4M	P_d =	7.2	W	ΔT_c =	42.3	°C	T_c =	92.3	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				95.9	°C	D.F. =	63.9	%

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

Vin = 100Vac Load = 100% Ta=50°C

ZUP- 800

A102	T_{jmax}=	150	°C	θ_{j-c} =	27	°C/W	P_{max} =	1.0	W
UC3854DW	P_d =	0.29	W	ΔT_c =	17.6	°C	T_c =	67.6	°C
UNITRODE	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				75.4	°C	D.F. =	50.3	%
A104	T_{jmax}=	150	°C	θ_{j-c} =	20	°C/W	P_{max} =	1.5	W
M51995AFP-600C	P_d =	0.31	W	ΔT_c =	39.5	°C	T_c =	89.5	°C
MITSUBISHI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				95.7	°C	D.F. =	63.8	%
Q403	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0	W
2SK2611	P_d =	11	W	ΔT_c =	27.4	°C	T_c =	77.4	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				86.6	°C	D.F. =	57.7	%
Q404	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0	W
2SK2611	P_d =	11	W	ΔT_c =	30.4	°C	T_c =	80.4	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				89.6	°C	D.F. =	59.7	%
D401	T_{jmax}=	150	°C	θ_{j-c} =	1	°C/W	P_{max} =		
D25XB60	P_d =	8	W	ΔT_c =	40	°C	T_c =	90.0	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				98	°C	D.F. =	65.3	%
D402	T_{jmax}=	150	°C	θ_{j-a} =	83.3	°C/W	P_{max} =		
U05NU44	P_d =	6	mW	ΔT_a =	28.7	°C	T_a =	78.7	°C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				79.2	°C	D.F. =	52.8	%
D405	T_{jmax}=	150	°C	θ_{j-c} =	1.5	°C/W	P_{max} =		
20GL2C41A	P_d =	2	W	ΔT_c =	14.2	°C	T_c =	64.2	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				67.2	°C	D.F. =	44.8	%
D407	T_{jmax}=	150	°C	θ_{j-c} =	37	°C/W	P_{max} =		
2NU41	P_d =	0.46	W	ΔT_c =	17.6	°C	T_c =	67.6	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				84.6	°C	D.F. =	56.4	%
D408	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =		
S60SC4M	P_d =	7.2	W	ΔT_c =	38.8	°C	T_c =	88.8	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				92.4	°C	D.F. =	61.6	%
D410	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =		
S60SC4M	P_d =	7.2	W	ΔT_c =	42.4	°C	T_c =	92.4	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				96	°C	D.F. =	64.0	%

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

Vin = 100Vac Load = 100% Ta=50°C

ZUP- 800

D412	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =	
S60SC4M	P_d =	7.2	W	ΔT_c =	35.6	°C	T_c =	85.6 °C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				89.2	°C	D.F. =	59.5 %
A402	T_{jmax}=	150	°C	θ_{j-c} =	27	°C/W	P_{max} =	1.0 W
UC3854DW	P_d =	0.29	W	ΔT_c =	18.1	°C	T_c =	68.1 °C
UNITRODE	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				75.9	°C	D.F. =	50.6 %
A404	T_{jmax}=	150	°C	θ_{j-c} =	20	°C/W	P_{max} =	1.5 W
M51995AFP-600C	P_d =	0.31	W	ΔT_c =	42.4	°C	T_c =	92.4 °C
MITSUBISHI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				98.6	°C	D.F. =	65.7 %

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

Vin = 100Vac Load = 100% Ta=50°C

ZUP- 800

Q205	T_{jmax}=	150	°C	θ_{j-c} =	1	°C/W	P_{max} =	125.0 W
2SK1937	P_d =	4.9	W	ΔT_c =	25.1	°C	Tc=	75.1 °C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				80	°C	D.F. =	53.3 %
D201	T_{jmax}=	150	°C	θ_{j-l} =	23	°C/W	P_{max} =	W
D1FL20U	P_d =	38	mW	ΔT_l =	7.9	°C	Tl =	57.9 °C
SHINDENGEN	$T_j = T_l + (\theta_{j-l} \times P_d)$ =				58.8	°C	D.F. =	39.2 %
D222	T_{jmax}=	150	°C	θ_{j-l} =	23	°C/W	P_{max} =	W
D1FL20U	P_d =	80	mW	ΔT_l =	4.6	°C	Tl =	54.6 °C
TOSHIBA	$T_j = T_l + (\theta_{j-l} \times P_d)$ =				56.4	°C	D.F. =	37.6 %
D232	T_{jmax}=	150	°C	θ_{j-l} =	23	°C/W	P_{max} =	W
D1FL20U	P_d =	38	mW	ΔT_l =	7.6	°C	Tl =	57.6 °C
TOSHIBA	$T_j = T_l + (\theta_{j-l} \times P_d)$ =				58.5	°C	D.F. =	38.9 %
A208	T_{jmax}=	150	°C	θ_{j-c} =	3	°C/W	P_{max} =	125.0 W
MIPO224SY	P_d =	0.55	W	ΔT_c =	23.7	°C	Tc =	73.7 °C
MATSUSHITA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				75.4	°C	D.F. =	50.2 %
A209	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC7805AHF	P_d =	0.7	W	ΔT_c =	26.9	°C	Tc=	76.9 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				80.4	°C	D.F. =	53.6 %
A210	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC7805AHF	P_d =	0.51	W	ΔT_c =	11.4	°C	Tc =	61.4 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				64.0	°C	D.F. =	42.6 %
A211	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC7805AHF	P_d =	0.51	W	ΔT_c =	21.3	°C	Tc =	71.3 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				73.9	°C	D.F. =	49.2 %
A212	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC78M12AHF	P_d =	0.2	W	ΔT_c =	12.4	°C	Tc=	62.4 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				63.4	°C	D.F. =	42.3 %
A213	T_{jmax}=	150	°C	θ_{j-a} =	66	°C/W	P_{max} =	15.0 W
AN79M12	P_d =	0.2	W	ΔT_a =	10.3	°C	Ta=	60.3 °C
MATSUSHITA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				73.5	°C	D.F. =	49.0 %

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

Vin = 100Vac Load = 100% Ta=50°C

ZUP- 800

D507	T_{jmax}=	150	°C	θ_{j-l} =	23	°C/W	P_{max} =	W
D1FL20U	P_d =	80	mW	ΔT_l =	10.9	°C	T_l =	60.9 °C
TOSHIBA	$T_j = T_l + (\theta_{j-l} \times P_d)$ =				62.7	°C	D.F. =	41.8 %
D508	T_{jmax}=	150	°C	θ_{j-l} =	23	°C/W	P_{max} =	W
D1FL20U	P_d =	38	mW	ΔT_l =	10.1	°C	T_l =	60.1 °C
TOSHIBA	$T_j = T_l + (\theta_{j-l} \times P_d)$ =				61	°C	D.F. =	40.6 %
A501	T_{jmax}=	150	°C	θ_{j-c} =	3	°C/W	P_{max} =	125.0 W
MIPO224SY	P_d =	0.55	W	ΔT_c =	21.4	°C	T_c =	71.4 °C
MATSUSHITA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				73.1	°C	D.F. =	48.7 %
A502	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC78M12AHF	P_d =	0.2	W	ΔT_c =	14.4	°C	T_c=	64.4 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				65.4	°C	D.F. =	43.6 %
A503	T_{jmax}=	150	°C	θ_{j-a} =	66	°C/W	P_{max} =	15.0 W
AN79M12	P_d =	0.2	W	ΔT_a =	15.3	°C	T_a=	65.3 °C
MATSUSHITA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				78.5	°C	D.F. =	52.3 %
A504	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC7805AHF	P_d =	0.7	W	ΔT_c =	35.3	°C	T_c =	85.3 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				88.8	°C	D.F. =	59.2 %

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

Vin =200Vac Load = 100% Ta=50°C

ZUP- 800

Q101	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0	W
2SK2699	P_d =	6	W	ΔT_c =	8.6	°C	T_c =	58.6	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				63.6	°C	D.F. =	42.4	%
Q102	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0	W
2SK2699	P_d =	6	W	ΔT_c =	7.4	°C	T_c=	57.4	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				62.4	°C	D.F. =	41.6	%
Q103	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0	W
2SK2611	P_d =	11	W	ΔT_c =	24.1	°C	T_c =	74.1	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				83.3	°C	D.F. =	55.5	%
Q104	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0	W
2SK2611	P_d =	11	W	ΔT_c =	29.1	°C	T_c =	79.1	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				88.3	°C	D.F. =	58.8	%
D101	T_{jmax}=	150	°C	θ_{j-c} =	1	°C/W	P_{max} =		
D25XB60	P_d =	4	W	ΔT_c =	19	°C	T_c =	69.0	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				73	°C	D.F. =	48.7	%
D105	T_{jmax}=	150	°C	θ_{j-c} =	1.5	°C/W	P_{max} =		
20GL2C41A	P_d =	1.8	W	ΔT_c =	5.7	°C	T_c =	55.7	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				58.4	°C	D.F. =	38.9	%
D107	T_{jmax}=	150	°C	θ_{j-c} =	37	°C/W	P_{max} =		
2NU41	P_d =	0.46	W	ΔT_c =	15.3	°C	T_c =	65.3	°C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				82.3	°C	D.F. =	54.9	%
D108	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =		
S60SC4M	P_d =	7.2	W	ΔT_c =	41.1	°C	T_c =	91.1	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				94.7	°C	D.F. =	63.1	%
D110	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =		
S60SC4M	P_d =	7.2	W	ΔT_c =	39.8	°C	T_c =	89.8	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				93.4	°C	D.F. =	62.3	%
D112	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =		
S60SC4M	P_d =	7.2	W	ΔT_c =	40.7	°C	T_c =	90.7	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				94.3	°C	D.F. =	62.9	%

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

Vin = 200Vac Load = 100% Ta=50°C

ZUP- 800

A102	T_{jmax}=	150	°C	θ_{j-c} =	27	°C/W	P_{max} =	1.0 W
UC3854DW	P_d =	0.29	W	ΔT_c =	15.6	°C	T_c =	65.6 °C
UNITRODE	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				73.4	°C	D.F. =	49.0 %
A104	T_{jmax}=	150	°C	θ_{j-c} =	20	°C/W	P_{max} =	1.5 W
M51995AFP-600C	P_d =	0.31	W	ΔT_c =	34.6	°C	T_c =	84.6 °C
MITSUBISHI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				90.8	°C	D.F. =	60.5 %
Q403	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0 W
2SK2611	P_d =	11	W	ΔT_c =	28	°C	T_c =	78.0 °C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				87.2	°C	D.F. =	58.1 %
Q404	T_{jmax}=	150	°C	θ_{j-c} =	0.833	°C/W	P_{max} =	150.0 W
2SK2611	P_d =	11	W	ΔT_c =	30.7	°C	T_c =	80.7 °C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				89.9	°C	D.F. =	59.9 %
D401	T_{jmax}=	150	°C	θ_{j-c} =	1	°C/W	P_{max} =	
D25XB60	P_d =	4	W	ΔT_c =	20	°C	T_c =	70.0 °C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				74	°C	D.F. =	49.3 %
D402	T_{jmax}=	150	°C	θ_{j-a} =	83.3	°C/W	P_{max} =	
U05NU44	P_d =	1.2	mW	ΔT_a =	9.5	°C	T_a =	59.5 °C
TOSHIBA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				59.6	°C	D.F. =	39.7 %
D405	T_{jmax}=	150	°C	θ_{j-c} =	1.5	°C/W	P_{max} =	
20GL2C41A	P_d =	1.8	W	ΔT_c =	6.8	°C	T_c =	56.8 °C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				59.5	°C	D.F. =	39.7 %
D407	T_{jmax}=	150	°C	θ_{j-c} =	37	°C/W	P_{max} =	
2NU41	P_d =	0.46	W	ΔT_c =	16.1	°C	T_c =	66.1 °C
TOSHIBA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				83.1	°C	D.F. =	55.4 %
D408	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =	
S60SC4M	P_d =	7.2	W	ΔT_c =	38.1	°C	T_c=	88.1 °C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				91.7	°C	D.F. =	61.1 %
D410	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =	
S60SC4M	P_d =	7.2	W	ΔT_c =	40.4	°C	T_c =	90.4 °C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				94	°C	D.F. =	62.7 %

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

Vin = 200Vac Load = 100% Ta=50°C

ZUP- 800

D412	T_{jmax}=	150	°C	θ_{j-c} =	0.5	°C/W	P_{max} =		
S60SC4M	P_d =	7.2	W	ΔT_c =	34.4	°C	T_c =	84.4	°C
SHINDENGEN	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				88	°C	D.F. =	58.7	%
A402	T_{jmax}=	150	°C	θ_{j-c} =	27	°C/W	P_{max} =	1.0	W
UC3854DW	P_d =	0.29	W	ΔT_c =	16.9	°C	T_c =	66.9	°C
UNITRODE	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				74.7	°C	D.F. =	49.8	%
A404	T_{jmax}=	150	°C	θ_{j-c} =	20	°C/W	P_{max} =	1.5	W
M51995AFP-600C	P_d =	0.31	W	ΔT_c =	38.6	°C	T_c =	88.6	°C
MITSUBISHI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				94.8	°C	D.F. =	63.2	%

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

Vin = 200Vac Load = 100% Ta=50°C

ZUP- 800

Q205	T_{jmax}=	150	°C	θ_{j-c} =	1	°C/W	P_{max} =	125.0 W
2SK1937	P_d =	4.9	W	ΔT_c =	19.9	°C	Tc=	69.9 °C
FUJI	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				74.8	°C	D.F. =	49.9 %
D201	T_{jmax}=	150	°C	θ_{j-l} =	23	°C/W	P_{max} =	W
D1FL20U	P_d =	38	mW	ΔT_l =	4.2	°C	Tl =	54.2 °C
SHINDENGEN	$T_j = T_l + (\theta_{j-l} \times P_d)$ =				55.1	°C	D.F. =	36.7 %
D222	T_{jmax}=	150	°C	θ_{j-l} =	23	°C/W	P_{max} =	W
D1FL20U	P_d =	80	mW	ΔT_l =	2.2	°C	Tl =	52.2 °C
TOSHIBA	$T_j = T_l + (\theta_{j-l} \times P_d)$ =				54	°C	D.F. =	36.0 %
D232	T_{jmax}=	150	°C	θ_{j-l} =	23	°C/W	P_{max} =	W
D1FL20U	P_d =	38	mW	ΔT_l =	4	°C	Tl =	54.0 °C
TOSHIBA	$T_j = T_l + (\theta_{j-l} \times P_d)$ =				54.9	°C	D.F. =	36.6 %
A208	T_{jmax}=	150	°C	θ_{j-c} =	3	°C/W	P_{max} =	125.0 W
MIPO224SY	P_d =	0.55	W	ΔT_c =	16.7	°C	Tc =	66.7 °C
MATSUSHITA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				68.4	°C	D.F. =	45.6 %
A209	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC7805AHF	P_d =	0.7	W	ΔT_c =	21	°C	Tc=	71.0 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				74.5	°C	D.F. =	49.7 %
A210	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC7805AHF	P_d =	0.51	W	ΔT_c =	6.8	°C	Tc =	56.8 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				59.4	°C	D.F. =	39.6 %
A211	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC7805AHF	P_d =	0.51	W	ΔT_c =	18.9	°C	Tc =	68.9 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				71.5	°C	D.F. =	47.6 %
A212	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC78M12AHF	P_d =	0.2	W	ΔT_c =	7.8	°C	Tc=	57.8 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				58.8	°C	D.F. =	39.2 %
A213	T_{jmax}=	150	°C	θ_{j-a} =	66	°C/W	P_{max} =	15.0 W
AN79M12	P_d =	0.2	W	ΔT_a =	6.2	°C	Ta=	56.2 °C
MATSUSHITA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				69.4	°C	D.F. =	46.3 %

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

Vin = 200Vac Load = 100% Ta=50°C

ZUP- 800

D507	T_{jmax}=	150	°C	θ_{j-l} =	23	°C/W	P_{max} =	W
D1FL20U	P_d =	80	mW	ΔT_l =	5.5	°C	T_l =	55.5 °C
TOSHIBA	$T_j = T_l + (\theta_{j-l} \times P_d)$ =				57.3	°C	D.F. =	38.2 %
D508	T_{jmax}=	150	°C	θ_{j-l} =	23	°C/W	P_{max} =	W
D1FL20U	P_d =	38	mW	ΔT_l =	4.4	°C	T_l =	54.4 °C
TOSHIBA	$T_j = T_l + (\theta_{j-l} \times P_d)$ =				55.3	°C	D.F. =	36.9 %
A501	T_{jmax}=	150	°C	θ_{j-c} =	3	°C/W	P_{max} =	125.0 W
MIPO224SY	P_d =	0.55	W	ΔT_c =	15	°C	T_c =	65.0 °C
MATSUSHITA	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				66.7	°C	D.F. =	44.4 %
A502	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC78M12AHF	P_d =	0.2	W	ΔT_c =	6.6	°C	T_c=	56.6 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				57.6	°C	D.F. =	38.4 %
A503	T_{jmax}=	150	°C	θ_{j-a} =	66	°C/W	P_{max} =	15.0 W
AN79M12	P_d =	0.2	W	ΔT_a =	7	°C	T_a=	57.0 °C
MATSUSHITA	$T_j = T_a + (\theta_{j-a} \times P_d)$ =				70.2	°C	D.F. =	46.8 %
A504	T_{jmax}=	150	°C	θ_{j-c} =	5	°C/W	P_{max} =	15.0 W
UPC7805AHF	P_d =	0.7	W	ΔT_c =	24.3	°C	T_c =	74.3 °C
NEC	$T_j = T_c + (\theta_{j-c} \times P_d)$ =				77.8	°C	D.F. =	51.9 %

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

3.MAIN COMPONENTS TEMPERATURE RISE

Model:ZUP 6-132

Location No.	Parts Name	DT Temperature Rise (℃)
		Standard Mounting
Q101	MOSFET	28.8
Q104	MOSFET	29.4
Q205	MOSFET	25.1
D101	BRIDGE	38.6
D105	DIODE	13.1
D107	DIODE	17.9
D110	DIODE	43
T101	TRANSFORMER	49.9
T201	TRANSFORMER	14
C114	ELEC.CAP.	8.8
C153	ELEC.CAP.	25
L101	BALUN COIL	22.2
L102	CHOKE COIL	25.3
L106	OUT.CHOKE	51.4
A102	IC	17.6
A104	IC	39.5

Conditions:

Standard Mounting	
Input Voltage	100VAC
Output Voltage	6V
Output Current	132A

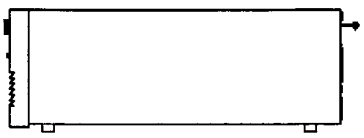
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

3.MAIN COMPONENTS TEMPERATURE RISE

Model:ZUP 6-132

Location No.	Parts Name	DT Temperature Rise (℃)
		Standard Mounting
Q403	MOSFET	27.4
Q404	MOSFET	30.4
D401	BRIDGE	40
D407	DIODE	17.6
D410	DIODE	42.4
T401	TRANSFORMER	51.2
T501	TRANSFORMER	13.5
C414	ELEC.CAP.	7.9
C453	ELEC.CAP.	27.8
L401	CHOKE COIL	35.2
L402	BALUN COIL	41.3
L406	OUT.CHOKE	48.4
A402	IC	18.1
A404	IC	42.4

Conditions:

Standard Mounting	
Input Voltage	100VAC
Output Voltage	6V
Output Current	132A

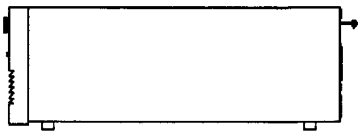
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

3.MAIN COMPONENTS TEMPERATURE RISE

Model:ZUP 6-132

Location No.	Parts Name	DT Temperature Rise (℃)
		Standard Mounting
Q101	MOSFET	8.6
Q104	MOSFET	29.1
Q205	MOSFET	19.9
D101	BRIDGE	19
D105	DIODE	5.7
D107	DIODE	15.3
D110	DIODE	39.8
T101	TRANSFORMER	45.3
T201	TRANSFORMER	7
C114	ELEC.CAP.	7.4
C153	ELEC.CAP.	21.3
L101	BALUN COIL	10.9
L102	CHOKE COIL	12.9
L106	OUT.CHOKE	46.2
A102	IC	15.6
A104	IC	34.6

Conditions:

Standard Mounting	
Input Voltage	200VAC
Output Voltage	6V
Output Current	132A

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

3.MAIN COMPONENTS TEMPERATURE RISE

Model:ZUP 6-132

Location No.	Parts Name	DT Temperature Rise (℃)
		Standard Mounting
Q403	MOSFET	28
Q404	MOSFET	30.7
D401	BRIDGE	20
D407	DIODE	16.1
D410	DIODE	40.4
T401	TRANSFORMER	44.7
T501	TRANSFORMER	4
C414	ELEC.CAP.	6.8
C453	ELEC.CAP.	24.9
L401	CHOKE COIL	16.3
L403	BALUN COIL	17
L406	OUT.CHOKE	44.5
A402	IC	16.9
A404	IC	38.6

Conditions:

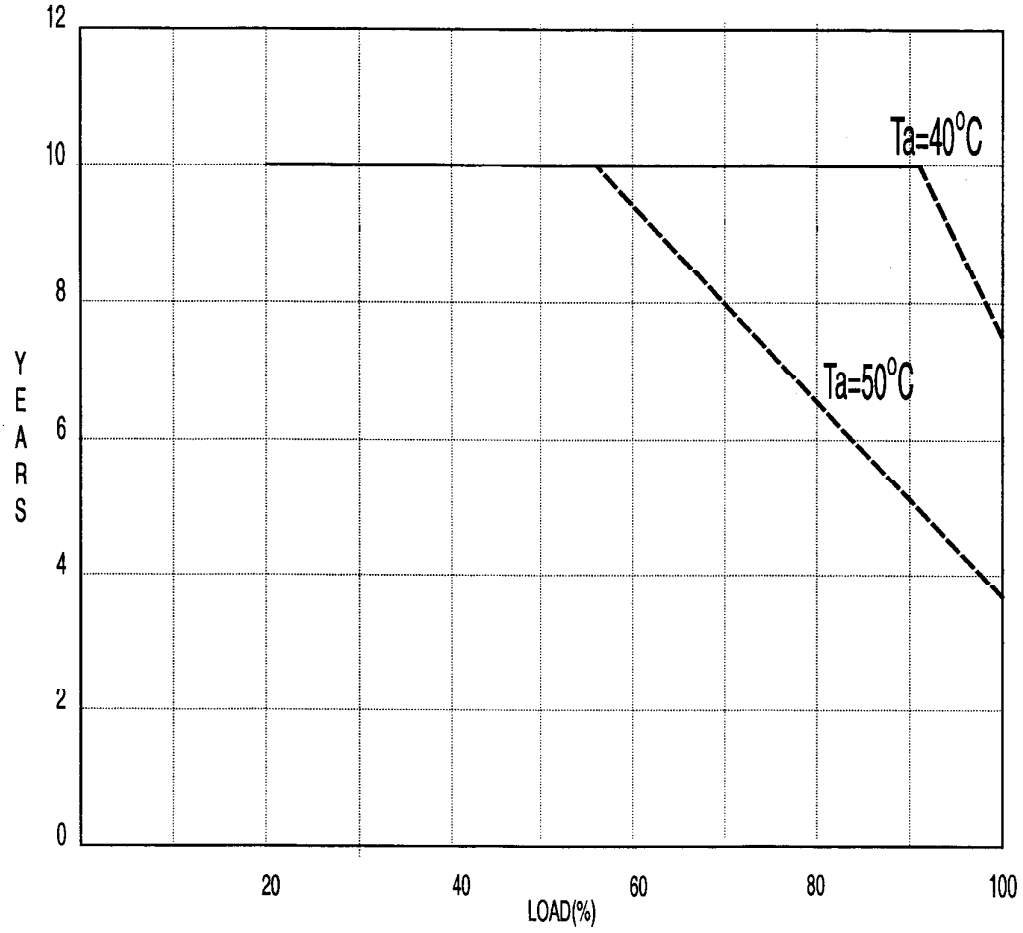
Standard Mounting	
Input Voltage	200VAC
Output Voltage	6V
Output Current	132A

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

4. E-CAP LIFETIME VERSUS LOAD

Model:ZUP 6-132

GRAPH OF ELECTROLYTIC CAPACITOR LIFETIME VERSUS LOAD

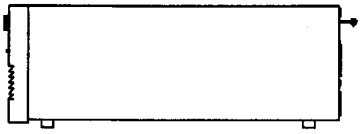


FORMULA: $L=Lo \times 2^{\frac{105-Tc}{10}}$ (years)

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

Lo- Guarantee life for Elec.capacitor

Tc- Case temperature of Elec. capacitor

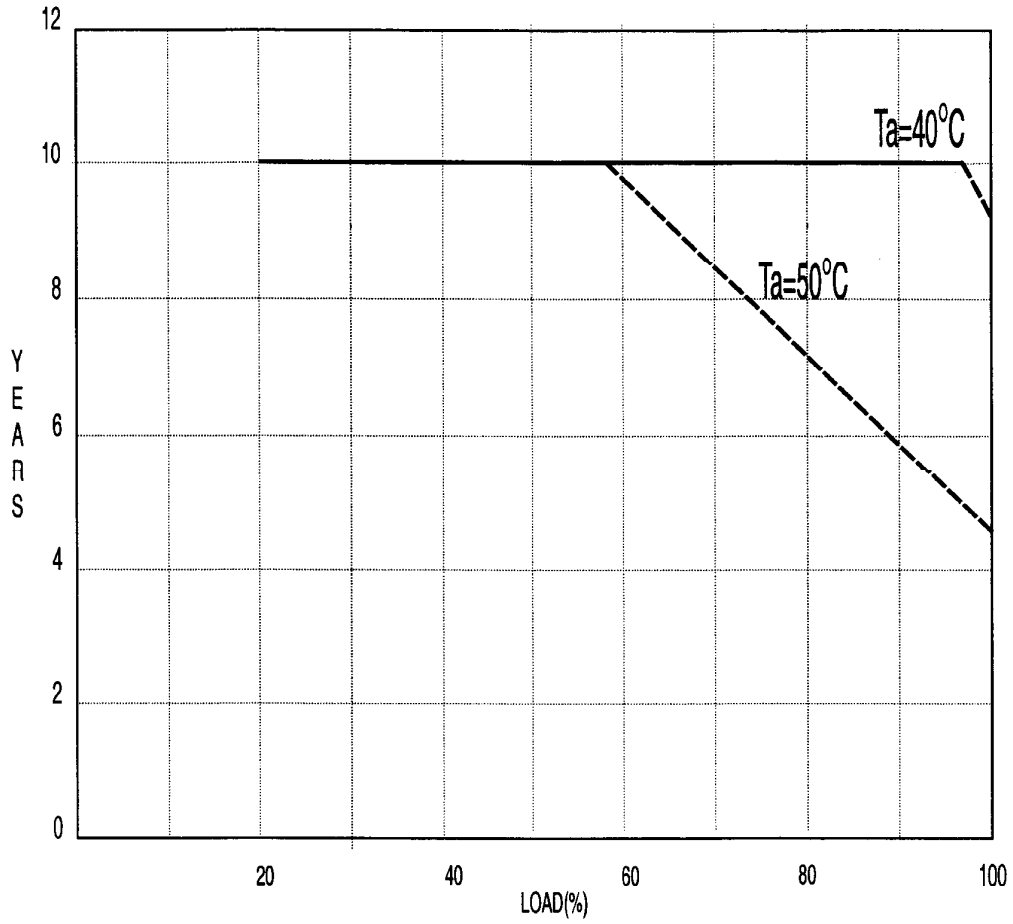
Standard Mounting	
Input Voltage	100VAC
Output Voltage	6V
Output Current	132A

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

4. E-CAP LIFETIME VERSUS LOAD

Model:ZUP 6-132

GRAPH OF ELECTROLYTIC CAPACITOR LIFETIME VERSUS LOAD

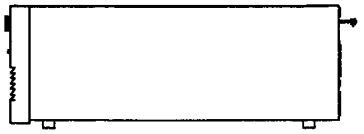


FORMULA: $L = Lo \times 2^{\frac{105-Tc}{10}}$ (years)

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
Output Current	132A

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

Model: ZUP6-132
Condition:
Input:100VAC Output:6V 132A 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,Q102,ZD101-short,R110 - open.
3		G-S	o											o			
4		D		o											o		
5		S		o											o		
6		G		o						o	o			o			Da:Q101,Q102,ZD101-short.
7	Q102	D-S	o								o			o			
8		D-G	o							o	o			o			Da:Q101,Q102,ZD101-short,R110-open.
9		G-S	o											o			
10		D		o											o		
11		S		o											o		
12		G		o						o	o			o			Da:Q101,Q102,ZD101-short.
13	Q103	D-S	o							o	o			o			Da:ZD106,ZD108,-short.
14		D-G	o							o	o			o			Da:Q103,Q104,ZD102,R116-open,ZD106,ZD108-short.
15		G-S	o											o			
16		D		o											o		
17		S		o											o		
18		G		o						o	o			o			Da:Q103,Q104,ZD106,ZD108-short.
19	Q104	D-S	o							o	o			o			Da:ZD106,ZD108-short.
20		D-G	o							o	o			o			Da:Q103,Q104,ZD102,R116-open,ZD106,ZD108-short.
21		G-S	o											o			
22		D		o											o		
23		S		o											o		
24		G		o						o	o			o			Da:Q103,Q104,ZD106,ZD108-short.
25	D101	AC-AC	o								o			o			
26		AC-DC	o								o			o			
27		AC		o										o			
28		DC		o										o			
29	D102		o											o			
30				o										o			
31	D104		o												o		
32				o						o	o			o			Da:Q101,Q102-open.
33	D105		o												o		
34				o						o	o			o			Da:Q101,Q102-open.
35	D107		o								o			o			
36				o											o		
37	D108		o											o			
38				o											o		

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

ZUP-800

Model: ZUP6-132
Condition:
Input:100VAC Output:6V 132A 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	D109		o											o			
40				o											o		
41	D110		o											o			
42				o											o		
43	D111		o											o			
44				o											o		
45	D112		o											o			
46				o											o		
47	PC101	1-2	o									o		o			
48		3-4	o											o			
49		1		o								o		o			
50		3		o								o		o			
51	C109		o							o				o			Da:FR101-open.
52				o										o			
53	C110		o												o		
54				o											o		
55	C111		o												o		
56				o											o		
57	C112		o							o							Da:R112-open.
58				o											o		
59	C113		o								o			o			
60				o											o		
61	C114		o								o			o			
62				o											o		
63	C115		o							o							Da:R114-open.
64				o											o		
65	C116		o												o		
66				o											o		
67	C117		o							o							Da:R121-open.
68				o											o		
69	C118		o							o							Da:R122-open.
70				o											o		
71	C119		o												o		
72				o											o		
73	C122		o												o		
74				o											o		
75	C125		o											o			
76				o											o		

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

Model: ZUP6-132
Condition:
Input:100VAC Output:6V 132A 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	C128		o												o		
78				o											o		
79	C136		o											o			
80				o												o	Vo not stable
81	C145		o											o			
82				o											o		
83	C146		o											o			
84				o											o		
85	C147		o										o	o			
86				o											o		
87	C148		o										o	o			
88				o											o		
89	C152		o											o			
90				o											o		
91	C153		o											o			
92				o											o		
93	FR101			o										o			
94	R103			o												o	Vo not stable
95	R104			o												o	Vo not stable
96	R107			o											o		
97	R108			o											o		
98	R110			o						o	o			o			Da:Q101,Q102,ZD101-short.
99	R111			o						o	o			o			Da:Q101,Q102,ZD101-short.
100	R112			o											o		
101	R116			o						o	o			o			Da:Q103,Q104,ZD106,ZD108-short.
102	R117			o						o	o			o			Da:Q103,Q104,ZD106,ZD108-short.
103	R120			o										o			
104	R121			o											o		
105	R122			o											o		
106	R123			o										o			
107	R124			o										o			
108	R125			o										o			
109	R130			o										o			
110	R133			o								o		o			
111	R134			o											o		
112	R142			o										o			
113	R143			o										o			
114	R144			o										o			
115	R151			o											o		

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

ZUP-800

Model: ZUP6-132
Condition:
Input:100VAC Output:6V 132A 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
116	R160			o										o			
117	R161			o										o			
118	R162			o										o			
119	R171			o											o		
120	R179			o										o			
121	R180			o										o			
122	R181			o										o			
123	R185			o										o			
124	Q107	C - E	o												o		
125		C - B	o							o	o			o			Da:Q101,Q102-short.
126		B - E	o												o		
127		C		o											o		
128		E		o										o			
129		B - E		o										o			
130	Q108	C - E	o											o			
131		C - B	o											o			
132		B - E	o												o		
133		C		o										o			
134		E		o						o	o			o			Da:Q101,Q102,R111-open.
135		B		o						o	o			o			Da:Q101,Q102,R111-open
136	T101	4 - 6	o											o			
137		13 - 14	o											o			
138		1 - 3	o											o			
139		4		o											o		
140		13		o										o			
141		1		o										o			
142	L105		o							o	o			o			Da:Q101,Q102,ZD101-short,F101-open.
143				o										o			
144	L106		o													o	Vo not stable
145				o										o			

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

Model: ZUP6-132
Condition:
Input:100VAC Output:6V 132A 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	Shor.	Open	Fire	Smoke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
146	A208	D - S	o							o				o			Da:R105,R106-open.
147		D - C	o							o				o			R105,R106,ZD214,A208-open.
148		C - S	o											o			
149		D		o										o			
150		S		o										o			
151		G		o										o			
152	Q201	B - E	o												o		
153		B - C	o											o			
154		C - E	o											o			
155		B		o											o		
156		C		o											o		
157		E		o											o		
158	Q202	B - E	o												o		
159		B - C	o											o			
160		C - E	o											o			
161		B		o											o		
162		C		o											o		
163		E		o											o		
164	Q203	D - S	o												o		
165		D - G	o												o		
166		G - S	o												o		
167		D		o											o		
168		S		o											o		
169		G		o											o		
170	Q204	D - S	o												o		
171		D - G	o												o		
172		G - S	o												o		
173		D		o											o		
174		S		o											o		
175		G		o											o		
176	Q205	D - S	o											o			
177		D - G	o											o			
178		G - S	o												o		
179		D		o											o		
180		S		o											o		
181		G		o											o		
182	Q206	B - E	o												o		
183		B - C	o												o		

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

ZUP-800

Model: ZUP6-132
Condition:
Input:100VAC Output:6V 132A 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	Q206	C - E	o												o		
185		B		o											o		
186		C		o											o		
187		E		o											o		
188	D201		o											o			
189				o											o		
190	D204		o												o		
191				o								o		o			
192	D205		o									o		o			
193				o											o		
194	D207		o											o			
195				o											o		
196	D221		o													o	HICC-UP
197				o											o		
198	D227		o												o		
199				o						o				o			Da:A102,R111,Q102,R105,R106-open.
200	D228		o												o		
201				o											o		
202	D229		o											o			
203				o											o		
204	D231		o													o	HICC-UP
205				o											o		
206	D233		o												o		
207				o											o		
208	D235		o											o			
209				o											o		
210	PC201	1 - 2	o												o		
211		3 - 4	o												o		
212		1		o										o			
213		3		o										o			
214	PC202	1 - 2	o												o		
215		3 - 4	o											o			
216		1		o											o		
217		3		o											o		
218	PC203	1 - 2	o												o		
219		3 - 4	o											o			
220		1		o											o		
221		3		o											o		

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

Model: ZUP6-132
Condition:
Input:100VAC Output:6V 132A 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
222	C218		o											o			
223				o											o		
224	C219		o											o			
225				o											o		
226	C221		o											o			
227				o											o		
228	C222		o													o	OTP
229				o											o		
230	C223		o												o		
231				o											o		
232	C224		o													o	HICC-UP
233				o											o		
234	C225		o												o		
235				o											o		
236	C227		o											o			
237				o											o		
238	C228		o											o			
239				o											o		
240	C230		o													o	HICC-UP
241				o											o		
242	C231		o													o	OTP
243				o											o		
244	C233		o													o	HICC-UP
245				o											o		
246	C234		o											o			
247				o											o		
248	C236		o							o				o			Da:D233-short.
249				o											o		
250	C261		o							o				o			Da:D224-short.
251				o											o		
252	R201			o								o		o			
253	R202			o											o		Max Io=0A.
254	R206			o											o		
255	R208			o										o			
256	R211			o												o	Vo=3.9V.
257	R213			o												o	Vo=3.5V
258	R220			o								o		o			
259	R227			o												o	Vo=4V.
260	R231			o												o	P.S. in C.C. MODE

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

Model: ZUP6-132
Condition:
Input:100VAC Output:6V132A 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
261	R241			o											o		
262	R243			o										o			
263	R253			o										o			
264	R263			o											o		
265	R290			o											o		
266	R291			o											o		
267	R292			o								o		o			
268	R293			o											o		
269	R294			o											o		
270	ZD204		o											o			
271	ZD205		o											o			
272	T201	1 - 3	o											o			
273		5 - 6	o											o			
274		7 - 8	o											o			
275		8 - 9	o											o			
276		8 - 10	o											o			
277		11 - 12	o											o			
278		13 - 14	o												o		
279		3		o										o			
280		5		o										o			
281		7		o										o			
282		9		o												o	OTP
283		10		o										o			
284		11		o											o		
285		13		o											o		

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

Model: ZUP6-132

ZUP-800

Condition:

Input: 100VAC Output:6V 132A 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
286	T501	8-9	o											o			
287		8-10	o											o			
288		8-9		o										o			
289		8-10		o										o			
290	D503		o											o			Da:A501-short

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

Model: ZUP6-132
Condition:
Input:200VAC Output:6V132A 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,Q102,ZD101-short,R110 - open.
3		G-S	o											o			
4		D		o											o		
5		S		o											o		
6		G		o						o	o			o			Da:Q101,Q102,ZD101-short.
7	Q102	D-S	o								o			o			
8		D-G	o							o	o			o			Da:Q101,Q102,ZD101-short,R110-open.
9		G-S	o											o			
10		D		o											o		
11		S		o											o		
12		G		o						o	o			o			Da:Q101,Q102,ZD101-short.
13	Q103	D-S	o							o	o			o			Da:ZD106,ZD108,-short.
14		D-G	o							o	o			o			Da:Q103,Q104,ZD102,R116-open,ZD106,ZD108-short.
15		G-S	o											o			
16		D		o											o		
17		S		o											o		
18		G		o						o	o			o			Da:Q103,Q104,ZD106,ZD108-short.
19	Q104	D-S	o							o	o			o			Da:ZD106,ZD108-short.
20		D-G	o							o	o			o			Da:Q103,Q104,ZD102,R117-open,ZD106,ZD108-short.
21		G-S	o											o			
22		D		o											o		
23		S		o											o		
24		G		o						o	o			o			Da:Q103,Q104,ZD106,ZD108-short.
25	D101	AC-AC	o								o			o			
26		AC-DC	o								o			o			
27		AC		o										o			
28		DC		o										o			
29	D102		o											o			
30				o										o			
31	D104		o												o		
32				o						o	o			o			Da:Q101,Q102-short.
33	D105		o												o		
34				o						o	o			o			Da:Q101,Q102-short.
35	D107		o								o			o			
36				o											o		
37	D108		o											o			
38				o											o		

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

Model: ZUP6-132
Condition:
Input:200VAC Output:6V132A 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	D109		o											o			
40				o											o		
41	D110		o											o			
42				o											o		
43	D111		o											o			
44				o											o		
45	D112		o											o			
46				o											o		
47	PC101	1-2	o									o		o			
48		3-4	o											o			
49		1		o								o		o			
50		3		o								o		o			
51	C109		o							o				o			Da:FR101 open.
52				o										o			
53	C110		o												o		
54				o											o		
55	C111		o												o		
56				o											o		
57	C112		o							o							Da:R112-open.
58				o											o		
59	C113		o								o			o			
60				o											o		
61	C114		o								o			o			
62				o											o		
63	C115		o							o							Da:R114-open.
64				o											o		
65	C116		o												o		
66				o											o		
67	C117		o							o							Da:R121-open.
68				o											o		
69	C118		o							o							Da:R122-open.
70				o											o		
71	C119		o												o		
72				o											o		
73	C122		o												o		
74				o											o		
75	C125		o												o		
76				o											o		

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

Model: ZUP6-132
Condition:
Input:200VAC Output:6V132A 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	C128		o												o		
78				o											o		
79	C136		o											o			
80				o												o	Vo not stable
81	C145		o											o			
82				o											o		
83	C146		o											o			
84				o											o		
85	C147		o										o	o			
86				o											o		
87	C148		o										o	o			
88				o											o		
89	C152		o											o			
90				o											o		
91	C153		o											o			
92				o											o		
93	FR101			o										o			
94	R103			o												o	Vo not stable
95	R104			o												o	Vo not stable
96	R107			o											o		
97	R108			o											o		
98	R110			o						o	o			o			Da:Q101,Q102,ZD101-short
99	R111			o						o	o			o			Da:Q101,Q102,ZD101-short.
100	R112			o											o		
101	R116			o						o	o			o			Da:Q103,Q104,ZD106,ZD108-short.
102	R117			o						o	o			o			Da:Q103,Q104,ZD106,ZD108-short.
103	R120			o										o			
104	R121			o											o		
105	R122			o											o		
106	R123			o											o		
107	R124			o											o		
108	R125			o											o		
109	R130			o											o		
110	R133			o								o		o			
111	R134			o											o		
112	R142			o												o	Vo not stable
113	R143			o												o	Vo not stable
114	R144			o												o	Vo not stable
115	R151			o											o		

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

Model: ZUP6-132
Condition:
Input:200VAC Output:6V 132A 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
116	R160			o										o			
117	R161			o										o			
118	R162			o										o			
119	R171			o											o		
120	R179			o										o			
121	R180			o										o			
122	R181			o										o			
123	R185			o										o			
124	Q107	C - E	o												o		
125		C - B	o							o	o			o			Da:Q101,Q102-short.
126		B - E	o												o		
127		C		o											o		
128		E		o										o			
129		B - E		o										o			
130	Q108	C - E	o											o			
131		C - B	o											o			
132		B - E	o												o		
133		C		o										o			
134		E		o						o	o			o			Da:Q101,Q102,R111-open.
135		B		o						o	o			o			Da:Q101,Q102,R111-open.
136	T101	4 - 6	o											o			
137		13 - 14	o											o			
138		1 - 3	o											o			
139		4		o											o		
140		13		o										o			
141		1		o										o			
142	L105		o							o	o			o			Da:Q101,Q102,ZD101-short,F101-open.
143				o										o			
144	L106		o													o	Vo not stable
145				o										o			

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

Model: ZUP6-132
Condition:
Input: 200VAC Output:6V 132A 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	Smcke	Burst	Smell	Red Hot	Damaged	Fuse Blown	OVP	OCP	No Output	No Change	Others	Note
146	A208	D - S	o							o				o			Da:R105,R106-open.
147		D - C	o							o				o			Da:R105,R106,ZD214,A208-open.
148		C - S	o											o			
149		D		o										o			
150		S		o										o			
151		C		o										o			
152	Q201	B - E	o												o		
153		B - C	o											o			
154		C - E	o											o			
155		B		o											o		
156		C		o											o		
157		E		o											o		
158	Q202	B - E	o												o		
159		B - C	o											o			
160		C - E	o											o			
161		B		o											o		
162		C		o											o		
163		E		o											o		
164	Q203	D - S	o												o		
165		D - G	o												o		
166		G - S	o												o		
167		D		o											o		
168		S		o											o		
169		G		o											o		
170	Q204	D - S	o												o		
171		D - G	o												o		
172		G - S	o												o		
173		D		o											o		
174		S		o											o		
175		G		o											o		
176	Q205	D - S	o											o			
177		D - G	o											o			
178		G - S	o												o		
179		D		o											o		
180		S		o											o		
181		G		o											o		
182	Q206	B - E	o												o		
183		B - C	o												o		

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

ZUP-800

Model: ZUP6-132
Condition:
Input: 200VAC Output:6V 132A 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	Q206	C - E	o												o		
185		B		o											o		
186		C		o											o		
187		E		o											o		
188	D201		o											o			
189				o											o		
190	D204		o												o		
191				o								o		o			
192	D205		o									o		o			
193				o											o		
194	D207		o											o			
195				o											o		
196	D221		o													o	HICC-UP
197				o											o		
198	D227		o												o		
199				o						o				o			Da:A102,R111,Q102,R105,R106-open.
200	D228		o												o		
201				o											o		
202	D229		o											o			
203				o											o		
204	D231		o													o	HICC-UP
205				o											o		
206	D233		o												o		
207				o											o		
208	D235		o											o			
209				o											o		
210	PC201	1 - 2	o												o		
211		3 - 4	o												o		
212		1		o										o			
213		3		o										o			
214	PC202	1 - 2	o												o		
215		3 - 4	o											o			
216		1		o											o		
217		3		o											o		
218	PC203	1 - 2	o												o		
219		3 - 4	o											o			
220		1		o											o		
221		3		o											o		

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

ZUP-800

Model: ZUP6-132
Condition:
Input: 200VAC Output:6V 132A 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
222	C218		o											o			
223				o											o		
224	C219		o											o			
225				o											o		
226	C221		o											o			
227				o											o		
228	C222		o													o	OTP
229				o											o		
230	C223		o												o		
231				o											o		
232	C224		o													o	HICC-UP
233				o											o		
234	C225		o												o		
235				o											o		
236	C227		o											o			
237				o											o		
238	C228		o											o			
239				o											o		
240	C230		o													o	HICC-UP
241				o											o		
242	C231		o													o	OTP
243				o											o		
244	C233		o													o	HICC-UP
245				o											o		
246	C234		o											o			
247				o											o		
248	C236		o							o				o			Da:D233-open.
249				o											o		
250	C261		o							o				o			Da:D224-open.
251				o											o		
252	R201			o								o		o			
253	R202			o											o		Max Io=0A.
254	R206			o											o		
255	R208			o										o			
256	R211			o												o	Vo=3.9V
257	R213			o												o	Vo=3.5V.
258	R220			o								o		o			
259	R227			o												o	Vo=4V .
260	R231			o												o	P.S. in C.C. MODE.

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

ZUP-800

Model: ZUP6-132
Condition:
Input: 200VAC Output:6V 132A 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
261	R241			o											o		
262	R243			o										o			
263	R253			o										o			
264	R263			o											o		
265	R290			o											o		
266	R291			o											o		
267	R292			o								o		o			
268	R293			o											o		
269	R294			o											o		
270	ZD204		o											o			
271	ZD205		o											o			
272	T201	1 - 3	o											o			
273		5 - 6	o											o			
274		7 - 8	o											o			
275		8 - 9	o											o			
276		8 - 10	o											o			
277		11 - 12	o											o			
278		13 - 14	o												o		
279		3		o										o			
280		5		o										o			
281		7		o										o			
282		9		o												o	OTP
283		10		o										o			
284		11		o											o		
285		13		o											o		

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

ZUP-800

Model: ZUP6-132

Condition:

Input: 200VAC Output:6V 132A 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
286	T501	8-9	o											o			
287		8-10	o											o			
288		8-9		o										o			
289		8-10		o										o			
290	D503		o											o			Da:A501-short

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

6. VIBRATION TEST

Model:ZUP 6-132

(1) Vibration test class

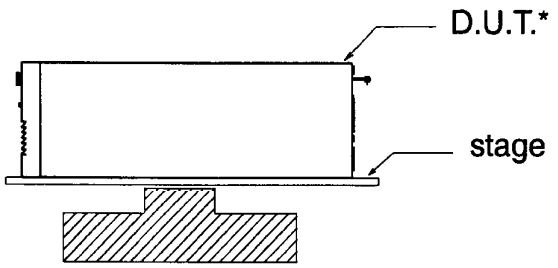
Frequency variable endurance test

(2) Equipment used

Controller: GENRAD-2503.

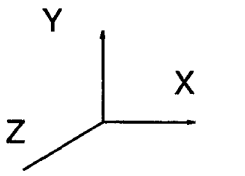
Vibrator: ULHOLTZ-DICKIE TA1000.

(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=230Vac;Iout=132A (OK) NG

Check item	Vout	Ripple (mVp-p)	D.U.T.state
Directions / Initial	6.024	63	O.K.
X	6.024	63	O.K.
Y	6.024	63	O.K.
Z	6.024	63	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