PXE20 Single Output DC/DC Converters

9 to 75 Vdc input, 3.3 to 15 Vdc Single Output, 20W

TDK-Lambda

Features

- Low profile: 2.0x1.6x0.4 inches (50.8x40.6x10.2mm)
- 2：1 wide input voltage of 9-18, 18-36 and 36-75VDC
- 4：1 ultra wide input voltage of 9-36 and 18-75VDC
- 20 Watts output power
- Input to output isolation: 1600Vdc, min
- Operating case temperature range :100℃ max
- Over-current protection, auto-recovery
- Output over voltage protection
- ISO 9001 certified manufacturing facilities
- UL60950-1, EN60950-1 and IEC60950-1 licensed
- CE Mark meet 2006/95/EC, 93/68/EEC and 2004/108/EC
- Compliant to RoHS EU directive 2002/95/EC

Applications

- Distributed power architectures
- Communications equipment
- Computer equipment

General Description

The PXE20 single output series offers 20 Watts of output power from a 2 x 1.6 x 0.4 inch package. The PXE20-xxSxx models have a 2:1 wide input voltage of 9-18, 18-36 and 36-75VDC. The PXE20-xxWSxx models have a 4:1 wide input voltage of 9-36 and 18-75VDC.

Table of contents

Absolute Maximum Rating					
Parameter	**Device**	**Min**	**Typ**	**Max**	**Unit**
Input Voltage Continuous Transient (100ms)	12Sxx 24Sxx 48Sxx			36 50 100	Vdc Vdc Vdc
Operating temperature range (Operating temperature will be depended De-rating curve)	Standard	-40		+85	℃
Operating case range	All			100	℃
Storage temperature	All	-55		+105	℃
I/O Isolation voltage	All	1600			Vdc
I/O Isolation capacitance	All			300	pF

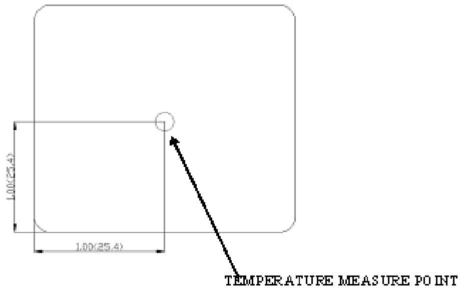
Output Specifications					
Parameter	**Device**	**Min**	**Typ**	**Max**	**Unit**
Operating Output Range	xxS33 xxS05 xxS12 xxS15	3.267 4.95 11.88 14.85	3.30 5.00 12.00 15.00	3.333 5.05 12.12 15.15	Vdc Vdc Vdc
Line Regulation(LL to HL at Full Load)	All	-0.2		0.2	%
Load Regulation(Min. to 100% Full Load)	All	-0.5		0.5	%
Output Ripple & Noise (20MHz bandwidth)	All			75	mVp-p
Temperature Coefficient	All	-0.02		+0.02	%/℃
Transient Response Recovery Time (25% load step change)	All		250		μS
Output Current	xxS33 xxS05 xxS12 xxS15	280 280 134 106		4000 4000 1670 1330	mA mA mA mA
Output Over Voltage Protection Zener diode clamp	xxS33 xxS05 xxS12 xxS15		3.9 6.2 15 18		Vdc Vdc Vdc Vdc
Output Over Current Protection	All		150		% FL.
Output Short Circuit Protection	All	Hiccup, automatics recovery			
Output Capacitor Load	xxS33 xxS05 xxS12 xxS15			13000 6800 2200 755	μF μF μF μF

Input Specifications					
Parameter	**Device**	**Min**	**Typ**	**Max**	**Unit**
Operating Input Voltage	12Sxx 24(W)Sxx 48(W)Sxx	9 18(9) 36(18)	12 24 48	18 36 75	Vdc Vdc Vdc
Input reflected ripple current	All		25		mA p-p
Start Up Time (nominal Vin and constant resistive load)	All		20		mS
Remote ON/OFF Positive Logic DC-DC ON DC-DC OFF	 All All	 3.5 0		 12 1.2	 Vdc Vdc

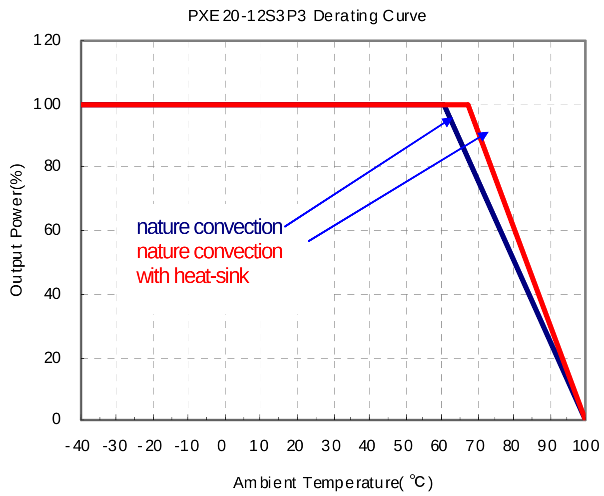
General Specifications					
Parameter	**Device**	**Min**	**Typ**	**Max**	**Unit**
Efficiency Test at Vin, nom and full load	12S3P3 12S05 12S12 12S15 24(W)S3P3 24(W)S05 24(W)S12 24(W)S15 48(W)S3P3 48(W)S05 48(W)S12 48(W)S15		77 80 83 84 79(76) 81(79) 86(81) 86(81) 79(77) 82(80) 86(82) 86(82)		% % % % % % % % % % % %
Isolation Resistance	All	10^9			Ω
Isolation Capacitance	All			300	pF
Switching Frequency(Test at Vin, nom and full load)	All		300		KHz
Transient Response Recovery Time (25% load step change)	All		250		uS
Weight	All		48		g
MTBF (please see the MTBF and reliability part)	All		1.928×10^6		hours

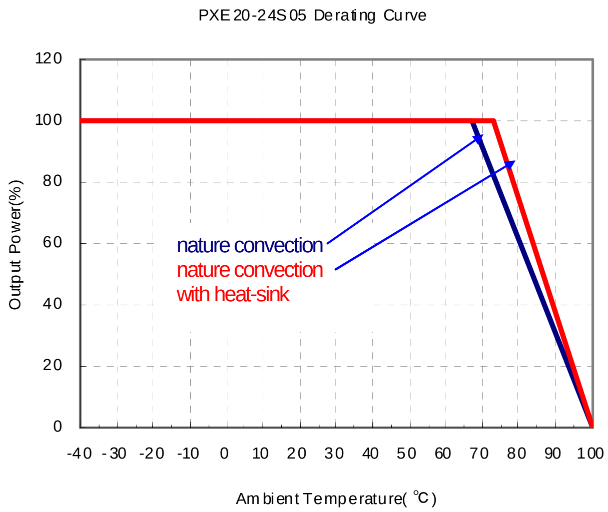
Thermal Consideration

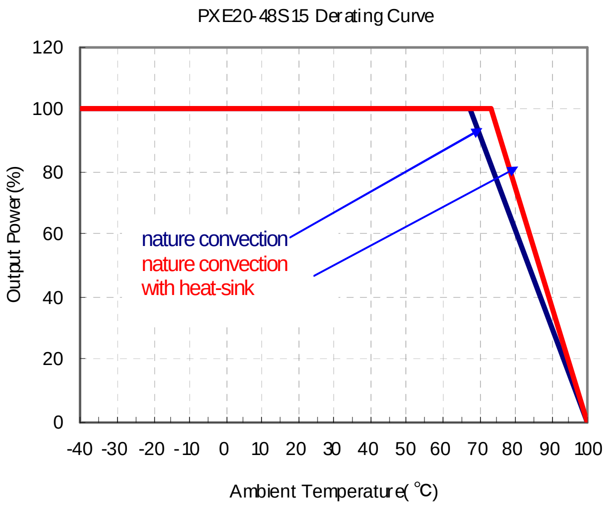
The power module operates in a variety of thermal environments. However, sufficient cooling should be provided to help ensure reliable operation of the unit. Heat is removed by conduction, convection, and radiation to the surrounding environment. Proper cooling can be verified by measuring the point shown in the figure below. The temperature at this location should not exceed 100C. When operating, adequate cooling must be provided to maintain the test point temperature at or below 100C. Although the maximum point temperature of the power modules is 100C, limiting this temperature to a lower value will yield higher higher reliability.

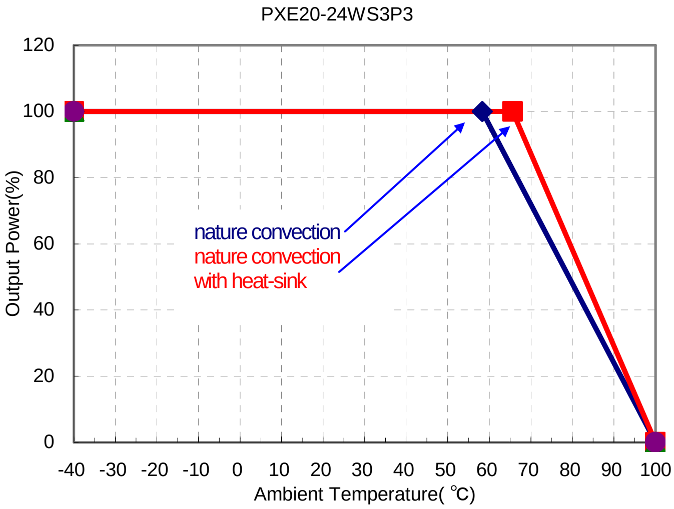


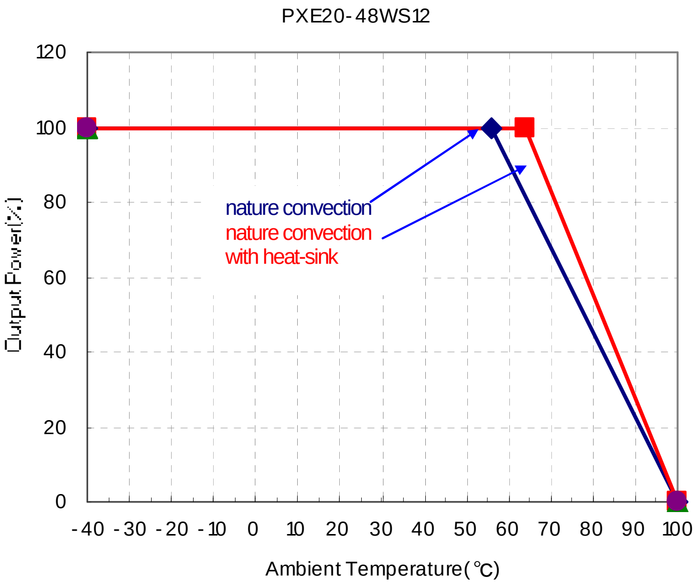
De-rating curves for PXE20-12S3P3, PXE20-24S05, PXE20-48S15, PXE20-24WS3P3, and PXE20-48WS12






PXE20-48S15 Derating Curve
Output Power(%)
Ambient Temperature(℃)
nature convection
nature convection
with heat-sink
120
100
80
60
40
20
0
-40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100


PXE20-24WS3P3
Output Power(%)
Ambient Temperature(℃)
nature convection
nature convection
with heat-sink
120
100
80
60
40
20
0
-40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100


PXE20-48WS12
Output Power(%)
Ambient Temperature(℃)
nature convection
nature convection
with heat-sink
120
100
80
60
40
20
0
-40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100

Output over current protection

When excessive output currents occur in the system, circuit protection is required on all power supplies. Normally, overload current is maintained at approximately 150 percent of rated current for the PXE20-S Series.

Hiccup-mode is a method of operation in a power supply whose purpose is to protect the power supply from being damaged during an over-current fault condition. It also enables the power supply to restart when the fault is removed. There are other ways of protecting the power supply when it is over-loaded, such as the maximum current limiting or current foldback methods.

One of the problems resulting from over current is that excessive heat may be generated in power devices; especially MOSFET and Schottky diodes and the temperature of those devices may exceed their specified limits. A protection mechanism has to be used to prevent those power devices from being damaged.

The operation of hiccup is as follows. When the current sense circuit sees an over-current event, the controller shuts off the power supply for a given time and then tries to start up the power supply again. If the over-load condition has been removed, the power supply will start up and operate normally; otherwise, the controller will see another over-current event and shut off the power supply again, repeating the previous cycle. Hiccup operation has none of the drawbacks of the other two protection methods, although its circuit is more complicated because it requires a timing circuit. The excess heat due to overload lasts for only a short duration in the hiccup cycle, hence the junction temperature of the power devices is much lower.

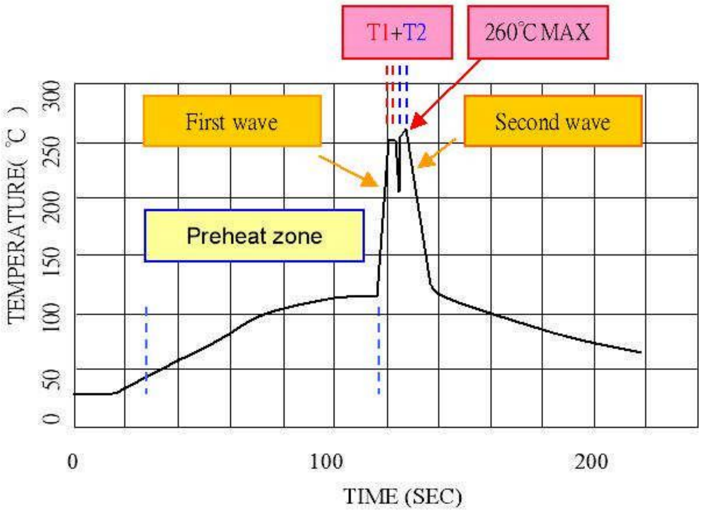
The hiccup operation can be done in various ways. For example, one can start hiccup operation any time an over-current event is detected; or prohibit hiccup during a designated start-up is usually larger than during normal operation and it is easier for an over-current event is detected; or prohibit hiccup during a designated start-up interval (usually a few milliseconds). The reason for the latter operation is that during start-up, the power supply needs to provide extra current to charge up the output capacitor. Thus the current demand during start-up is usually larger than during normal operation and it is easier for an over-current event to occur. If the power supply starts to hiccup once there is an over-current, it might never start up successfully. Hiccup mode protection will give the best protection for a power supply against over current situations, since it will limit the average current to the load at a low level, so reducing power dissipation and case temperature in the power devices.

Short Circuit Protection

Continuous, hiccup and auto-recovery mode.

Soldering and Reflow Consideration

Lead free wave solder profile for PXE20-S DIP type



Zone	Reference Parameter
Preheat zone	Rise temp. speed : 3□/ sec max. Preheat temp. : 100~130□
Actual heating	Peak temp. : 250~260□ Peak time (T1+T2 time) : 4~6 sec

Reference Solder：Sn-Ag-Cu；Sn-Cu

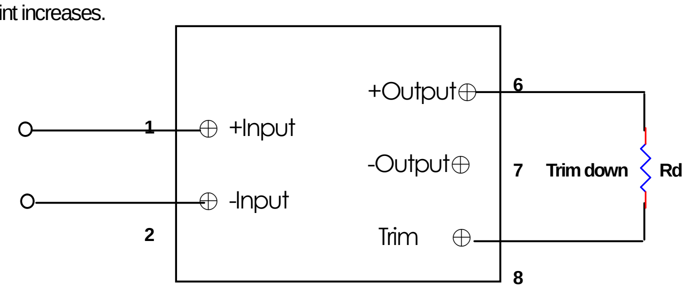
Hand Welding：Soldering iron：Power 90W

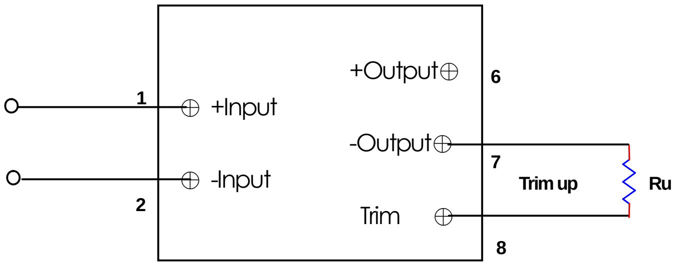
Welding Time：2～4 sec

Temp.：380～400 ℃

External trim adjustment

Output voltage set point adjustment allows the user to increase or decrease the output voltage set point of a module. This is accomplished by connecting an external resistor between the TRIM pin and either the Vo (+) or Vo (-) pins. With an external resistor between the TRIM and Vo (+) pin, the output voltage set point decreases. With an external resistor between the TRIM and Vo (-) pin, the output voltage set point increases.





EXTERNAL OUTPUT TRIMMING

TRIM TABLE

PXE20-xxS3P3

Trim down	1	2	3	4	5	6	7	8	9	10	%
Vout=	3.266	3.233	3.200	3.167	3.134	3.101	3.068	3.035	3.002	2.969	Volts
Rx=	69.470	31.235	18.490	12.117	8.294	5.745	3.924	2.559	1.497	0.647	K Ohms
Trim up	1	2	3	4	5	6	7	8	9	10	%
Vout=	3.332	3.365	3.398	3.431	3.464	3.497	3.530	3.563	3.596	3.629	Volts
Rx=	57.930	26.165	15.577	10.283	7.106	4.988	3.476	2.341	1.459	0.753	K Ohms

PXE20-xxS05

Trim down	1	2	3	4	5	6	7	8	9	10	%
Vout=	4.952	4.902	4.852	4.802	4.752	4.702	4.652	4.602	4.552	4.502	Volts
Rx=	45.533	20.612	12.306	8.152	5.660	3.999	2.812	1.922	1.230	0.676	K Ohms
Trim up	1	2	3	4	5	6	7	8	9	10	%
Vout=	5.052	5.102	5.152	5.202	5.252	5.302	5.352	5.402	5.452	5.502	Volts
Rx=	36.570	16.580	9.917	6.585	4.586	3.253	2.302	1.588	1.032	0.588	K Ohms

PXE20-xxS12

Trim down	1	2	3	4	5	6	7	8	9	10	%
Vout=	11.887	11.767	11.647	11.527	11.407	11.287	11.166	11.046	10.926	10.806	Volts
Rx=	460.659	207.779	123.486	81.340	56.052	39.193	27.151	18.120	11.095	5.476	K Ohms
Trim up	1	2	3	4	5	6	7	8	9	10	%
Vout=	12.127	12.247	12.367	12.487	12.607	12.727	12.847	12.967	13.088	13.208	Volts
Rx=	368.241	166.121	98.747	65.060	44.848	31.374	21.749	14.530	8.916	4.424	K Ohms

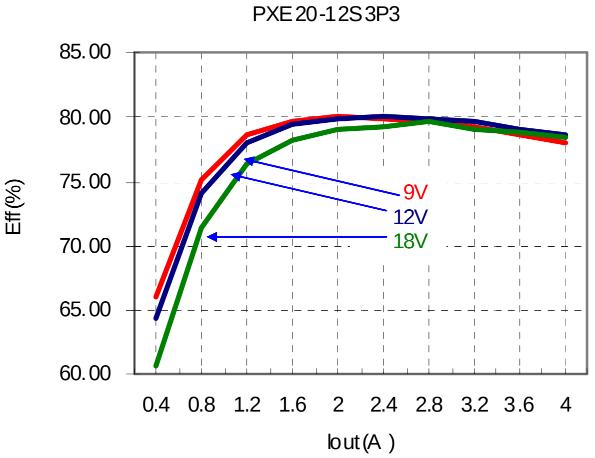
PXE20-xxS15

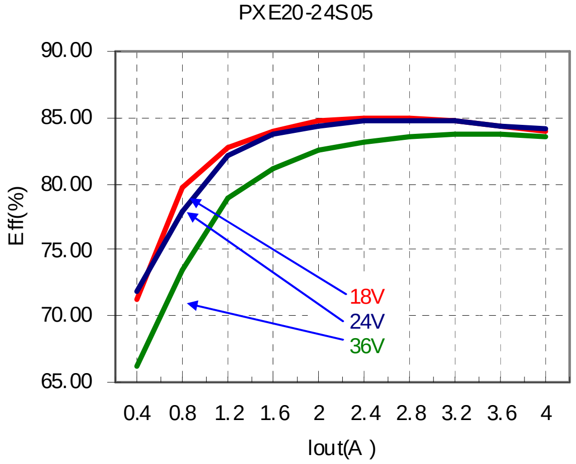
Trim down	1	2	3	4	5	6	7	8	9	10	%
Vout=	14.808	14.658	14.509	14.359	14.209	14.060	13.910	13.761	13.611	13.462	Volts
Rx=	499.816	223.408	131.272	85.204	57.563	39.136	25.974	16.102	8.424	2.282	K Ohms
Trim up	1	2	3	4	5	6	7	8	9	10	%
Vout=	15.107	15.256	15.406	15.556	15.705	15.855	16.004	16.154	16.304	16.453	Volts
Rx=	404.184	180.592	106.061	68.796	46.437	31.531	20.883	12.898	6.687	1.718	K Ohms

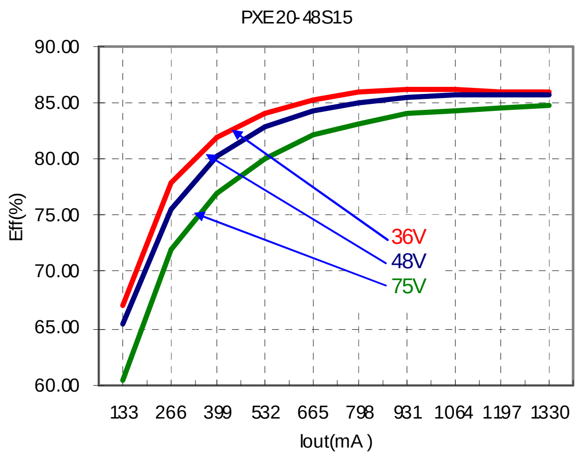
Characteristic Curve

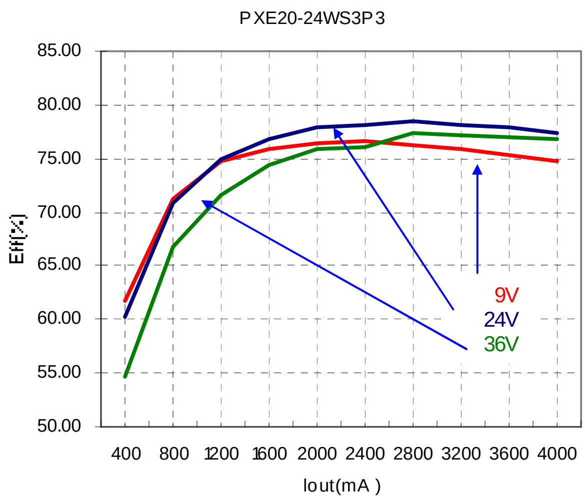
Efficiency

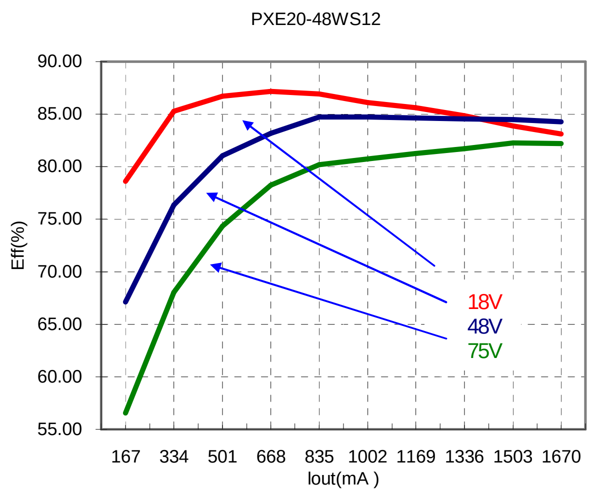
a. Efficiency with load change under different line condition at room temperature



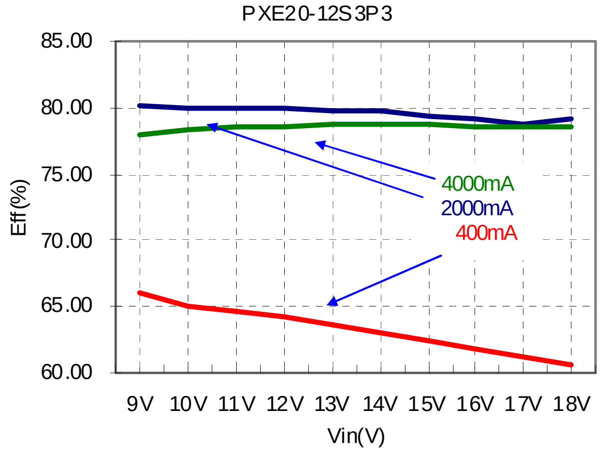


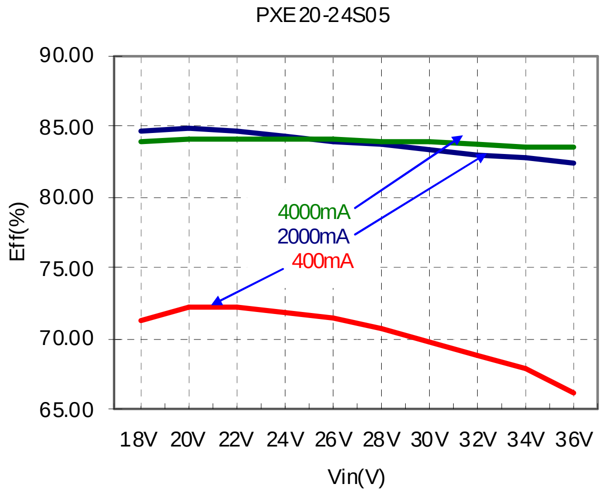


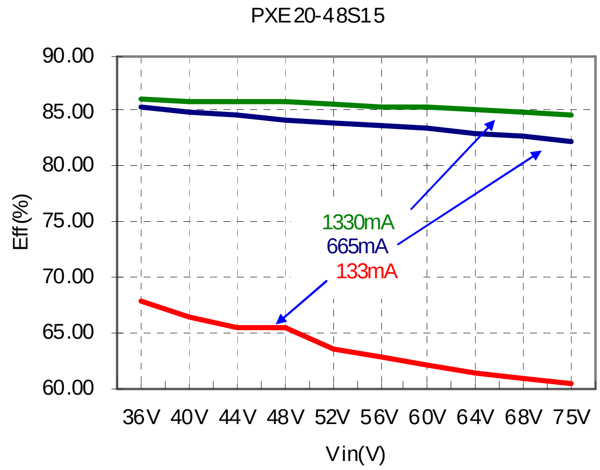

PXE20-24WS3P3
85.00
80.00
75.00
70.00
65.00
60.00
55.00
50.00
Eff[%]
400 800 1200 1600 2000 2400 2800 3200 3600 4000
Iout(mA)
9V
24V
36V

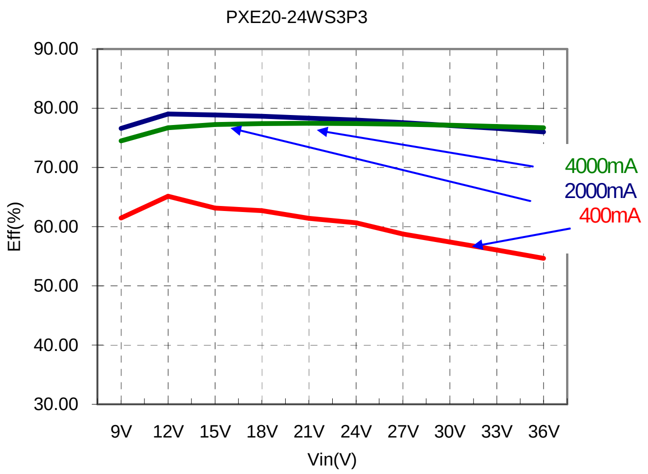

PXE20-48WS12
90.00
85.00
80.00
75.00
70.00
65.00
60.00
55.00
Eff(%)
167 334 501 668 835 1002 1169 1336 1503 1670
Iout(mA)
18V
48V
75V

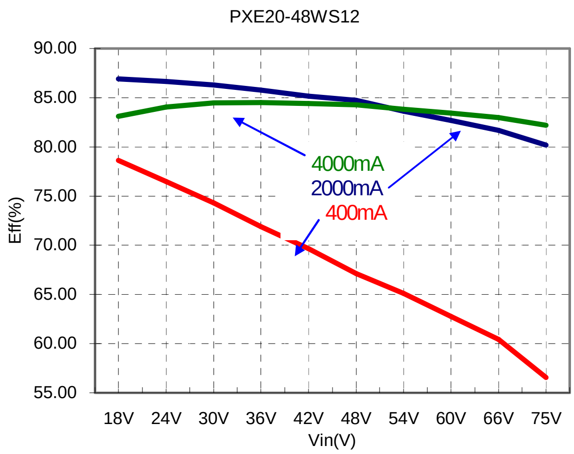
b. Efficiency with line change under different load condition at room temperature



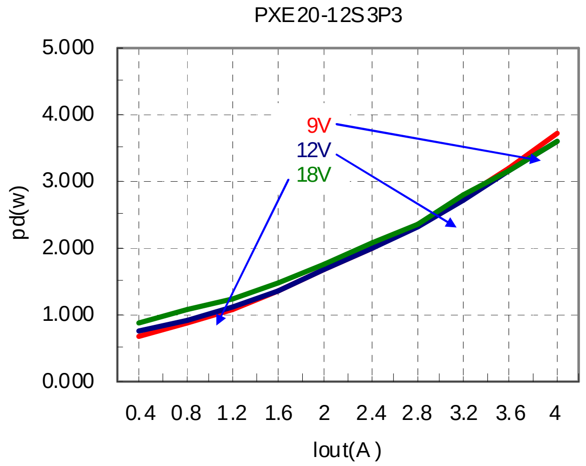


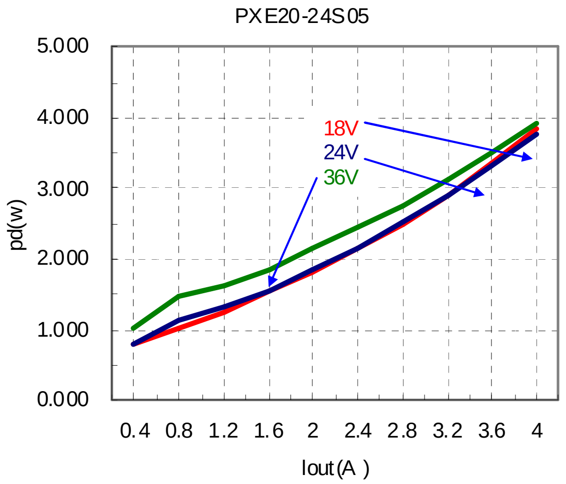


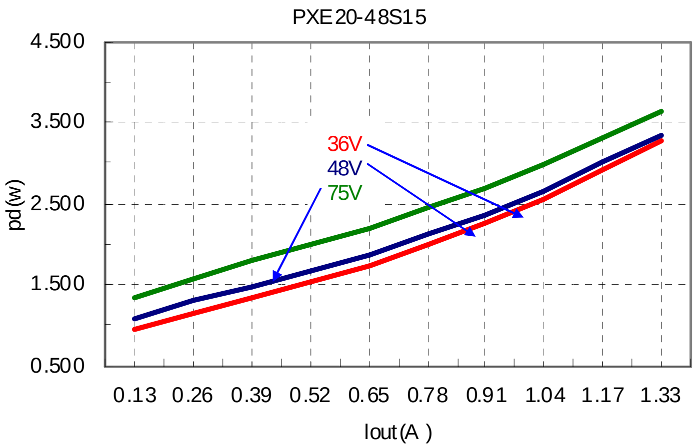

PXE20-24WS3P3
90.00
80.00
70.00
60.00
50.00
40.00
30.00
Eff(%)
9V
12V
15V
18V
21V
24V
27V
30V
33V
36V
Vin(V)
4000mA
2000mA
400mA

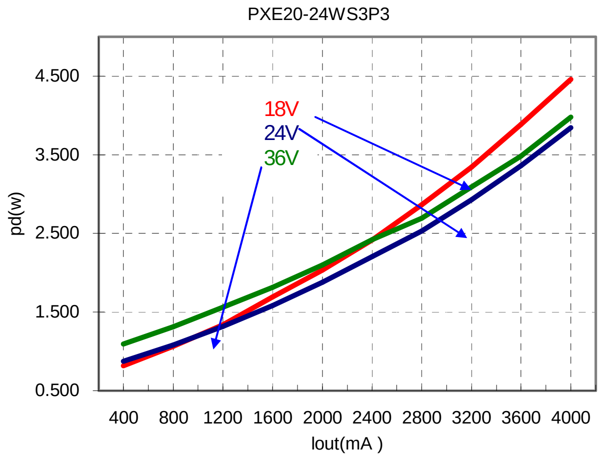

PXE20-48WS12
90.00
85.00
80.00
75.00
70.00
65.00
60.00
55.00
Eff(%)
18V
24V
30V
36V
42V
48V
54V
60V
66V
75V
Vin(V)
4000mA
2000mA
400mA

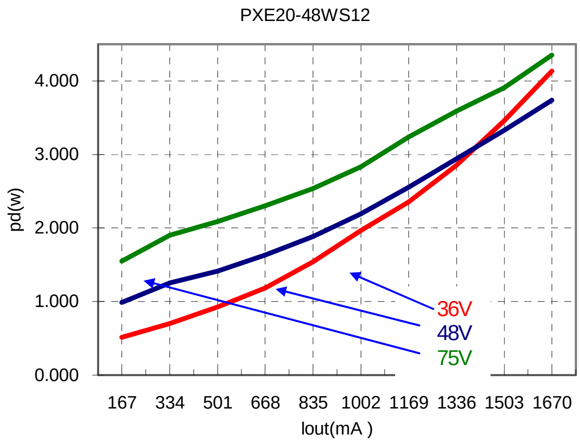
c. Power Dissipation Curves





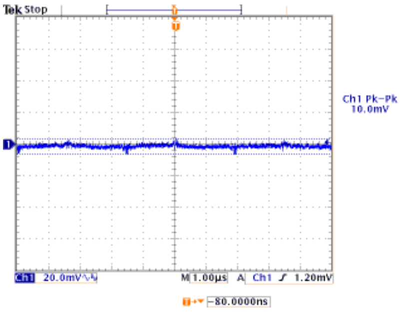



PXE20-24WS3P3
4.500
3.500
2.500
1.500
0.500
pd(w)
18V
24V
36V
400 800 1200 1600 2000 2400 2800 3200 3600 4000
Iout(mA)


PXE20-48WS12
4.000
3.000
2.000
1.000
0.000
pd(w)
36V
48V
75V
167 334 501 668 835 1002 1169 1336 1503 1670
Iout(mA)

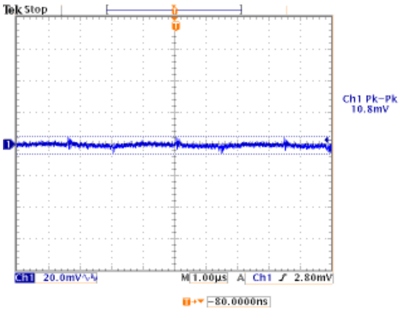
Output ripple & noise

PXE20-12S3P3



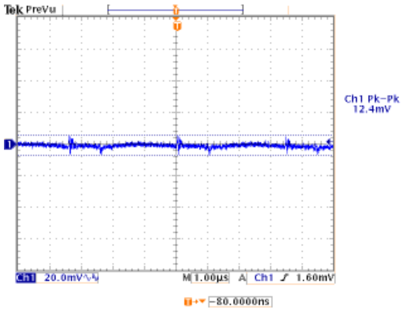
Low Line, Full Load

Ripple noise=10.0mV



Normal Line, Full Load

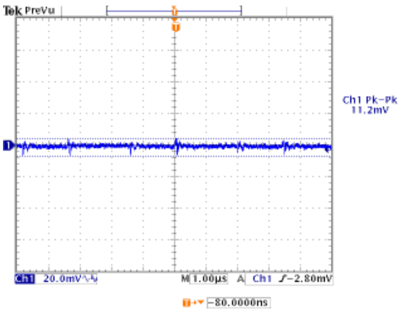
Ripple noise=10.8mV



High Line, Full Load

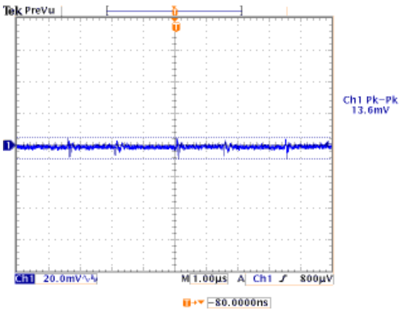
Ripple noise=12.4mV

PXE20-24S05



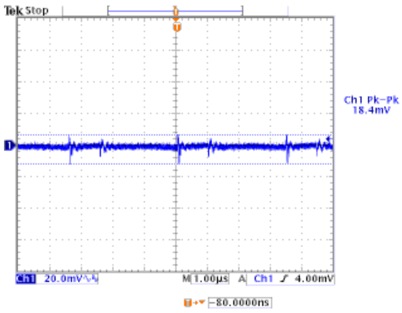
Low Line, Full Load

Ripple noise=11.2mV



Normal Line, Full Load

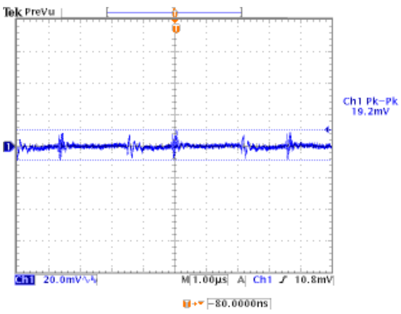
Ripple noise=13.6mV



High Line, Full Load

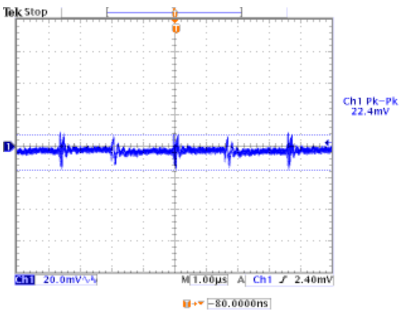
Ripple noise=18.4mV

PXE20-48S15



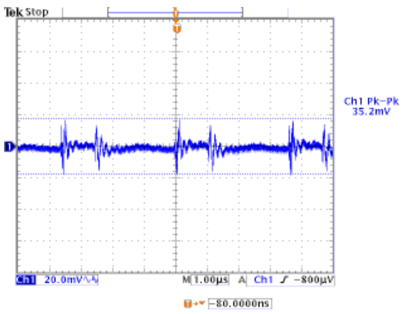
Low Line, Full Load

Ripple noise=19.2mV



Normal Line, Full Load

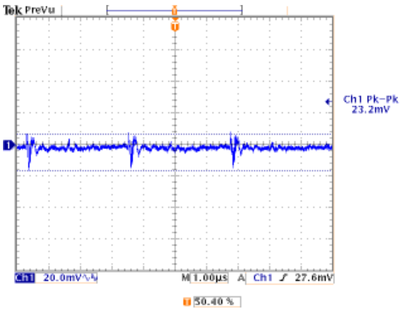
Ripple noise=22.4mV



High Line, Full Load

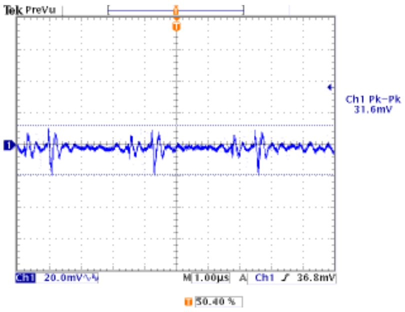
Ripple noise=35.2mV

PXE20-24WS3P3



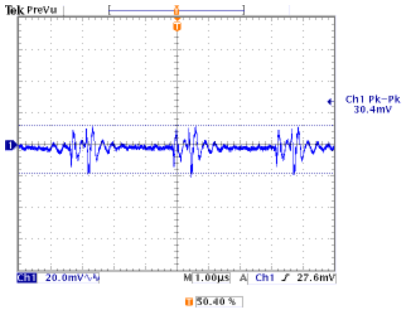
Low Line, Full Load

Ripple noise=23.2mV



Normal Line, Full Load

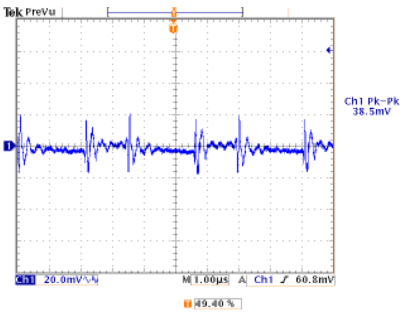
Ripple noise=31.5mV



High Line, Full Load

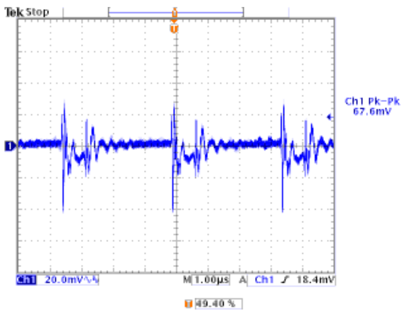
Ripple noise=30.4mV

PXE20-48WS12



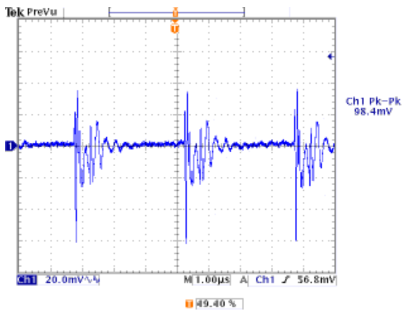
Low Line, Full Load

Ripple noise=38.5mV



Normal Line, Full Load

Ripple noise=67.6mV

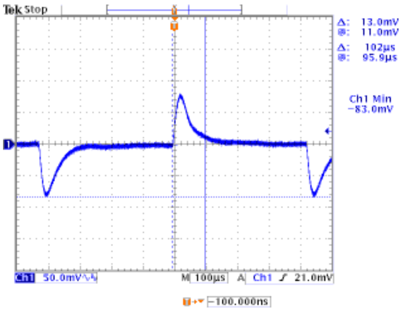


High Line, Full Load

Ripple noise=98.4mV

Transient Peak and Response

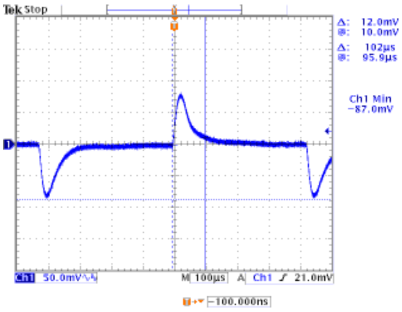
PXE20-12S3P3



Low Line, Full Load

Transient Peak 83.0mV

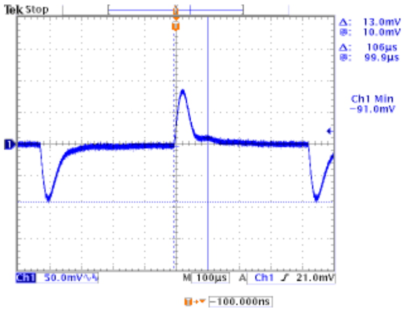
Transient Response 102uS



Normal Line, Full Load

Transient Peak 87.0mV

Transient Response 102uS

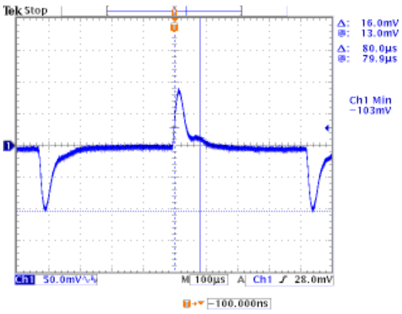


High Line, Full Load

Transient Peak 91.0mV

Transient Response 106uS

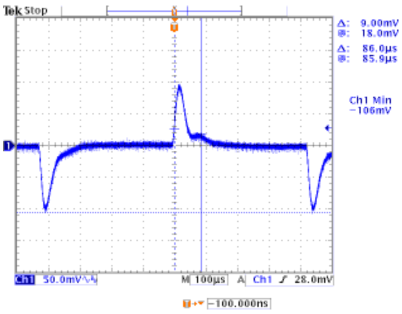
PXE20-24S05



Low Line, Full Load

Transient Peak 103mV

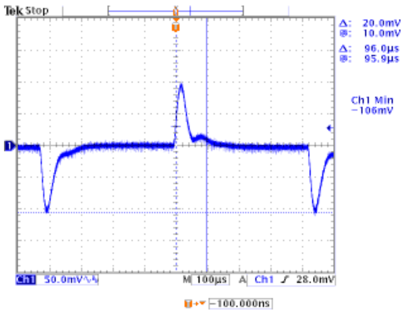
Transient Response 80uS



Normal Line, Full Load

Transient Peak 106mV

Transient Response 86uS

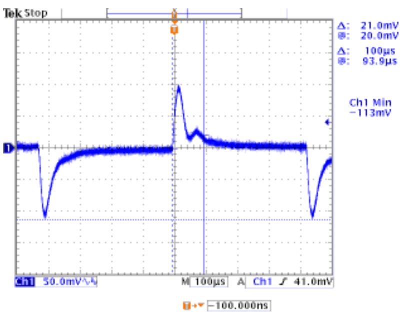


High Line, Full Load

Transient Peak 106mV

Transient Response 96uS

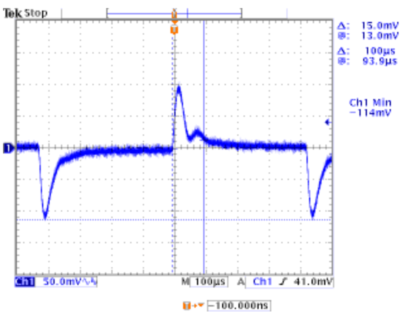
PXE20-48S15



Low Line, Full Load

Transient Peak 113mV

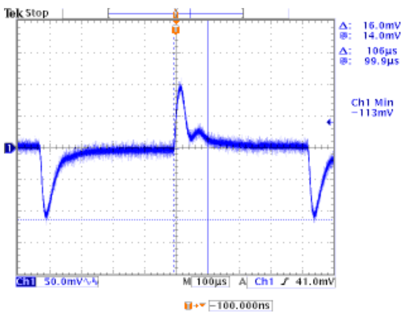
Transient Response 100uS



Normal Line, Full Load

Transient Peak 114mV

Transient Response 100uS

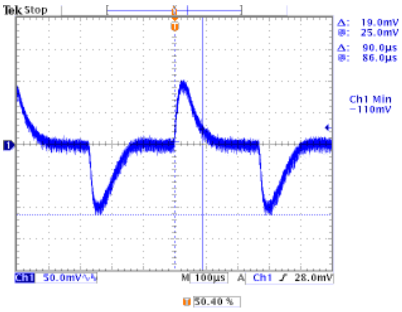


High Line, Full Load

Transient Peak 113mV

Transient Response 106uS

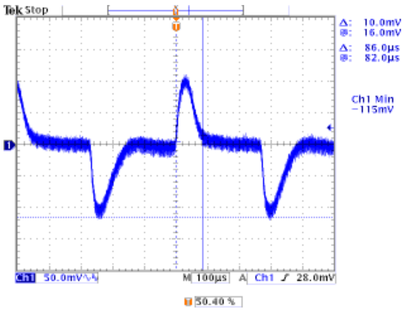
PXE20-24WS3P3



Low Line, Full Load

Transient Peak 110mV

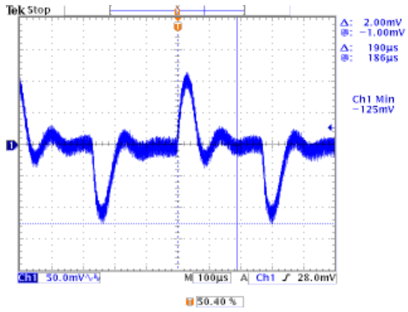
Transient Response 90Us



Normal Line, Full Load

Transient Peak 115mV

Transient Response 86uS

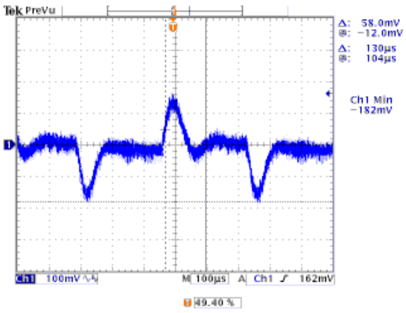


High Line, Full Load

Transient Peak 125mV

Transient Response 190uS

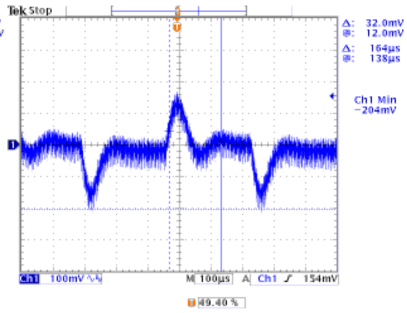
PXE20-48WS12



Low Line, Full Load

Transient Peak 182mV

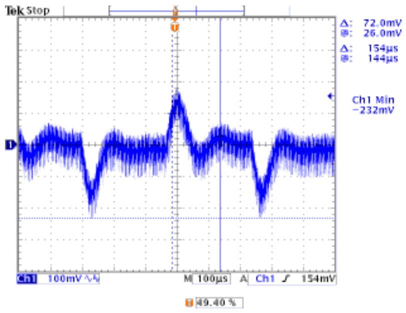
Transient Response 130uS



Normal Line, Full Load

Transient Peak 204mV

Transient Response 164uS



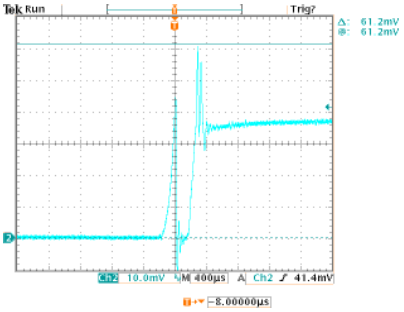
High Line, Full Load

Transient Peak 232mV

Transient Response 154uS

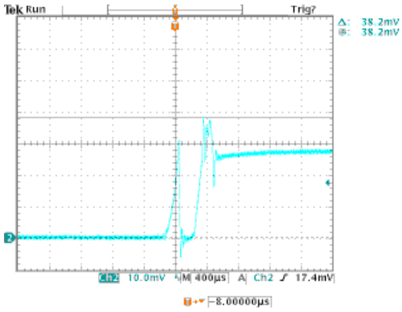
Inrush Current

PXE20-12S3P3



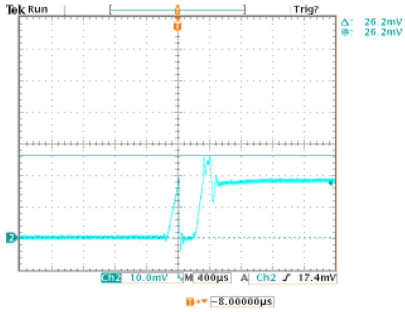
Low Line, Full Load

Inrush current=(61.2/10) X500mA=3060mA



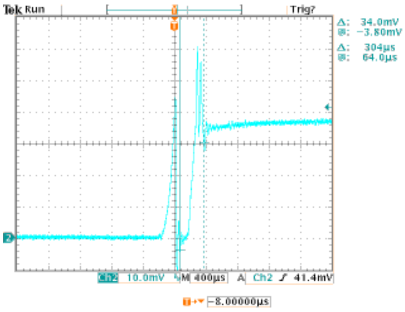
Normal Line, Full Load

Inrush current=(38.2/10) x500mA=1910mA



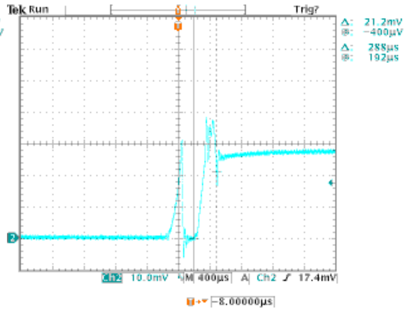
High Line, Full Load

Inrush current=(26.2/10) x500mA=1310mA



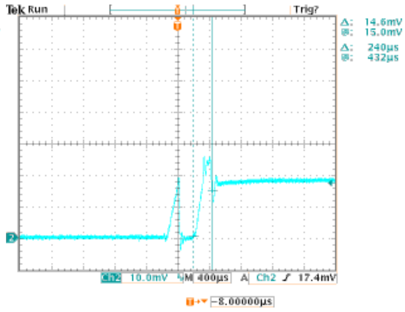
Low Line, Full Load

Duration: 304uS



Normal Line, Full Load

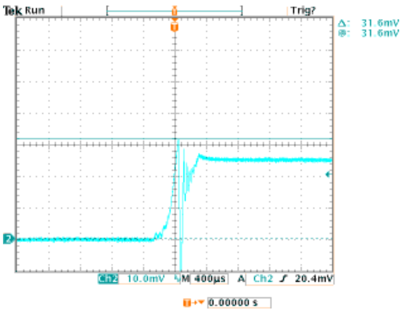
Duration: 288uS



High Line, Full Load

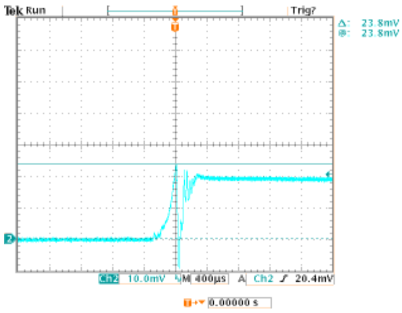
Duration: 240uS

PXE20-24S05



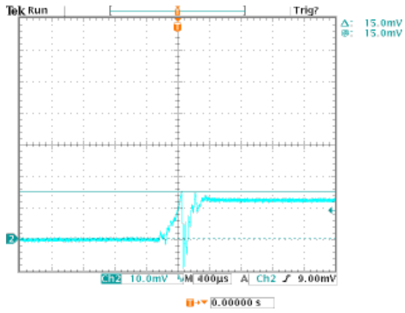
Low Line, Full Load

Inrush current=(31.6/10) X500mA=1580mA



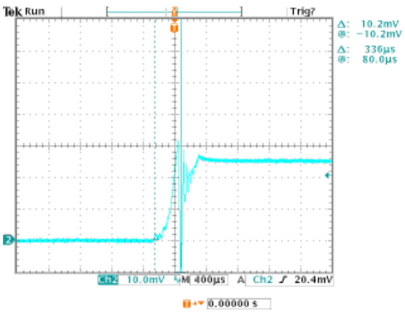
Normal Line, Full Load

Inrush current=(23.8/10) x500mA=1190mA



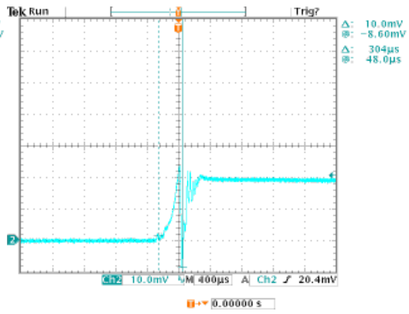
High Line, Full Load

Inrush current=(15.0/10) x500mA=750mA



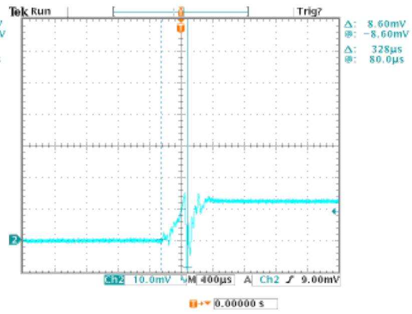
Low Line, Full Load

Duration: 336uS



Normal Line, Full Load

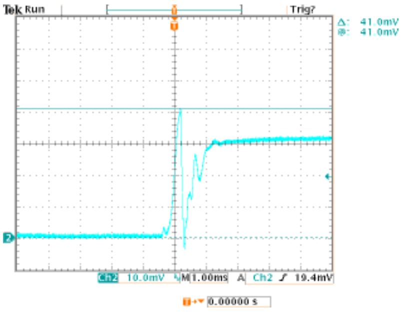
Duration: 304uS



High Line, Full Load

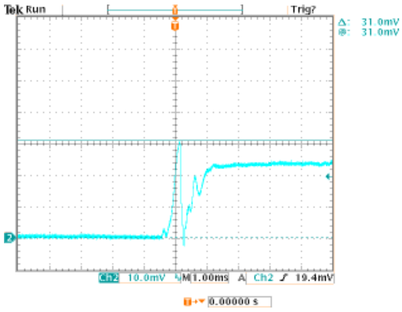
Duration: 328uS

PXE20-48S15



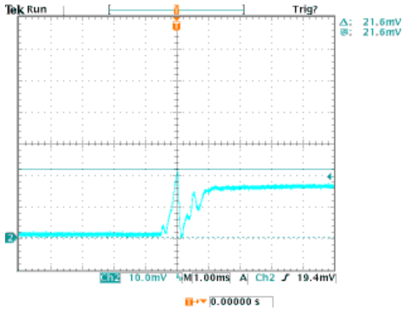
Low Line, Full Load

Inrush current=(41.0/10) X200mA=820mA



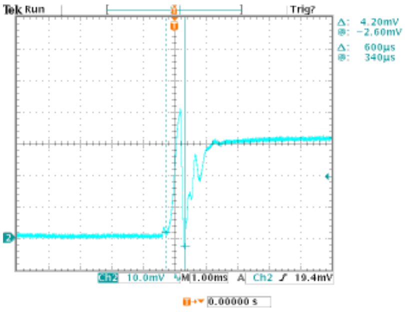
Normal Line, Full Load

Inrush current=(31.0/10) x200mA=620mA



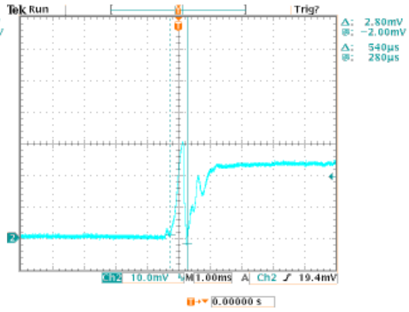
High Line, Full Load

Inrush current=(21.6/10) x200mA=432mA



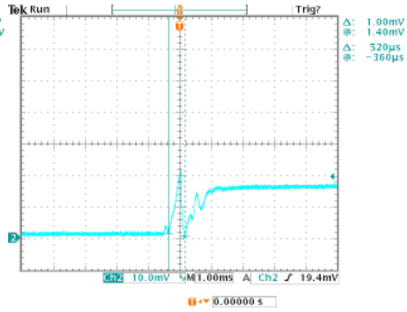
Low Line, Full Load

Duration: 600uS



Normal Line, Full Load

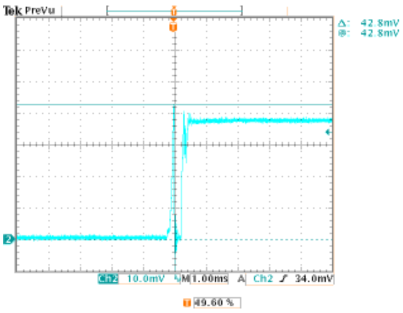
Duration: 540uS



High Line, Full Load

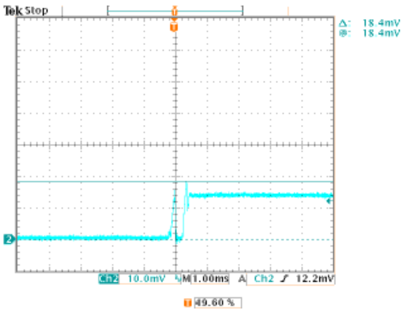
Duration: 520uS

PXE20-24WS3P3



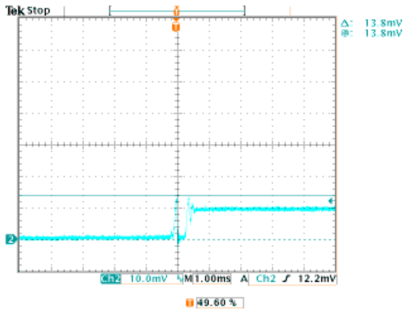
Low Line, Full Load

Inrush current=(42.8/10) X500mA=2140mA



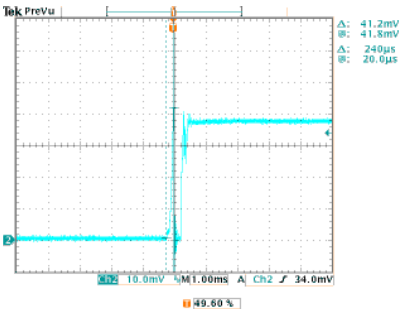
Normal Line, Full Load

Inrush current=(18.4/10) x500mA=920mA



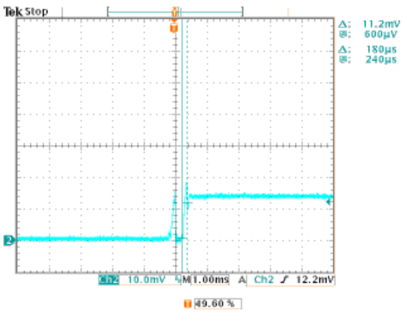
High Line, Full Load

Inrush current=(13.8/10) x500mA=690mA



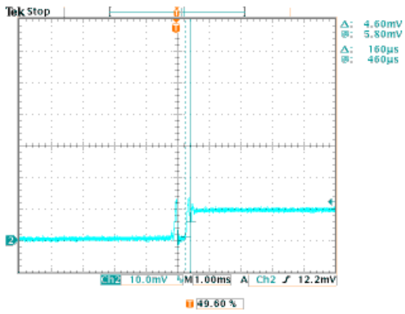
Low Line, Full Load

Duration: 240uS



Normal Line, Full Load

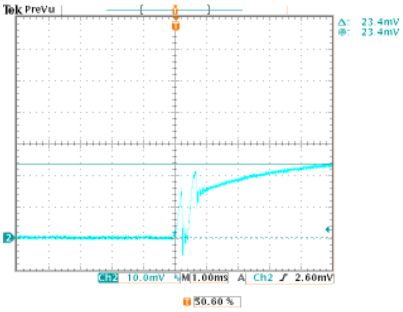
Duration: 180uS



High Line, Full Load

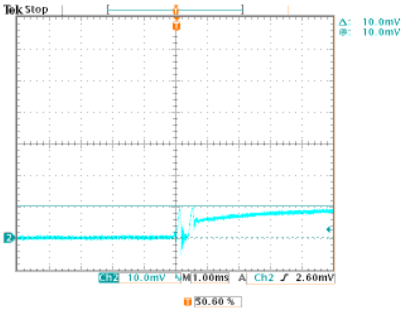
Duration: 160uS

PXE20-48WS12



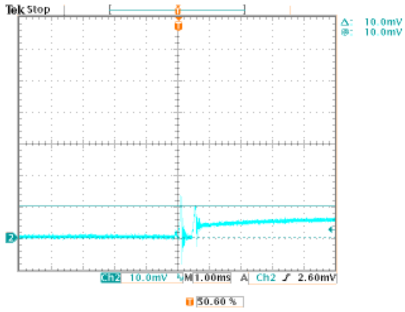
Low Line, Full Load

Inrush current=(23.4/10) X500mA=1170mA



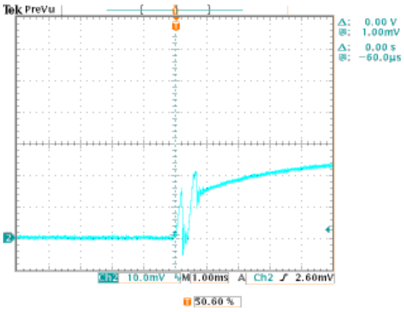
Normal Line, Full Load

Inrush current=(10/10) x500mA=500mA



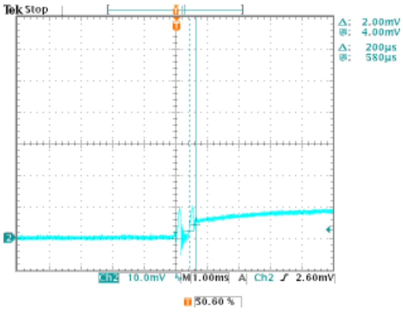
High Line, Full Load

Inrush current=(1010) x500mA=500mA



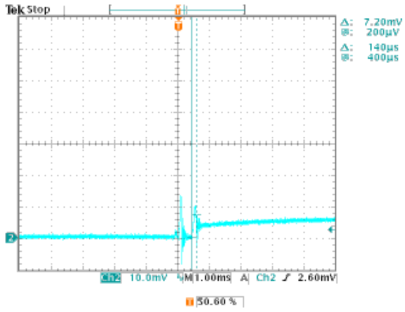
Low Line, Full Load

Duration: 0uS



Normal Line, Full Load

Duration: 200uS

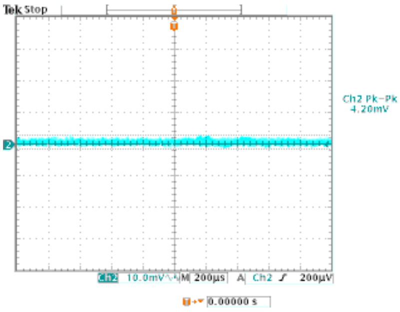


High Line, Full Load

Duration: 140uS

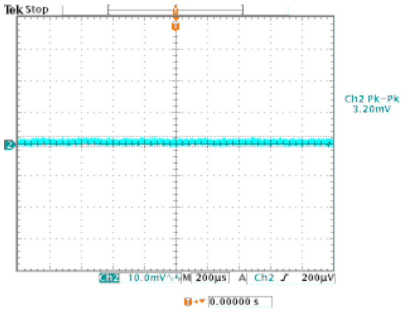
Input Ripple Current

PXE20-12S3P3



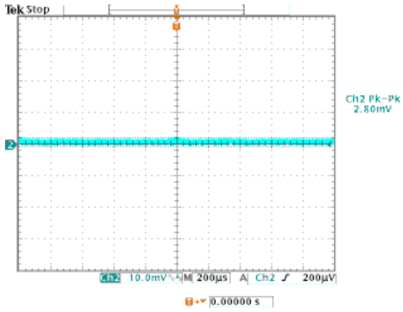
Low Line, Full Load

Ripple current=(4.2/10) x20=8.4mA



Normal Line, Full Load

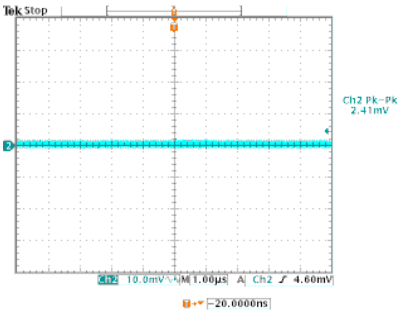
Ripple current=(3.2/10) x20=6.4mA



High Line, Full Load

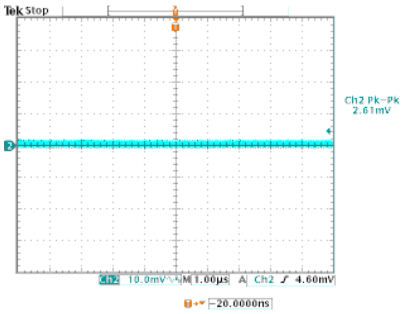
Ripple current=(2.8/10) x20=5.6mA

PXE20-24S05



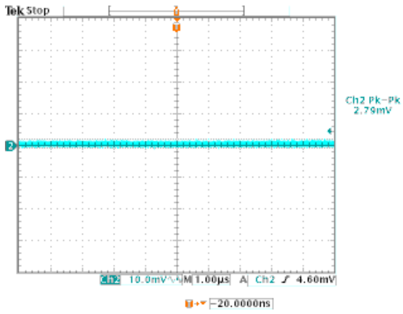
Low Line, Full Load

Ripple current=(2.41/10) x20=4.82mA



Normal Line, Full Load

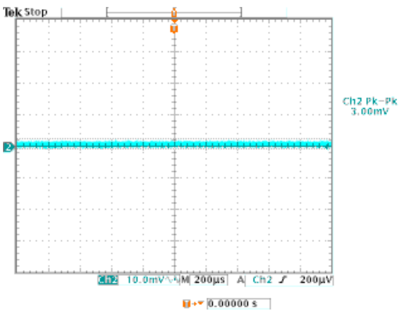
Ripple current=(2.61/10) x20=5.22mA



High Line, Full Load

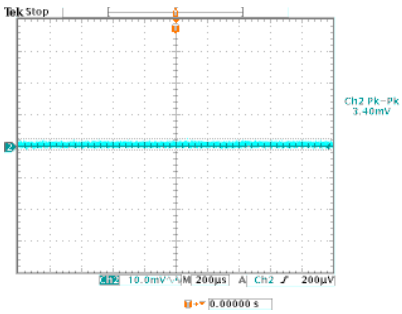
Ripple current=(2.79/10) x20=5.58mA

PXE20-48S15



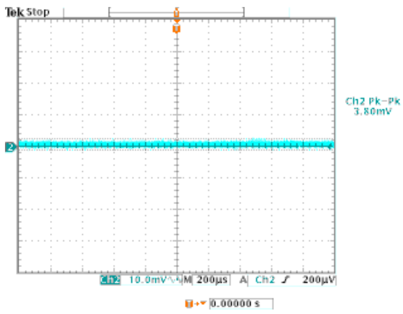
Low Line, Full Load

Ripple current=(3.0/10) x20=6mA



Normal Line, Full Load

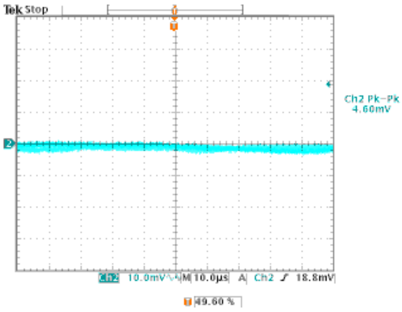
Ripple current=(3.4/10) x20=6.8mA



High Line, Full Load

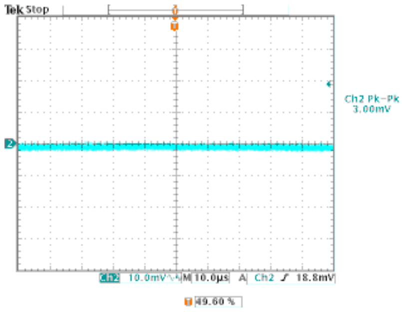
Ripple current=(3.8/10) x20=7.6mA

PXE20-24WS3P3



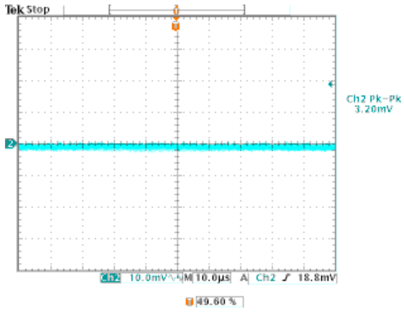
Low Line, Full Load

Ripple current=(4.6/10) x10=4.6mA



Normal Line, Full Load

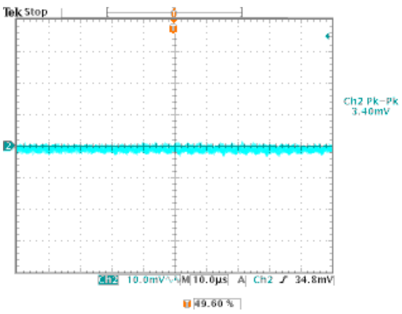
Ripple current=(3.0/10) x10=3.0mA



High Line, Full Load

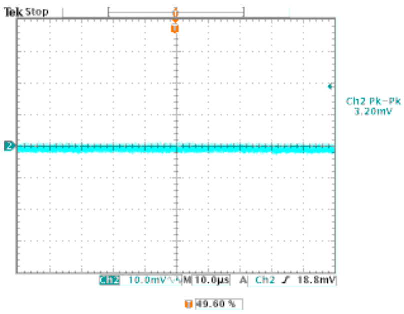
Ripple current=(3.2/10) x10=3.2mA

PXE20-48WS12



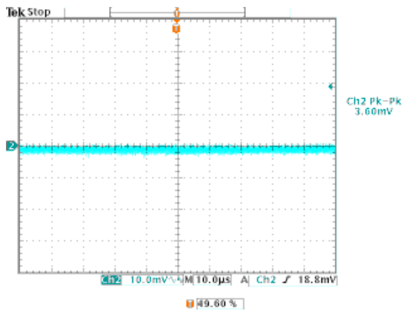
Low Line, Full Load

Ripple current=(3.4/10) x10=3.4mA



Normal Line, Full Load

Ripple current=(3..2/10) x10=3.2mA

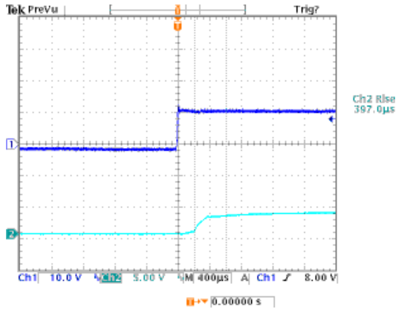


High Line, Full Load

Ripple current=(3.6/10) x10=3.6mA

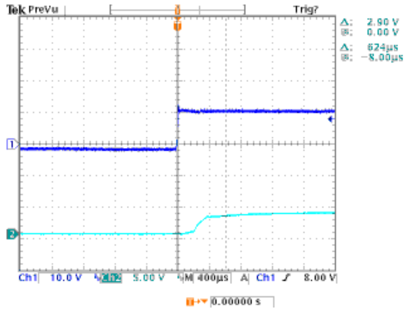
Delay Time and Raise Time

PXE20-12S3P3



Normal Line, Full Load

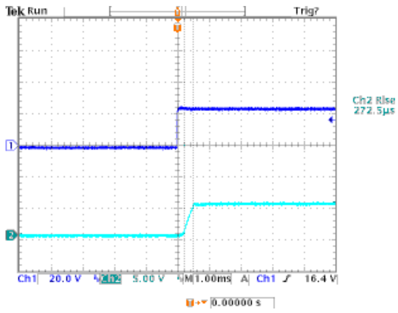
Rise Time=397.0uS



Normal Line, Full Load

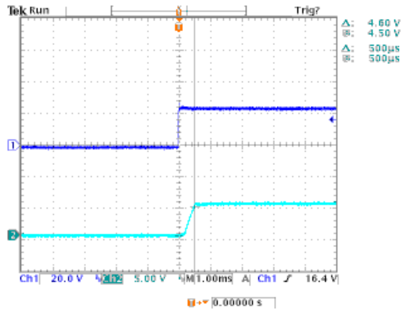
Delay Time= 624uS

PXE20-24S05



Normal Line, Full Load

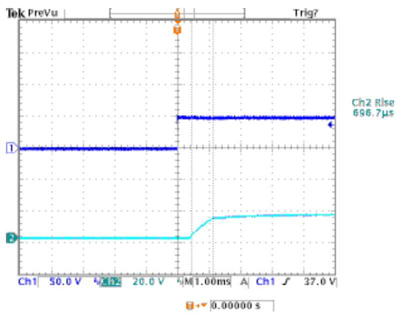
Rise Time=272.5uS



Normal Line, Full Load

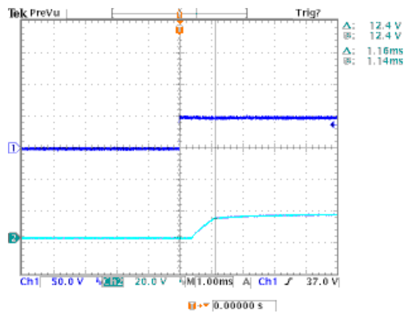
Delay Time= 500uS

PXE20-48S15



Normal Line, Full Load

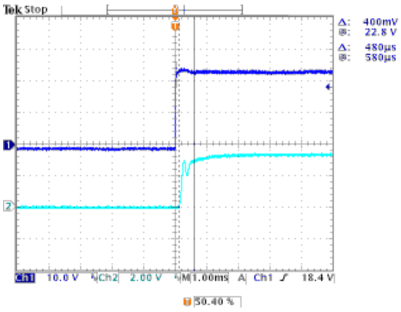
Rise Time=696.7uS



Normal Line, Full Load

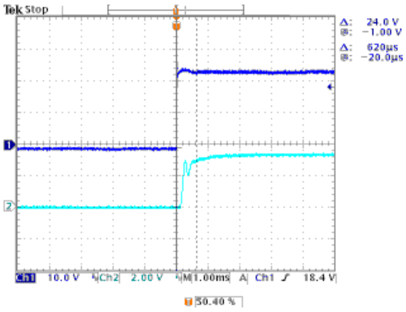
Delay Time=1.16mS

PXE20-24WS3P3



Normal Line, Full Load

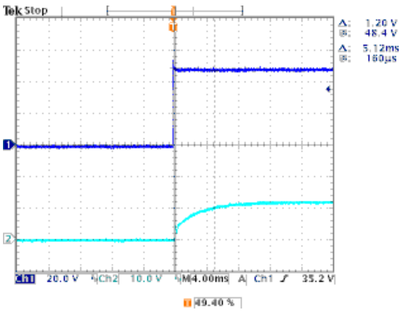
Rise Time=480uS



Normal Line, Full Load

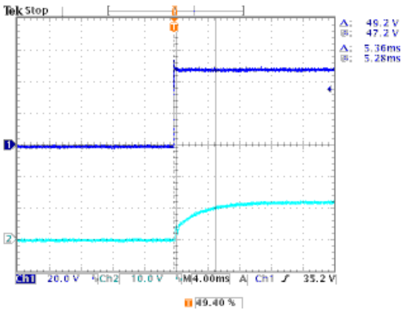
Delay Time=620uS

PXE20-48WS12



Normal Line, Full Load

Rise Time=5.12mS

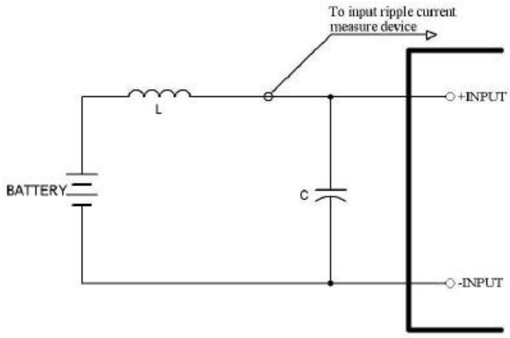


Normal Line, Full Load

Delay Time=5.36mS

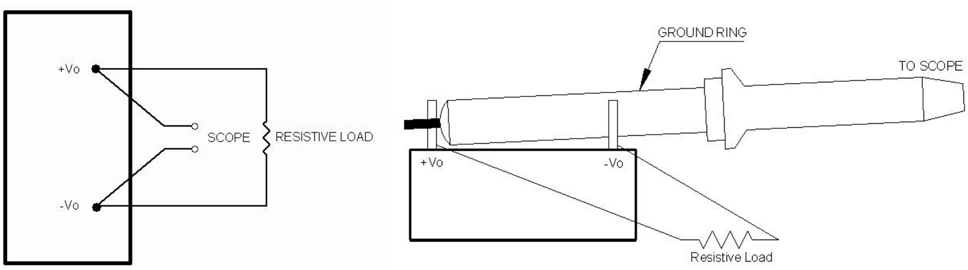
Testing Configurations

Input reflected-ripple current Measurement:

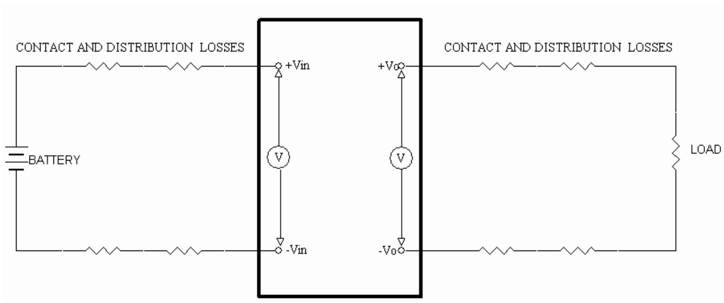


Component	Value	Voltage	Reference
L	12µH	----	----
C	220µF	100V	Aluminum Electrolytic Capacitor

Peak-to-peak output ripple & noise Measurement:



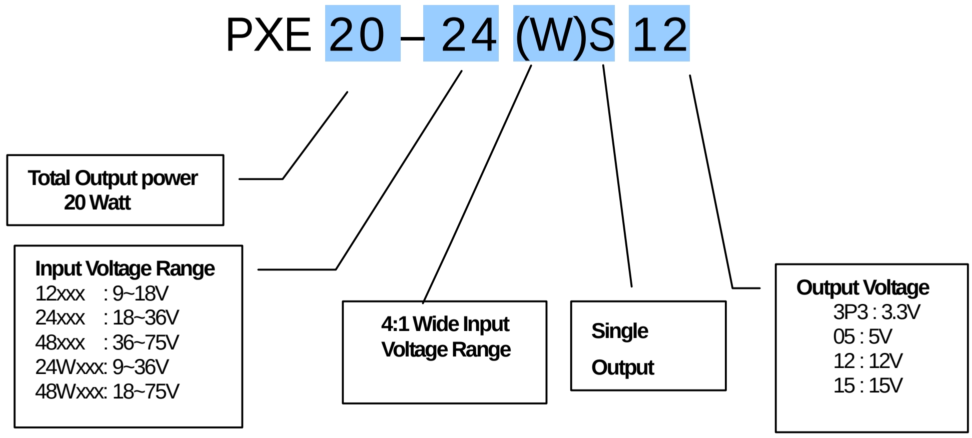
Output Voltage and Efficiency Measurement:



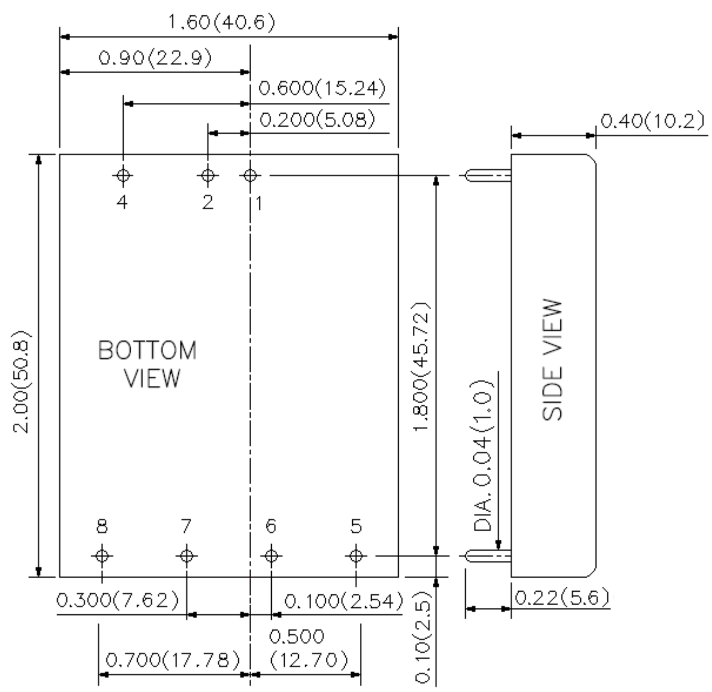
Note: All measurements are taken at the module terminals.

$$Efficiency = \left(\frac{V_o \times I_o}{V_{in} \times I_{in}} \right) \times 100\%$$

Part Number Structure



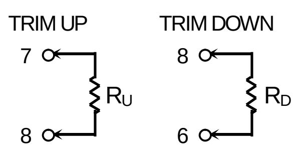
Mechanical Data



PIN CONNECTION	
Pin	Function
1	+INPUT
2	-INPUT
4	CTRL
5	NO PIN
6	+OUTPUT
7	-OUTPUT
8	TRIM

EXTERNAL OUTPUT TRIMMING

Output can be externally trimmed by using the method shown below.



Safety and Installation Instruction

Isolation consideration

The PXE20 series features 1.6k Volt DC isolation from input to output, input to case, and output to case. The input to output resistance is greater than 10^9 ohms. Nevertheless, if the system using the power module needs safety agency approval, certain rules must be followed in the design of the system when using the product In particular, all of the creepage and clearance requirements of the end-use safety requirement must be observed. These documents include UL-60950-1, EN60950-1 and CSA 22.2-960, although specific applications may have other or additional requirements.

Fusing Consideration

Caution: This power module is not internally fused. An input line fuse must always be used. This encapsulated power module can be used in a wide variety of applications, ranging from simple stand-alone operation to an integrated part of a sophisticated power architecture. To maximum flexibility, internal fusing is not included; however, to achieve maximum safety and system protection, always use an input line fuse. The safety agencies require a slow-blow fuse with maximum rating of 6.3 A. Based on the information provided in this data sheet on inrush energy and maximum dc input current, the same type of fuse with lower rating can be used. Refer to the fuse manufacturer's data for further information.

Minimum Load Requirement

10%(of full load) minimum load required. The 10% minimum load requirement is in order to meet all performance specifications. The PXE20 Series does not properly maintain regulation and operate with a no load condition. The output voltage drops off about 10%.

MTBF and Reliability

The MTBF of PXE20- has been calculated using:

1.MIL-HDBK-217F under the following conditions:

Nominal Input Voltage

Io = Io, max

Ta = 25℃

The resulting figure for MTBF is 7.650× 10^5 hours.

2.Bell-core TR-NWT-000332 Case I:

50% stress, Operating Temperature at 40 ℃ (Ground fixed and controlled environment)

The resulting figure for MTBF is 1.928× 10^6 hours.