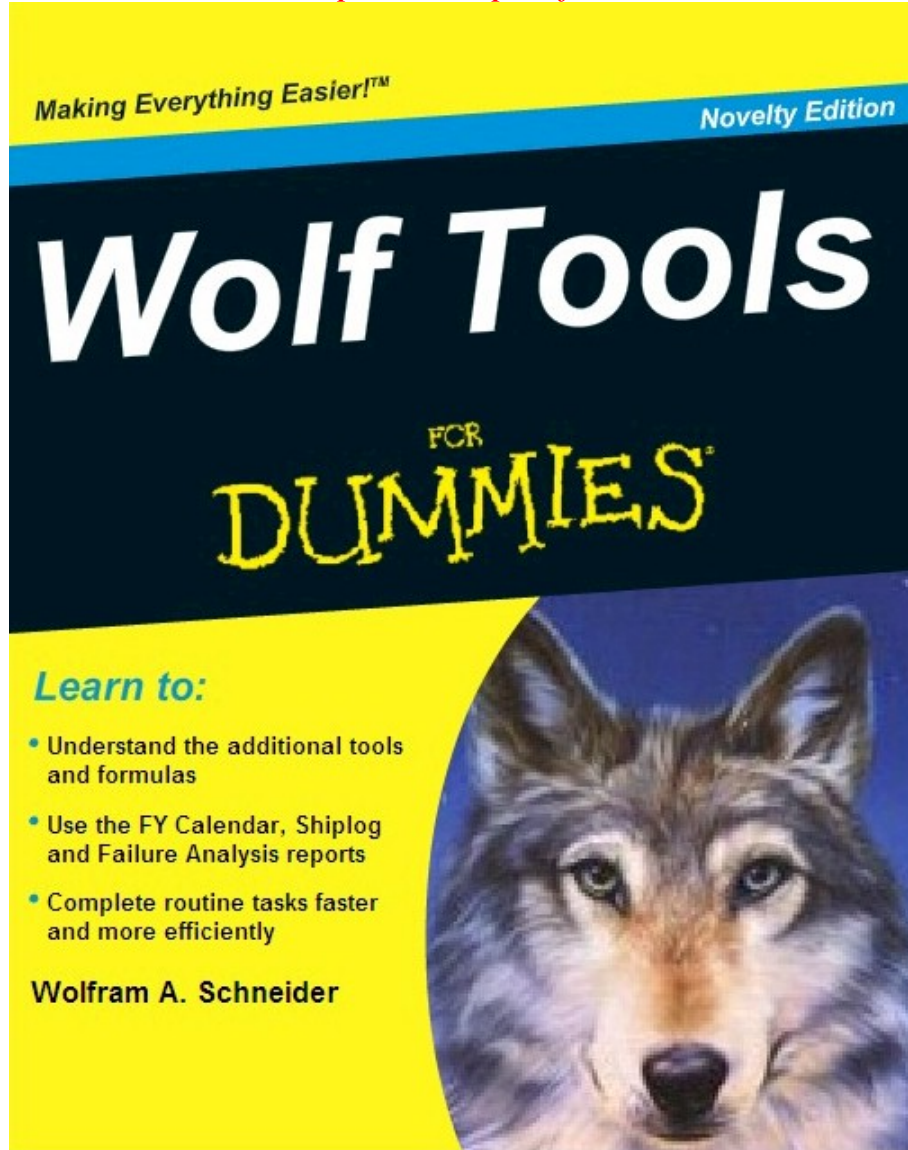


A special chapter from



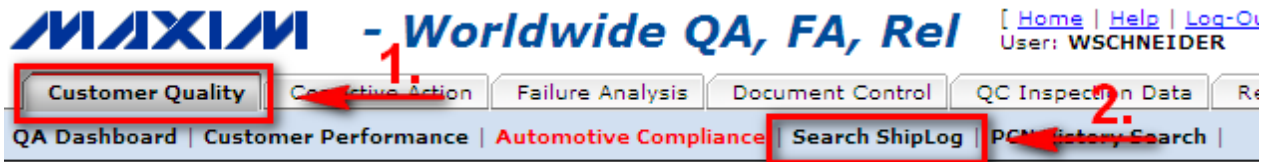
How to create a ppm graph

1.	Getting the shiplog data.....	2
2.	Getting the Failure Signature data.....	4
3.	Getting the “ppm graph” template.....	7
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August 15, 2012

1. Getting the shiplog data

Go to the *Customer Quality* webpage and select *Search ShipLog*.



Enter the *Ship To Customer*, *End Customer* “or *Part #* for which you want to create your ppm graph. You also may enter the time frame for the ship dates or the datecode range. (Note: the template used later covers 12 months or datecodes, but it can be adjusted.)

In this example the ppm graph will be created for a specific End Customer.

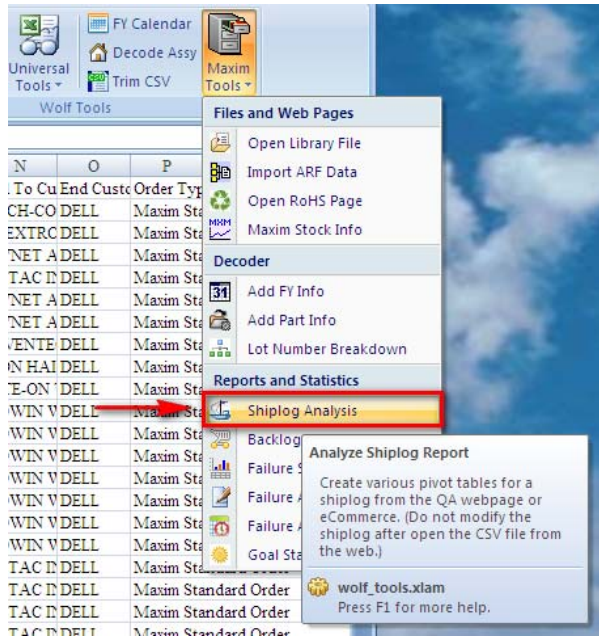
ShipLog Search

Sales Order #:
 Part #: Cust Part #:
 Ship To Customer: Bill To Customer:
 End Customer:
 Lot #: Batch ID:
 Date Code from: to (6 digit format)
 Ship Date from: to ODM Aliases

After clicking *Search* the shiplog will be displayed on the webpage. Now export the data to Excel.

Sublot Qty	Ship To Customer	Bill To Customer	End Customer	Order Type
5000	SILITEK ELECTRONIC (GZ) CO LTD	LITE-ON TECHNOLOGY CORPORATION	DELL	Maxim Standard Order
5000	SILITEK ELECTRONIC (GZ) CO LTD	LITE-ON TECHNOLOGY CORPORATION	DELL	Maxim Standard Order
2500	MITAC COMPUTER(SHUN-DE) LTD	MITAC INTERNATIONAL CORPORATION	DELL	Maxim Standard Order
2500	MITAC COMPUTER(SHUN-DE) LTD	MITAC INTERNATIONAL CORPORATION	DELL	Maxim Standard Order
2500	MITAC COMPUTER(SHUN-DE) LTD	MITAC INTERNATIONAL CORPORATION	DELL	Maxim Standard Order

Running *Shiplog Analysis* in Wolf Tools ...

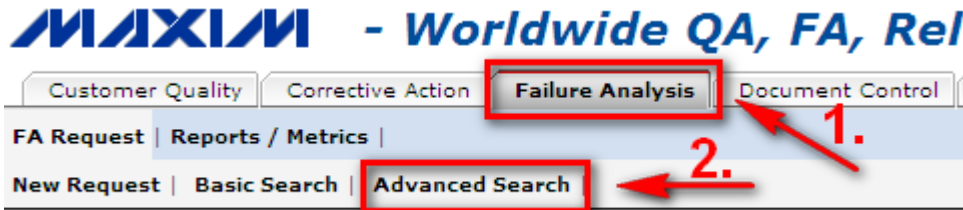


... is analyzing the data and creating several Pivot Tables.

	A	B	C	D	E	F
1	Part					
2						
3	End Customer	(All) ▼				
4	Ship To Customer	(All) ▼				
5	Bill To Customer	(All) ▼				
6	Order Type	(All) ▼				
7						
8	Sum of Ship Qty	Month ▼				
9	Part Number ▼	2009-10	2009-11	2009-12	2010-01	2010-02
10	78M6612-IMR/F/PD					
11	78M6613-IMR/F/PD					
12	78M6613-IMR/F/PL2					
13	DS1339U-33+T&R	3000			3000	3000
14	DS1388Z-33+T&R					
15	DS1556WP-120+	2000	3000	5000	3000	3000
16	DS1557WP-120+					
17	DS1682S+T&R					
18	DS1815R-10+T&R		3000			
19	DS1816R-10+T&R					
20	DS1816R-5+T&R		6000			
21	DS1818R-10+T&R			3000		
22	DS1818R-5+T&R	3000				
23	DS1922L-F5#					
24	DS1990L-F3+					

2. Getting the Failure Signature data

Go to the *Failure Analysis* webpage and select *Advanced Search*.



Select “CFAR” and enter the same parameters that you used in the shiplog (*Customer* or *Device*). You need to enter a time frame since leaving the time frame blank only extract partial data. Although there are different time frame options, it is recommended to use *Parts Received from*.

Make sure to include all fields in *Fields to Display*, because Wolf Tools requires all data fields. Do not sort these fields since Wolf Tools requires them in the original order.

FA Advanced Search

New or Select Existing Search Template: Choose One

Do Search Excel PDF Save Template * Wildcards supported. Example: *DELL* OR *SIEMENS* is a valid entry.

FAR No:

FAR Type: **CFAR**

RMA / Project Number:

Customer: *dell*

Category: Please Select

Requestor:

Package Code:

Die Type:

Lot No.: Process:

Mode:

Type:

Initiated from to

Assigned from to

Initial Verification from to

Approval from to

Business Unit:

FA Site:

Job Status:

Customer Location: Please Select

Device:

Analyst:

Package Description:

Industry:

Assembly:

Mechanism:

Source:

Parts Received from 01/01/2011 to 02/10/2012

To Test from to

Report Date from to

Logged Out from to

Only Priority FA's? FA Backlog? Parts Not Received? Not Assigned? Not Approved? CCAR?

Fields to Display

Exclude: Job Initiated By, Unit Quantity, Backmark, Lot Number, Date Code, Process, Fab, Assembly, Type, Mode, Mechanism, Source, Test Mode, CAR#, Unit Comments

Include: Job Initiated By, Unit Quantity, Backmark, Lot Number, Date Code, Process, Fab, Assembly, Type, Mode, Mechanism, Source, Test Mode, CAR#, Unit Comments

Fields to Sort

Exclude: Job Initiated By, Unit Quantity, Backmark, Lot Number, Date Code, Process, Fab, Assembly, Type, Mode, Mechanism, Source, Test Mode, CAR#, Unit Comments

Include: Job Initiated By, Unit Quantity, Backmark, Lot Number, Date Code, Process, Fab, Assembly, Type, Mode, Mechanism, Source, Test Mode, CAR#, Unit Comments

Ascending Descending

Do Search Excel PDF Save Template

If you use these search parameters more often, consider to *Save Template*.

↳ FAR Advanced Search

or Select Existing Search Template:

Wildcards supported. Example: *DELL* OR *SIEMENS* is a valid entry.

Please enter a name for your new report:

Once the Template is saved, you can use it quickly for future searches.

Report Layout Successfully Saved

↳ FAR Advanced Search

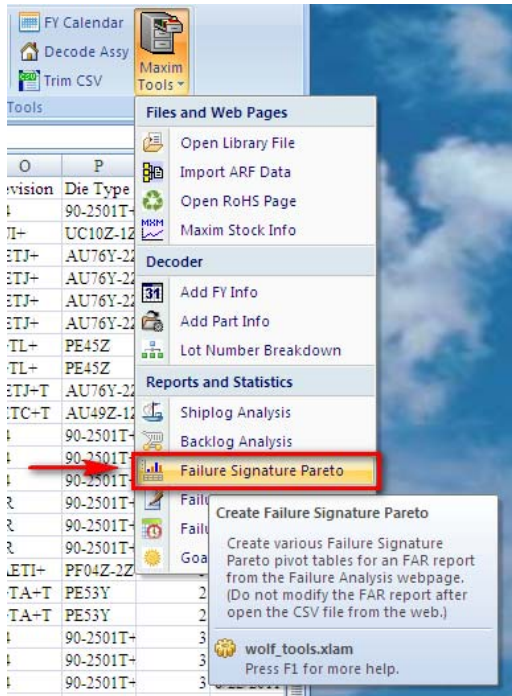
or Select Existing Search Template:

After clicking *Do Search* the Failure Analysis report will be displayed on the webpage. Now export the data to Excel.

40035127	C	Philippines	Battery & N/A Ind Power		Dell c/o Ambit Microsystem (Shanghai) Ltd.	PacRim		NO	Production n/a Line Failure		Strategic	MAX17061AETI+
40035308	C	Philippines	SPM	144572	Dell c/o Compal Kunshan	PacRim		NO	Field Failure	42%	Strategic	MAX17491GTA+T
40035308	C	Philippines	SPM	144572	Dell c/o Compal Kunshan	PacRim		NO	Field Failure	42%	Strategic	MAX17491GTA+T
40035328	C	Dallas	Secure Info & Auth	RMA144566	DELL C/O DELTA (WUJIANG) POWER ELECTRONICS	PacRim		NO	0 Km/0 Hour	Not Reported	Strategic	DS2501+T&R

First Previous **1** 2 Next Last (Page 1/2)

Running Failure Signature Pareto in Wolf Tools ...



... is analyzing the data and creating several Pivot Tables.

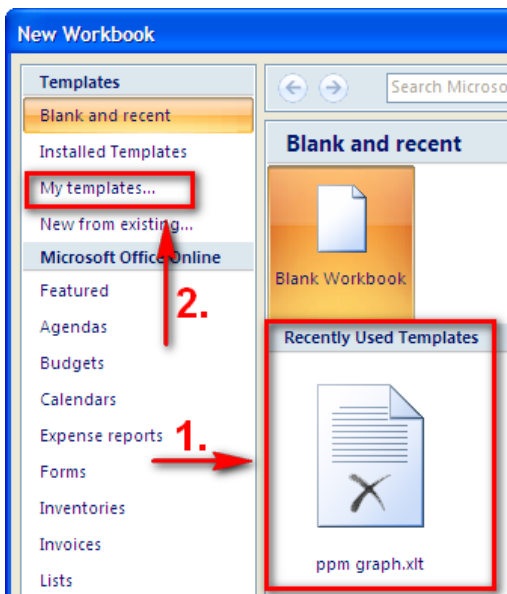
	A	B	C	D	E	F	G	H	I	J	K	L
1	FAR Count											
2												
3	FAR Type	(All) ▼										
4	FA Site	(All) ▼										
5	Category	(All) ▼										
6	Failed Point	(All) ▼										
7	Cust. Location	(All) ▼										
8	Customer	(All) ▼										
9	Device	(All) ▼										
10	Bus. Unit	(All) ▼										
11	Fab	(All) ▼										
12	Assembly	(All) ▼										
13												
14	Count of FAR	Month ▼										
15	Root Part ▼	2011-01	2011-02	2011-03	2011-04	2011-05	2011-07	2011-08	2011-11	2011-12	2012-01	Grand Total
16	DS2501	1					4	2				7
17	MAX9736	1	1	1	1				1			5
18	MAX8655								3	1		4
19	MAX17491						1	1				2
20	MAX17030			1								1
21	MAX17061						1					1
22	MAX9724					1						1
23	MAX17806								1			1
24	MAX15050								1			1
25	MAX1786	1										1
26	Grand Total	3	1	2	1	1	4	4	1	6	1	24
27												

3. Getting the “ppm graph” template

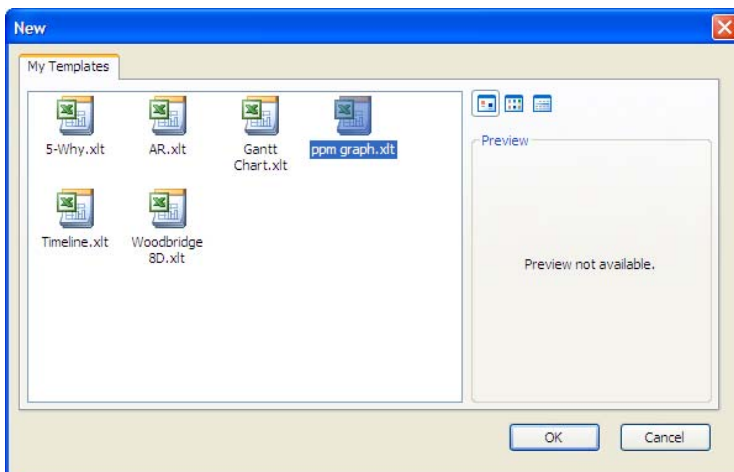
Select a *New Template* in the Excel menu.



The “ppm graph” template is either under *Recently Used Templates ...*



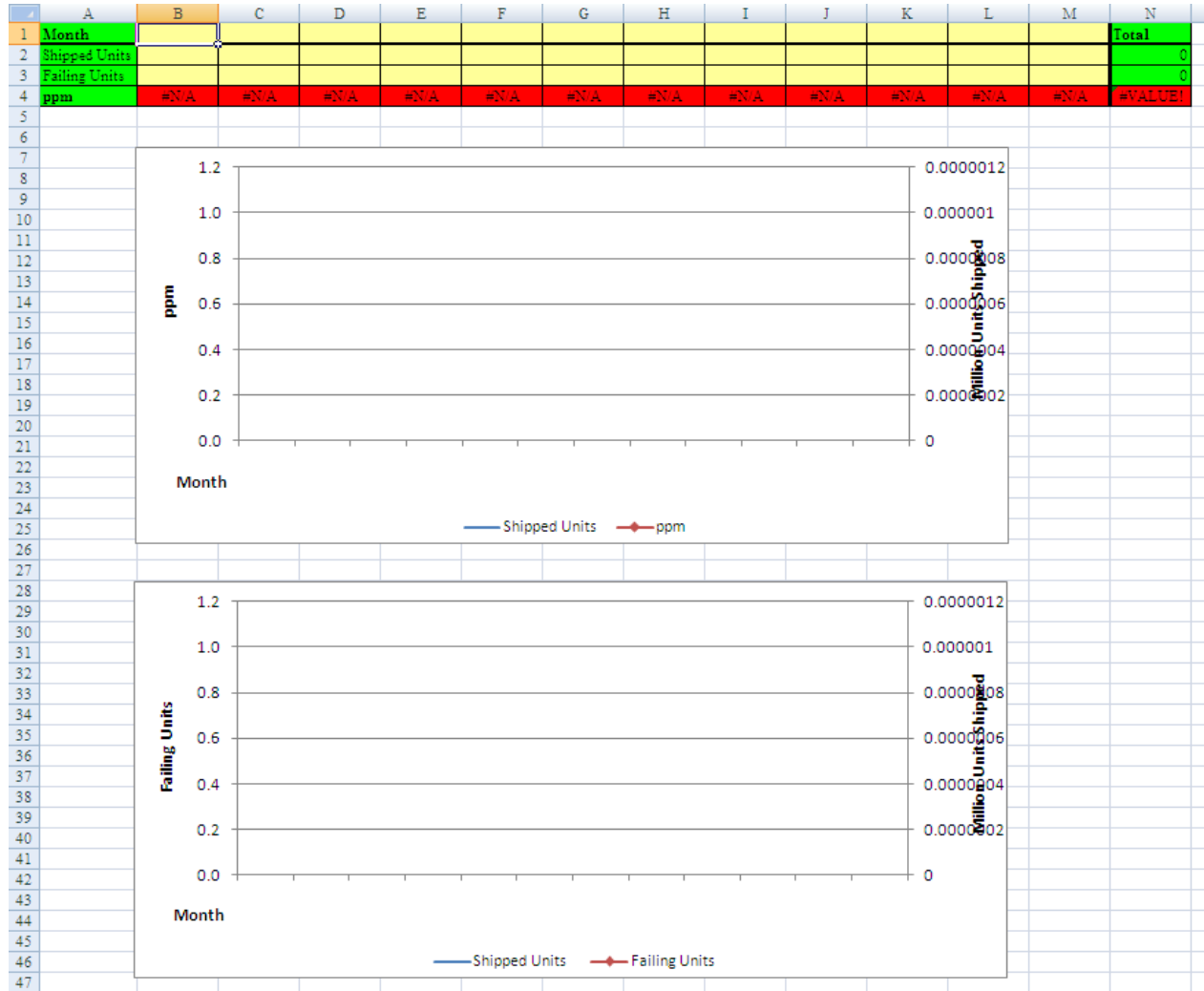
... or if you don't see it listed there, then click on *My Templates*.



Click [ppm graph.xlt](#) to open the template.

The yellow fields are for your data entry. Row 4 contains formulas and conditional formatting to allow a quick check that the entered data is in a valid numeric range. The template is set-up for a time frame of 12 months. Column N has formulas to calculate the total for the 12 month time frame.

You can easily adjust the template for more or less months by just adding or deleting some columns. If you add columns, make sure to also copy the formulas and conditional formatting in row 4. Other than adjusting the time frame, you should not modify anything in this template yet.



4. Creating the ppm graph

Go to your *shiplog* and select worksheet *Part* for the shipments per calendar month

(Note: in the next revision of Wolf Tools, you will also be able to create ppm charts for *Part (DC)* for the shipments per datecode or *Part (FY)* for the shipments per Maxim Quarter).

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Part												
2													
3	End Customer	(All)											
4	Ship To Customer	(All)											
5	Bill To Customer	(All)											
6	Order Type	(All)											
7													
8	Sum of Ship Qty	Month											
9	Part Number	2009-10	2009-11	2009-12	2010-01	2010-02	2010-03	2010-04	2010-05	2010-06	2010-07	2010-08	2010-09
10	78M6612-IMR/F/PD												
11	78M6613-IMR/F/PD												
12	78M6613-IMR/F/PL2												
13	DS1339U-33-T&R	3000			3000	3000	3000		3000	3000	3000	3000	3000
14	DS1388Z-33-T&R						2500						
15	DS1556WP-120+	2000	3000	5000	3000	3000	4000	2000	1000	3000	1000	2880	

Ready | Part | Cust Part | Lot | SAP Batch | Customer | Part (DC) | Cust Part (DC) | Customer (DC) | Part (FY) | Cu

Select the months for which you want to create your ppm graph. Remember that the ppm graph template covers 12 months as a default. You also can select a particular Customer if needed.

1. →

2. ←

3. →

After clicking “OK”, the pivot tables are adjusted to your selected time frame. It is important that you verify that the months are consecutive numbers and that no month is missing. Now copy the months (they are in format yyyy-mm)

...

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Part													
2														
3	End Customer	(All)												
4	Ship To Customer	(All)												
5	Bill To Customer	(All)												
6	Order Type	(All)												
7														
8	Sum of Ship Qty	Month												
9	Part Number	2011-01	2011-02	2011-03	2011-04	2011-05	2011-06	2011-07	2011-08	2011-09	2011-10	2011-11	2011-12	Grand Total
10	D81339U-33+T&R		3000	3000		3000		3000		3000		3000	3000	21000
11	D81388Z-33+T&R			2500	7500			7500		2500	5000	2500	7500	35000
12	D81556WP-120+						200					240		440
13	D81557WP-120+	5640	5280	6000	8045	2000	2000	2000	4560	5200	3200	3200	3640	50765
14	D81682S+T&R						2500							2500
15	D81816R-10+T&R		3000											3000
16	D81990A-F3+						4							4
17	D82432P-W01+3T	100000	52000	52000	112000		24000		36000	24000	48000	32000	36000	516000
18	D82432P-W01+4T	48000	52000	72000	64000	76000	68000		64000	40000	80000	40000	96000	700000

... and paste into row 1 of the ppm graph template.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Month	2011-01	2011-02	2011-03	2011-04	2011-05	2011-06	2011-07	2011-08	2011-09	2011-10	2011-11	2011-12	Total
2	Shipped Units													0
3	Failing Units													0
4	ppm	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#VALUE!
5														

Go back to your shiplog file and scroll down to the end of the pivot table. Now copy the numbers in Grand Total ...

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
127	MAX8759ETI+									82				82
128	MAX8759ETI-T					2500	10000		8175	9243				29918
129	MAX8791GTA-T	5000	7500	2500										15000
130	MAX8792ETD+T	10000	5000	2500		5000		2500						25000
131	MAX8794ETB+T				7500	20000	10000	5000		17500	12500			72500
132	MAX8869EUE10+T			2500	2500	7500	2500	5000	7500	5000	15000		17500	65000
133	MAX889RESA+T				2500			2500		2500			2500	10000
134	MAX8903CETI+T	110000	40000	27500	10000	10000						52500	20000	270000
135	MAX8958EWW+						600							600
136	MAX8958EWW-T						2000	2000	2000	4000	8000	8000		26000
137	MAX9736AETJ+T									50000	155000	130000	115000	450000
138	MAX9736DETJ+T	5000			2500									7500
139	MXD1818UR22+T							2500						2500
140	Grand Total	1922766	1942100	1662344	1796379	4304866	4450012	5487610	4441825	1691382	2876553	3182230	2988660	36746727
141														

... and paste into row 2 of the ppm graph template.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Month	2011-01	2011-02	2011-03	2011-04	2011-05	2011-06	2011-07	2011-08	2011-09	2011-10	2011-11	2011-12	Total
2	Shipped Unit	1922766	1942100	1662344	1796379	4304866	4450012	5487610	4441825	1691382	2876553	3182230	2988660	36746727
3	Failing Units													0
4	ppm	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0.00
5														

Go to your Failure Signature Pareto and select worksheet "Unit Count"

Select the months for the same time frame as in your shiplog. You also can exclude certain Failure Signatures (like No Trouble Found or Handling) in the Source field. Scroll down to the end of the pivot table and copy the numbers in "Grand Total" ...

	A	B	C	D	E	F	G	H	I	J	K	L
1	Unit Count											
2												
3	FAR Type	(All)										
4	FA Site	(All)										
5	Category	(All)										
6	Failed Point	(All)										
7	Cust. Location	(All)										
8	Customer	(All)										
9	Device	(All)										
10	Bus. Unit	(All)										
11	Fab	(All)										
12	Assembly	(All)										
13												
14	Sum of Unit Quantity	Month										
15	Root Part	2011-01	2011-02	2011-03	2011-04	2011-05	2011-07	2011-08	2011-11	2011-12	2012-01	Grand Total
16	MAX8655								19	6		25
17	DS2501	1					6	13				20
18	MAX9736	4	5	1	2				1			13
19	MAX17061							5				5
20	MAX17491							2	2			4
21	MAX17030			2								2
22	MAX17806								1			1
23	MAX9724					1						1
24	MAX1786	1										1
25	MAX15050								1			1
26	Grand Total	6	5	3	2	1	6	20	2	22	6	73
27												

... and paste into row 3 of the ppm graph template. However, please be very careful that the months line up. It is very likely that your Failure Analysis data misses some months! Due to the error validation in row 4 you cannot leave a cell in row 3 blank, but you have to enter a 0 (zero) if there is no failure.

Note that in the example above, there is no data for months 2011-06, 2011-09 and 2011-10. Also, the data has an additional month 2012-01 which is not covered in the shiplog.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Month	2011-01	2011-02	2011-03	2011-04	2011-05	2011-06	2011-07	2011-08	2011-09	2011-10	2011-11	2011-12	Total
2	Shipped Units	1922766	1942100	1662344	1796379	4304866	4450012	5487610	4441835	1691382	2876553	3182230	2988660	3674672
3	Failing Units	6	5	3	2	1	0	6	20	0	0	2	22	67
4	ppm						0.00			0.00	0.00			1.82
5														

Now row 4 should change the color to green and you can see the graphs for “ppm” and the “Failing Units”. If needed, you now can change the settings for the graphs.

Month	2011-01	2011-02	2011-03	2011-04	2011-05	2011-06	2011-07	2011-08	2011-09	2011-10	2011-11	2011-12	Total
Shipped Units	1922766	1942100	1662344	1796379	4304866	4450012	5487610	4441825	1691382	2876553	3182230	2988660	36746727
Failing Units	6	5	3	2	1	0	6	20	0	0	2	22	67
ppm	3.12	2.57	1.80	1.11	0.23	0.00	1.09	4.50	0.00	0.00	0.63	7.36	1.82

