



Final Product/Process Change Notification
Generic Copy

30-MAY-2003

SUBJECT: ON Semiconductor Final Product/Process Change Notification 12884

TITLE: DIE SHRINK FOR SOT23, SOD123, AND SOD323 ZENER DIODES

EFFECTIVE DATE: 22-Jul-2003

AFFECTED CHANGE CATEGORY(S): Die Shrink

AFFECTED PRODUCT DIVISION: Bipolar Discretes Products Div

ADDITIONAL RELIABILITY DATA: Contact you local ON Semiconductor Sales Representative or Laura Rivers, S20636@onsemi.com

SAMPLES: Contact you local ON Semiconductor Sales Representative or Lon Robinson, FFGMYH@onsemi.com

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact Sales Representative or Leon Gross, RXJK20@onsemi.com

NOTIFICATION TYPE:
Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 60 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:

As part of ON Semiconductors continuous improvement program we are announcing a die shrink for the SOT23, SOD123, and SOD323 families of voltage regulators. The new die design will continue to be processed the same as the previous design. The new design uses the same design rules as the previous design. The new design will meet the same data sheet specifications as the previous design. Although not specified and not normally required in voltage regulation applications, the surge performance of the new design will be comparable or better than equivalent competitive parts. We recommend that customers using these parts as Transient Voltage Suppressors evaluate the surge power handling capability required by their application.

Customers with applications requiring the power handling capability of the old design can continue to purchase these parts under a new part number.



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RELIABILITY DATA SUMMARY :

The following is a list of devices used for reliability and characterization:

Qual Device	#1	MM3Z2V4T1	Lot ID#1174A,B
Qual Device	#2	MMSZ4678T1	Lot ID#1176A,B
Qual Device	#3	BZX84C9V1LT1	Lot ID#1178A,B
Qual Device	#4	MMBZ5270BLT1	Lot ID#1179A,B
Qual Device	#5	MMSZ5264BT1	Lot ID#1177A,B
Qual Device	#6	MM3Z7V5VT1	Lot ID#1175A,B

TEST	CONDITIONS	INTERVAL	SIZE	FAILURES
A/clave	Ta = 121 deg C,	0 hrs	1008	0/1008
	P =15 psig, RH = 100%	96 hrs	1008	0/1008
DPA	Ta = 25 deg C Random sample of good Temp Cycle and H3TRB devices.	N/A	36	0/36
H3TRB	Ta = 85 deg C, RH = 85%, VR = 0.8V	0 hrs	1008	0/1008
		504 hrs	1008	0/1008
		1008 hrs	1008	0/1008
HTRB	Ta = 150 deg C, VR = 0.8V	0 hrs	1008	0/1008
		504 hrs	1008	0/1008
		1008 hrs	1008	0/1008
IOL	Ta = 25 deg C, delta Tj => 100 deg C, 2 minutes on/off	0 cycles	1008	0/1008
		7500 cycles	1008	0/1008
		15000 cycles	1008	0/1008
RSH	TS = 260 deg C, Tdwel = 10 seconds	0 hrs	180	0/180
		Final Test	180	0/180
TC	Air to Air; 65 deg C to 150 deg C	0 cycles	1008	0/1008
		500 cycles	1008	0/1008
		1000 cycles	1008	0/1008
Electro Static Discharge	Human Body Model	N/A	48 Class 3 >16kV	
	Machine Model	N/A	48 Class C ->400V	

ELECTRICAL CHARACTERISTIC SUMMARY:

Electrical characterization has been completed on the designated qualification devices. These devices are representative of the entire family and will qualify the process. Datasheet specifications and electrical performance of the devices will remain unchanged.

Click on Link for Electrical Characterization summary results:
[Characterization summary results](#)

Capacitance and Surge Data available upon request.

CHANGED PART IDENTIFICATION:

There will be no changes to device marking, case outline, and package functionality.
 Change implementation will be tracked by date code.



AFFECTED DEVICE LIST (WITHOUT SPECIALS)

PART

BZX84C2V4LT1
BZX84C2V4LT3
BZX84C2V7LT1
BZX84C3V0LT1
BZX84C3V3LT1
BZX84C3V3LT3
BZX84C3V6LT1
BZX84C3V9LT1
BZX84C4V3LT1
BZX84C4V3LT3
BZX84C4V7LT1
BZX84C4V7LT3
BZX84C5V1LT1
BZX84C5V1LT3
BZX84C5V6LT1
BZX84C5V6LT3
BZX84C6V2LT1
BZX84C6V2LT3
BZX84C6V8LT1
BZX84C6V8LT3
BZX84C7V5LT1
BZX84C7V5LT3
BZX84C8V2LT1
BZX84C8V2LT3
BZX84C9V1LT1
BZX84C9V1LT3
MM3Z2V4T1
MM3Z2V7T1
MM3Z3V0T1
MM3Z3V3T1
MM3Z3V6T1
MM3Z3V9T1
MM3Z4V3T1
MM3Z4V7T1
MM3Z5V1T1
MM3Z5V6T1
MM3Z6V2T1
MM3Z6V8T1
MM3Z7V5T1
MM3Z8V2T1
MM3Z9V1T1
MMBZ5221BLT1
MMBZ5221BLT3
MMBZ5222BLT1
MMBZ5223BLT1
MMBZ5224BLT1
MMBZ5225BLT1
MMBZ5226BLT1
MMBZ5226BLT3
MMBZ5227BLT1
MMBZ5228BLT1
MMBZ5228BLT3
MMBZ5229BLT1
MMBZ5229BLT3



PART

MMBZ5230BLT1
MMBZ5230BLT3
MMBZ5231BLT1
MMBZ5231BLT3
MMBZ5232BLT1
MMBZ5232BLT3
MMBZ5233BLT1
MMBZ5234BLT1
MMBZ5234BLT3
MMBZ5235BLT1
MMBZ5235BLT3
MMBZ5236BLT1
MMBZ5237BLT1
MMBZ5237BLT3
MMBZ5238BLT1
MMBZ5239BLT1
MMBZ5239BLT3
MMSZ2V4T1
MMSZ2V7T1
MMSZ3V0T1
MMSZ3V3T1
MMSZ3V3T3
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MMSZ4695T1
MMSZ4696T1
MMSZ4V3T1
MMSZ4V7T1
MMSZ4V7T3
MMSZ5221BT1
MMSZ5222BT1
MMSZ5223BT1
MMSZ5224BT1
MMSZ5225BT1
MMSZ5226BT1



PART

MMSZ5226BT3
MMSZ5227BT1
MMSZ5228BT1
MMSZ5228BT3
MMSZ5229BT1
MMSZ5229BT3
MMSZ5230BT1
MMSZ5230BT3
MMSZ5231BT1
MMSZ5231BT3
MMSZ5232BT1
MMSZ5233BT1
MMSZ5233BT3
MMSZ5234BT1
MMSZ5234BT3
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MMSZ5236BT3
MMSZ5237BT1
MMSZ5238BT1
MMSZ5239BT1
MMSZ5239BT3
MMSZ5V1T1
MMSZ5V1T3
MMSZ5V6T1
MMSZ6V2T1
MMSZ6V8T1
MMSZ7V5T1
MMSZ8V2T1
MMSZ9V1T1
MMSZ9V1T3

Qual Device #1 - MM3Z2V4T1 Lot ID#1174 A, B

MM3Z2V4T1	Temp:	25C	25C	25C	25C	25C
	Parameter:	IR	VZ	ZZ	ZZ	VF
	Condition:	@VR=1V	@IT=5mA	@IT=5mA	@IZ=0.5mA	@IF=10mA
	Max Limit:	5.00E-05	2.600	100.000	1000.000	0.900
	Min Limit:		2.200			

CONTROL	Max:	1.11E-05	2.474	68.840	497.200	0.782
	Min:	8.27E-06	2.389	67.000	483.000	0.779
	Average:	9.64E-06	2.427	67.718	489.104	0.780
	Std Dev:	7.52E-07	0.022	0.418	3.382	0.001
	Cpk	17.89	2.64	25.72	50.35	43.49

QUAL LOT	Max:	1.61E-05	2.387	69.500	494.600	0.795
	Min:	1.34E-05	2.336	68.460	485.800	0.794
	Average:	1.45E-05	2.365	69.030	490.640	0.794
	Std Dev:	7.20E-07	0.014	0.285	2.280	0.000
	Cpk	1.64E+01	4.0767388	36.2646081	74.4802545	108.747191

MMB3Z2V4T1	Temp:	-55C	-55C	-55C	-55C	-55C
	Parameter:	IR	VZ	ZZ	ZZ	VF
	Condition:	@VR=1V	@IT=5mA	@IT=5mA	@IZ=0.5mA	@IF=10mA
	Max Limit:	5.00E-05	2.600	100.000	1000.000	0.900
	Min Limit:		2.200			

CONTROL	Max:	0.000	2.634	73.400	531.600	0.891
	Min:	5.60E-06	2.543	71.520	516.400	0.888
	Average:	6.52E-06	2.584	72.275	522.472	0.889
	Std Dev:	5.25E-07	0.023	0.454	3.594	0.001

QUAL LOT	Max:	1.105E-05	2.544	74.420	529.200	0.901
	Min:	9.181E-06	2.490	73.160	520.000	0.898
	Average:	9.916E-06	2.522	73.866	525.232	0.899
	Std Dev:	4.949E-07	0.015	0.306	2.344	0.001

MMB3Z2V4T1	Temp:	150C	150C	150C	150C	150C
	Parameter:	IR	VZ	ZZ	ZZ	VF
	Condition:	@VR=1V	@IT=5mA	@IT=5mA	@IZ=0.5mA	@IF=10mA

	Max Limit:	5.00E-05	2.600	100.000	1000.000	0.900
	Min Limit:		2.200	0.000	0.000	0.000
CONTROL	Max:	1.83E-05	2.277	62.580	453.800	0.597
	Min:	1.38E-05	2.199	60.860	440.600	0.593
	Average:	1.61E-05	2.233	61.523	445.848	0.595
	Std Dev:	1.23E-06	0.020	0.421	3.261	0.001
QUAL	Max:	2.57E-05	2.190	62.840	447.800	0.614
LOT	Min:	2.15E-05	2.144	61.840	440.200	0.612
	Average:	2.33E-05	2.170	62.436	444.480	0.613
	Std Dev:	1.10E-06	0.012	0.263	1.791	0.001

Qual Device #2 – MMSZ4678T1 Qual ID # 1176 A, B

MMSZ4678T1	Temp:	25C	25C	25C	25C
	Parameter:	IR	VZ	ZZ	VF
	Condition:	@VR=1V	@IT=50uA	@IT=50uA	@IF=10mA
	Max Limit:	7.50E-06	1.890	0.000	0.900
	Min Limit:		1.710	0.000	

CONTROL	Max:	7.57E-07	1.867	4724.000	0.781
	Min:	4.97E-07	1.774	4558.000	0.778
	Average:	5.90E-07	1.830	4653.360	0.780
	Std Dev:	5.95E-08	0.022	38.986	0.001
	Cpk:	38.70	0.90	39.79	58.78

QUAL	Max:	6.57E-07	1.880	4892.000	0.797
LOT	Min:	4.86E-07	1.815	4746.000	0.796
	Average:	5.44E-07	1.857	4828.800	0.797
	Std Dev:	4.45E-08	0.018	35.777	0.000
	Cpk:	52.16	0.62	44.99	87.50

MMSZ4678T1	Temp:	-55C	-55C	-55C	-55C
	Parameter:	IR	VZ	ZZ	VF
	Condition:	@VR=1V	@IT=50uA	@IT=50uA	@IF=10mA
	Max Limit:	7.50E-06	1.890	0.000	0.900

		Min Limit:	1.710	0.000		
CONTROL	Max:	4.66E-07	1.985	5016.000	0.892	
	Min:	2.98E-07	1.885	4834.000	0.889	
	Average:	3.58E-07	1.945	4937.360	0.890	
	Std Dev:	3.81E-08	0.024	43.649	0.001	
QUAL	Max:	4.34E-07	1.992	5176.000	0.899	
	Min:	3.17E-07	1.923	5050.000	0.896	
	Average:	3.57E-07	1.966	5121.120	0.898	
	Std Dev:	3.02E-08	0.019	34.905	0.001	
MMSZ4678T1	Temp:	150C	150C	150C	150C	
	Parameter:	IR	VZ	ZZ	VF	
	Condition:	@VR=1V	@IT=50uA	@IT=50uA	@IF=10mA	
	Max Limit:	7.50E-06	1.890	0.000	0.900	
	Min Limit:		1.710	0.000		
CONTROL	Max:	1.76E-06	1.718	4414.000	0.600	
	Min:	1.25E-06	1.632	4256.000	0.593	
	Average:	1.44E-06	1.684	4352.640	0.597	
	Std Dev:	1.21E-07	0.020	38.802	0.002	
QUAL	Max:	1.36E-06	1.728	4496.000	0.614	
	Min:	1.05E-06	1.668	4362.000	0.609	
	Average:	1.15E-06	1.707	4436.080	0.611	
	Std Dev:	8.21E-08	0.016	29.863	0.001	

Qual Device #3 – BZX84C9V1LT1 Qual ID # 1178 A, B

BZX84C9V1LT

Temp:	25C	25C	25C	25C	25C	25C	25C	25C
Parameter:	IR	VZ	ZZ	VZ	ZZ	VZ	ZZ	VF
Condition:	@VR=6V	@IT=5mA	@IT=5mA	@IT2=1mA	@IT2=1mA	@IT3=20mA	@IT3=20mA	@IF=10mA
Max Limit:	5.00E-07	9.600	15.000	9.600	100.000	9.700	8.000	0.900

Min Limit:		8.500	8.400	8.500						
CONTROL	Max:	9.80E-11	9.003	11.160	8.979	33.000	9.048	4.528	0.790	
	Min:	5.60E-11	8.778	3.802	8.748	4.230	8.848	2.571	0.785	
	Average:	7.71E-11	8.896	5.848	8.873	12.228	8.956	3.331	0.787	
	Std Dev:	1.14E-11	0.048	1.835	0.049	6.426	0.046	0.488	0.001	
	Cpk	14629.83	2.77	1.66	3.25	4.55	3.31	3.19	28.07	

QUAL	Max:	2.52E-10	9.045	9.712	9.007	23.780	9.139	5.510	0.811
	LOT Min:	5.40E-11	8.771	4.618	8.746	4.100	8.831	3.196	0.797
	Average:	8.68E-11	8.894	6.869	8.864	12.396	8.969	4.302	0.801
	Std Dev:	3.68E-11	0.072	1.518	0.070	5.083	0.074	0.590	0.003
	Cpk	4532.75	1.81	1.79	2.21	5.74	2.10	2.09	12.03

BZX84C9V1

Temp:	-55C	-55C	-55C	-55C	-55C	-55C	-55C	-55C	-55C
Parameter:	IR	VZ	ZZ	VZ	ZZ	VZ	ZZ	VF	VF
Condition:	@VR=6V	@IT=5mA	@IT=5mA	@IT2=1mA	@IT2=1mA	@IT3=20mA	@IT3=20mA	@IF=10mA	@IF=200mA
Max Limit:	5.00E-07	9.60E+00	1.50E+01	9.60E+00	1.00E+02	9.70E+00	8.00E+00	9.00E-01	1.50E+00
Min Limit:		8.50E+00		8.40E+00		8.50E+00			

CONTROL	Max:	1.61E-10	8.549	9.582	8.529	26.460	8.593	4.195	0.902	1.165
	Min:	9.00E-12	8.330	3.360	8.305	2.850	8.393	2.301	0.894	1.083
	Average:	7.89E-11	8.446	5.234	8.426	10.912	8.500	3.041	0.897	1.117
	Std Dev:	3.90E-11	0.045	1.562	0.046	5.454	0.044	0.467	0.002	0.027

QUAL	Max:	3.16E-10	8.566	9.274	8.530	20.800	8.655	5.325	0.926	1.377
	LOT Min:	2.90E-11	8.325	4.104	8.307	3.770	8.384	2.964	0.905	1.129
	Average:	1.11E-10	8.440	6.279	8.413	11.172	8.507	3.898	0.909	1.203
	Std Dev:	5.73E-11	0.065	1.426	0.063	4.920	0.068	0.562	0.004	0.048

BZX84C9V1	Temp:	150C	150C	150C	150C	150C	150C	150C	150C	150C
	Parameter:	IR	VZ	ZZ	VZ	ZZ	VZ	ZZ	VF	VF
	Condition:	@VR=6V	@IT=5mA	@IT=5mA	@IT2=1mA	@IT2=1mA	@IT3=20mA	@IT3=20mA	@IF=10mA	@IF=200mA
	Max Limit:	5.00E-07	9.600	15.000	9.600	100.000	9.700	8.000	0.900	1.500
	Min Limit:		8.500		8.400		8.500			

CONTROL	Max:	5.97E-09	9.735	14.160	9.701	46.280	9.787	5.060	0.602	0.905
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Min:	2.33E-09	9.498	4.616	9.454	6.220	9.580	3.049	0.595	0.865
Average:	2.77E-09	9.621	7.158	9.586	14.098	9.689	4.020	0.599	0.880
Std Dev:	7.13E-10	0.052	2.169	0.054	8.539	0.049	0.515	0.002	0.013

QUAL	Max:	2.66E-09	9.778	12.300	9.730	31.080	9.887	6.430	0.627	1.085
LOT	Min:	1.25E-09	9.452	5.380	9.418	8.290	9.522	4.222	0.615	0.940
	Average:	1.60E-09	9.604	8.578	9.561	15.408	9.692	5.232	0.622	0.977
	Std Dev:	2.68E-10	0.083	1.905	0.081	6.276	0.085	0.627	0.003	0.028

Qual Device #4 – MMBZ5270BLT1 Lot ID#1179 A, B

MMBZ5270BLT1	Temp:	25C	25C	25C	25C	25C
	Parameter:	IR	VZ	ZZ	ZZ	VF
	Condition:	@VR=69V	@IT=5mA	@IT=1.4mA	@IZ=0.25mA	@IF=10mA
	Max Limit:	1.00E-07	95.55	400	2300	0.9
	Min Limit:		86.45			

CONTROL	Max:	1.56E-09	90.52	275	133.7	0.774
	Min:	1.08E-10	76.45	71.48	44.42	0.764
	Average:	2.64E-10	89.057	151.198	87.298	0.771
	Std Dev:	2.76E-10	2.658	57.94	22.257	0.0021
	Cpk	120.58518	0.8142714	1.4313773	33.138668	20.47619

QUAL	Max:	1.28E-08	90.91	773.2	259.8	0.818
LOT	Min:	9.70E-11	89.01	119.5	79.85	0.726
	Average:	8.45E-10	90.0068	234.68	130.557	0.792
	Std Dev:	2.52E-09	0.37	129.29	48.16	0.017
	Cpk	13.11578	4.9938739	0.4262253	15.015525	2.1176471

MMBZ5270BLT1	Temp:	-55C	-55C	-55C	-55C	-55C
	Parameter:	IR	VZ	ZZ	ZZ	VF
	Condition:	@VR=69V	@IT=5mA	@IT=1.4mA	@IZ=0.25mA	@IF=10mA
	Max Limit:	1.00E-07	95.55	400	2300	0.9
	Min Limit:		86.45			

CONTROL	Max:	1.69E-10	85.23	926.4	109.9	0.899
	Min:	7.00E-12	81.59	79.68	45.14	0.894
	Average:	9.19E-11	82.36	319.315	72.164	0.896
	Std Dev:	4.68E-11	0.3825	239.359	15.703	0.00153

QUAL	Max:	4.66E-10	84.21	870.8	191.7	0.946
LOT	Min:	4.00E-12	81.82	84.48	76.78	0.858
	Average:	9.20E-11	82.695	438.814	104.385	0.912
	Std Dev:	9.54E-11	0.4607	267.767	28.88	0.00157
MMBZ5270BLT1	Temp:	150C	150C	150C	150C	150C
	Parameter:	IR	VZ	ZZ	ZZ	VF
	Condition:	@VR=69V	@IT=5mA	@IT=1.4mA	@IZ=0.25mA	@IF=10mA
	Max Limit:	1.00E-07	95.55	400	2300	0.9
	Min Limit:		86.45			
CONTROL	Max:	1.76E-07	100.1	391.6	165.7	0.584
	Min:	7.88E-08	98.3	163.4	71.85	0.575
	Average:	1.00E-08	99.3577	248.132	108.599	0.58
	Std Dev:	2.70E-08	0.406	54.022	23.576	0.0023
QUAL	Max:	3.52E-07	100.2	418	212.5	0.629
LOT	Min:	5.33E-08	98.7	213.6	93.21	0.609
	Average:	9.85E-08	99.64	287.809	136.324	0.618
	Std Dev:	6.53E-08	0.299	55.373	32.505	0.004

Qual Device #5 – MMSZ5264BT1 Lot ID#1177 A, B

MMSZ5264BT1	Temp:	25C	25C	25C	25C	25C
	Parameter:	IR	VZ	ZZ	ZZ	VF
	Condition:	@VR=46V	@IT=5mA	@IT=2.1mA	@IZ=0.25mA	@IF=10mA
	Max Limit:	1.00E-07	63	170	1400	0.9
	Min Limit:		57			
CONTROL	Max:	2.22E-10	59.05	149	1060	0.778
	Min:	3.40E-11	56.51	57.09	170.8	0.771
	Average:	1.52E-10	58.28	107.547	521.695	0.774
	Std Dev:	4.87E-11	0.543	28.07	253.167	0.0018
	Cpk	683.56268	2.8974831	0.741634	1.1564238	23.333333
QUAL	Max:	2.86E-10	61.04	154.6	993.2	0.812
LOT	Min:	1.60E-11	59.45	88.47	291.8	0.798
	Average:	1.35E-10	60.17	123.884	652.53	0.796

	Std Dev:	7.59E-11	0.4476	16.17	213.826	0.00449
	Cpk	438.58059	2.1075365	0.9506494	1.1652309	7.7208612
MMSZ5264BT1	Temp:	-55C	-55C	-55C	-55C	-55C
	Parameter:	IR	VZ	ZZ	ZZ	VF
	Condition:	@VR=46V	@IT=5mA	@IT=2.1mA	@IZ=0.25mA	@IF=10mA
	Max Limit:	1.00E-07	63	170	1400	0.9
	Min Limit:		57			
CONTROL	Max:	3.20E-09	54.41	133.4	2704	0.902
	Min:	4.70E-11	52.06	39.61	251.5	0.895
	Average:	1.52E-10	53.57	86.392	955.78	0.898
	Std Dev:	6.10E-10	0.5533	22.249	723.133	0.0017
QUAL	Max:	2.98E-09	56.16	164.3	3276	0.926
LOT	Min:	1.41E-10	54.61	63.66	197.2	0.91
	Average:	4.27E-10	55.33	106.763	1123.1	0.91668
	Std Dev:	5.57E-10	0.434	27.31	906.695	0.00363
MMSZ5264BT1	Temp:	150C	150C	150C	150C	150C
	Parameter:	IR	VZ	ZZ	ZZ	VF
	Condition:	@VR=46V	@IT=5mA	@IT=2.1mA	@IZ=0.25mA	@IF=10mA
	Max Limit:	1.00E-07	63	170	1400	0.9
	Min Limit:		57			
CONTROL	Max:	1.31E-07	65.67	186	952.4	0.58
	Min:	5.32E-08	62.75	78.23	243.2	0.572
	Average:	8.94E-08	64.72	126.95	414.06	0.575
	Std Dev:	2.02E-08	0.713	28.227	157.57	0.0025
QUAL	Max:	8.37E-08	67.83	200	1098	0.634
LOT	Min:	1.34E-08	66.02	120.9	265.4	0.607
	Average:	3.71E-08	66.778	155.396	526.88	0.616
	Std Dev:	1.70E-08	0.5449	20.449	180.579	0.005

Qual Device #6 – MM3Z75VT1 Lot ID#1175 A, B

MM3Z75VT1 Temp: 25C 25C 25C 25C 25C

Parameter:		IR	VZ	ZZ	ZZ	VF
Condition:		@VR=52.5V	@IT=5mA	@IT=5mA	@IZ=0.5mA	@IF=10mA
Max Limit:		5.00E-08	79	255	500	0.9
Min Limit:			70			
CONTROL						
Max:		1.80E-10	78.01	55.32	158.2	0.768
Min:		8.70E-11	76.45	35.02	58.6	0.763
Average:		1.39E-10	77.2848	41.025	93.071	0.765
Std Dev:		2.46E-11	0.382	6.24	30.262	0.0156
Cpk		675.07311	1.4966841	11.430288	4.482288	2.8846154
QUAL						
Max:		1.54E-10	78.38	88.1	252.2	0.785
Min:		2.00E-12	77.02	50.08	83.78	0.78
Average:		1.02E-10	77.952	60.112	128.866	0.782
Std Dev:		3.95E-11	0.2831	9.318	39.72	0.000142
Cpk		4.21E+02	1.2339574	6.9717393	3.1145854	276.99531
MM3Z75VT1						
Temp:		-55C	-55C	-55C	-55C	-55C
Parameter:		IR	VZ	ZZ	ZZ	VF
Condition:		@VR=52.5V	@IT=5mA	@IT=5mA	@IZ=0.5mA	@IF=10mA
Max Limit:		5.00E-08	79	255	500	0.9
Min Limit:			70			
CONTROL						
Max:		1.71E-10	71.92	47.16	139.3	0.889
Min:		1.90E-11	70.41	28.58	39.04	0.885
Average:		8.84E-11	71.267	34.9	75.141	0.887
Std Dev:		3.62E-11	0.3695	5.718	28.28	0.001046
QUAL						
Max:		1.49E-10	72.04	77.64	217.8	0.908
Min:		3.20E-11	70.95	42.1	54.38	0.9
Average:		7.92E-11	71.7508	52.313	104.443	0.903
Std Dev:		2.95E-11	0.2387	8.65	36.212	0.0021
MM3Z75VT1						
Temp:		150C	150C	150C	150C	150C
Parameter:		IR	VZ	ZZ	ZZ	VF
Condition:		@VR=52.5V	@IT=5mA	@IT=5mA	@IZ=0.5mA	@IF=10mA
Max Limit:		5.00E-08	79	255	500	0.9
Min Limit:			70			
CONTROL						
Max:		7.35E-08	86.89	62.58	175.4	0.564

Min:	3.91E-08	85.21	40.78	91.18	0.553
Average:	5.71E-08	86.109	46.694	124.962	0.559
Std Dev:	1.12E-08	0.428	5.95	28.56	0.00227

QUAL	Max:	3.55E-08	87.19	87.72	227.6	0.591
LOT	Min:	1.34E-08	85.54	56.46	111	0.584
	Average:	2.80E-08	86.608	65.92	157.692	0.5876
	Std Dev:	4.43E-09	0.367	8.35	28.17	0.002

A full characterization report is available upon request.