ON Semiconductor

Final Product/Process Change Notification
Generic Copy

30-SEP-2003

SUBJECT: ON Semiconductor Final Product/Process Change Notification 13127

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

EFFECTIVE DATE: 30-Nov-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 (TVS) 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.

Contact Leon Gross at leon.gross@onsemi.com for assistance.

This is the final PCN for phase 2 of Initial PCN #11733.

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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,	0 hrs	1008	0/1008
	RH = 85%, VR = 0.8V	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	0 cycles	1008	0/1008
	Tj => 100 deg C,	7500 cycles	1008	0/1008
	2 minutes on/off	15000 cycles	1008	0/1008
RSH	TS = 260 deg C,	0 hrs	180	0/180
	Tdwell = 10 seconds	Final Test	180	0/180
TC	Air to Air;	0 cycles	1008	0/1008
	65 deg C to 150 deg C	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 qualification devices are representative of the entire family being qualified, and will serve to qualify the change on all represented families. Datasheet specifications of the devices will remain unchanged. Characterization summary results below:

CHANGED PART IDENTIFICATION:

There will be no changes to device marking, case outline, and package functionality.

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AFFECTED DEVICE LIST (WITHOUT SPECIALS)

PART
BZX84C10LT1
BZX84C10LT3
BZX84C11LT1
BZX84C11LT3
BZX84C12LT1
BZX84C12LT3
BZX84C13LT1
BZX84C13LT3
BZX84C15LT1
BZX84C15LT3
BZX84C16LT1
BZX84C18LT1
BZX84C18LT3
BZX84C20LT1
BZX84C20LT3
BZX84C22LT1
BZX84C24LT1
BZX84C24LT3
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BZX84C27LT3
BZX84C30LT1
BZX84C30LT3
BZX84C33LT1
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BZX84C36LT1
BZX84C36LT3
BZX84C39LT1
BZX84C39LT3
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BZX84C47LT1
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BZX84C51LT1
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BZX84C62LT1
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MM3Z10VT1
MM3Z11VT1
MM3Z12VT1
MM3Z13VT1
MM3Z15VT1
MM3Z16VT1
MM3Z18VT1
MM3Z20VT1
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MM3Z24VT1
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MMBZ5265BLT1
MMBZ5266BLT1
MMBZ5267BLT1
MMBZ5268BLT1
MMBZ5270BLT1
MMSZ10T1
MMSZ10T3
MMSZ11T1
MMSZ12T1
MMSZ13T1
MMSZ15T1
MMSZ16T1
MMSZ18T1

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MMSZ20T1
MMSZ22T1
MMSZ24T1
MMSZ27T1
MMSZ27T3
MMSZ30T1
MMSZ33T1
MMSZ36T1
MMSZ39T1
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MMSZ5255BT1
MMSZ5255BT3
MMSZ5256BT1

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MMSZ5256BT3
MMSZ5257BT1
MMSZ5257BT3
MMSZ5258BT1
MMSZ5258BT3
MMSZ5259BT1
MMSZ5260BT1
MMSZ5261BT1
MMSZ5261BT3
MMSZ5262BT1
MMSZ5263BT1
MMSZ5264BT1
MMSZ5264BT3
MMSZ56T1

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
CONTROL	Max:	7.51E-06	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
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 LOT	Max:	2.57E-05	2.190	62.840	447.800	0.614
	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 LOT	Max:	6.57E-07	1.880	4892.000	0.797
	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
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 LOT	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
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 LOT	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 LOT	Max:	2.52E-10	9.045	9.712	9.007	23.780	9.139	5.510	0.811
	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
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 LOT	Max:	3.16E-10	8.566	9.274	8.530	20.800	8.655	5.325	0.926	1.377
	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
CONTROL	Max:	5.97E-09	9.735	14.160	9.701	46.280	9.787	5.060	0.602	0.905
	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=1.4mA	@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	90.520	275	133.7	0.774
	Min:	1.08E-10	88.730	71.48	44.42	0.764
	Average:	2.64E-10	89.603	151.198	87.298	0.771
	Std Dev:	2.76E-10	0.431	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=1.4mA	@IT=1.4mA	@IZ=0.25mA	@IF=10mA
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=1.4mA	@IT=1.4mA	@IZ=0.25mA	@IF=10mA

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:	1.18E-07	99.3577	248.132	108.599	0.58
	Std Dev:	2.66E-08	0.406	54.022	23.576	0.0023
QUAL	Max:	1.17E-05	100.2	418	212.5	0.629
LOT	Min:	5.33E-08	98.7	213.6	93.21	0.609
	Average:	6.89E-07	99.64	287.809	136.324	0.618
	Std Dev:	2.47E-06	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=2.1mA	@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	59.050	149	1060	0.778
	Min:	3.40E-11	56.510	57.09	170.8	0.771
	Average:	1.52E-10	58.201	107.547	521.695	0.774
	Std Dev:	4.87E-11	0.607	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=2.1mA	@IT=2.1mA	@IZ=0.25mA	@IF=10mA
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=2.1mA	@IT=2.1mA	@IZ=0.25mA	@IF=10mA
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 LOT	Max:	8.37E-08	67.83	200	1098	0.634
	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 LOT	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
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

LOT	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
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 LOT	Max:	3.55E-08	87.19	87.72	227.6	0.591
	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

Capacitance Comparison

	Control	Engineering
Device:	**Typ (pF) - Avg:**	**Typ (pF) - Avg:**
SOT23		
BZX84C9V1LT1	**85.34**	**55.88**
MMBZ5270BLT1	**16.51**	**11.76**
SOD123		
MMSZ4678T1	**301.16**	**189.77**
MMSZ5264BT1	**23.58**	**16.70**
SOD323		
MM3Z2V4T1	**332.07**	**207.75**
MM3Z75VT1	**18.49**	**13.05**

A full characterization report is available upon request.