

# MINI-MELF-SMD



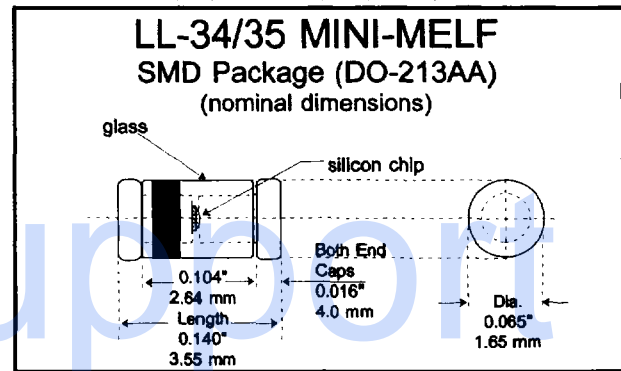
# 0.5 Watt Zener Diodes

## Use Advantages

- Full performance replacement for plastic SOT-23 zener diodes.
- Occupies the same footprint as plastic SOD 123 or SMA, no PC board rework.
- MELF vs. SMA - possible savings are as much as 50%.
- Compatible with all major automatic pick and place SM mounting equipment.
- May be used on ceramic boards along with high temperature IR solder reflow.
- For use in stabilizing and clipping circuits, where real surge protection is a necessity.
- MIL-S-19500/117 "UR" DO-213AA SMD approvals, see list for bold ✓ types.

## Features

- Six Sigma quality
- High surge capability
- Humidity proof glass
- Thermally matched system
- Out performs leaded parts
- No applications restrictions
- Sigma Bond™ plated contacts
- 100% guaranteed solderability
- DO-35 leaded parts available
- Available up to JTXV UR-1 levels
- Can be screened up to "S" level via Source Control Drawings



Absolute Maximum Ratings	Symbol	Value	Unit
Power Dissipation at end cap temperature = 75 °C	$P_{tot}$	0.5	Watt
Junction Temperature	$T_j$	200	°C
Operating and Storage Temperature Range	$T_{op \& st}$	-65 to +200	°C

Characteristics at T = 25 °C	Symbol	Limit	Unit
Power Derating at end cap temperature = 75 °C	$P_{DR}$	4.0 (Max)	mW/°C
Forward Voltage at $I_F = 200$ mA	$V_F$	1.1 (Max)	Volts

To order Mil types add a JAN1N, JTX1N or JTXV1N prefix along with a UR-1 suffix to the ✓ type number listed

DO-35 leaded glass package available in both commercial and Mil types, use 1N instead of the LL prefix.

DETAILED SPECIFICATIONS ON REVERSE



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\*BKCSS097\*

# MINI-MELF-SMD

LL957B

thru

LL992B



# 0.5 Watt Zener Diodes

LL- 34/35 DO-213AA

Detail

# Specifications

Type	Nominal Zener Voltage	Test Current	Maximum Zener Impedance			Typical Temperature Coefficient	Maximum Reverse Leakage Current		Maximum Regulator Current
	(V <sub>Z</sub> ) @ I <sub>Zt</sub> Volts	I <sub>Zt</sub> mA	(Z <sub>Zt</sub> ) @ I <sub>Zt</sub> Ohms	(Z <sub>ZK</sub> ) @ I <sub>ZK</sub> Ohms	I <sub>ZK</sub> mA	%/°C	(I <sub>R</sub> ) µA	@ V <sub>R</sub> Volts	(I <sub>ZM</sub> ) mA
LL957B	6.8	18.5	4.5	700	1.0	0.050	150	5.2	55
LL958B	7.5	16.5	5.5	700	0.5	0.058	75	5.7	50
LL959B	8.2	15.0	6.5	700	0.5	0.062	50	6.2	45
LL960B	9.1	14.0	7.5	700	0.5	0.068	25	6.9	41
LL961B	10	12.5	8.5	700	0.25	0.075	10	7.6	38
LL962B✓	11	11.5	9.5	700	0.25	0.076	5	8.4	35
LL963B✓	12	10.5	11.5	700	0.25	0.077	5	9.1	32
LL964B✓	13	9.5	13	700	0.25	0.079	5	9.9	30
LL965B✓	15	8.5	16	700	0.25	0.082	5	11.4	26
LL966B✓	16	7.8	17	700	0.25	0.083	5	12.2	25
LL967B✓	18	7.0	21	750	0.25	0.085	5	13.7	21
LL968B✓	20	6.2	25	750	0.25	0.086	5	15.2	19
LL969B✓	22	5.6	29	750	0.25	0.087	5	16.7	17
LL970B✓	24	5.2	33	750	0.25	0.088	5	18.2	16
LL971B✓	27	4.6	41	750	0.25	0.090	5	20.6	14
LL972B✓	30	4.2	49	1000	0.25	0.091	5	22.8	13
LL973B✓	33	3.8	58	1000	0.25	0.092	5	25.1	12
LL974B✓	36	3.4	70	1000	0.25	0.093	5	27.4	11
LL975B✓	39	3.2	80	1000	0.25	0.094	5	29.7	9.1
LL976B✓	43	3.0	93	1500	0.25	0.095	5	32.7	8.8
LL977B✓	47	2.7	105	1500	0.25	0.095	5	35.8	7.9
LL978B✓	51	2.5	125	1500	0.25	0.096	5	38.8	7.4
LL979B✓	56	2.2	150	2000	0.25	0.096	5	42.6	6.9
LL980B✓	62	2.0	185	2000	0.25	0.097	5	47.1	6.0
LL981B✓	68	1.8	230	2000	0.25	0.097	5	51.7	5.5
LL982B✓	75	1.7	270	2000	0.25	0.098	5	56.0	5.1
LL983B✓	82	1.5	330	3000	0.25	0.098	5	62.2	4.6
LL984B✓	91	1.4	400	3000	0.25	0.099	5	69.2	4.2
LL985B✓	100	1.3	500	3000	0.25	0.11	5	76.0	3.7
LL986B✓	110	1.1	750	4000	0.25	0.11	5	83.6	3.3
LL987B✓	120	1.0	900	4500	0.25	0.11	5	91.2	3.1
LL988B✓	130	0.95	1100	5000	0.25	0.11	5	98.8	2.7
LL989B✓	150	0.85	1500	6000	0.25	0.11	5	114.0	2.4
LL990B✓	160	0.80	1700	6500	0.25	0.11	5	121.6	2.2
LL991B✓	180	0.68	2200	7100	0.25	0.11	5	136.8	2.0
LL992B✓	200	0.65	2500	8000	0.25	0.11	5	152.0	1.8

B suffix Voltage tolerance is ± 5 % and available in the ✓ "UR" MIL types listed above..

Use suffix "A" for ± 10% tolerance and non-suffix part numbers for ± 20% tolerance.

To order the DO-213AA Mil types; use a JAN1N, JTX1N or JTXV1N prefix, along with a UR-1 suffix.

For commercial DO-35 leaded glass packages, replace "LL" prefix with "1N".



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