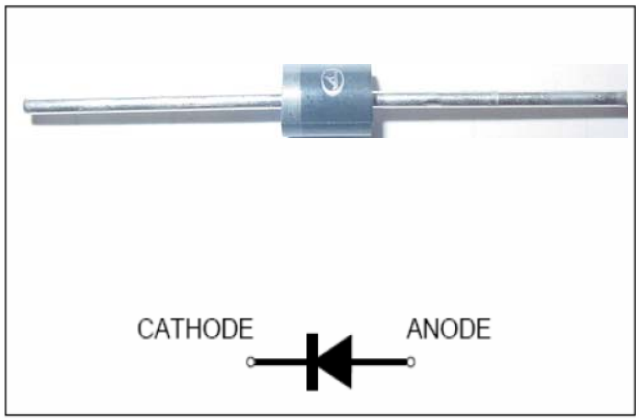
乐山无线电股份有限公司
Leshan Radio Company, Ltd

1W 1N47**AM Series Zener Diodes

Feature & Dimensions

* 1W DO-41
*Zener voltage regulator diodes
* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
* Complete voltage range_24volts
* We declare that the material of product compliance with RoHS requirements.
* Guarding for over voltage protection
* High temperature soldering guaranteed: 260°C/10 seconds at terminals



We declare that the material of product compliance with ROHS requirements

Absolute Maximum Ratings(Ta=25°C)

Power Disspation at T_{amb} = 25℃	P_{tot}	1 [1)]	W
Forward voltage at I_F=200mA	V_F	1.2	V
Junction Temperature	T_j	175	℃
Storage Temperature Range	Ts	-65 to +175	℃
1)Valid provided that leads at a distance of 8mm from case are kept at ambient temperature			

1.Product Characteristic

TYPE		Nominal	Test	Max Zener Impedance			Max Reverse		Surge Current @
Type	Marking	Zener	Current	A and B Sufflx only			Leakage Current		Ta=25℃
		Voltage	I zt	Z zt @ I zt	Z zk@ Izk	Z zk@ Izk	I_R	V_R	Ir-m A
		Vz@Lzt	mA	Ohms	Ohms	m A	uA Max	Volts B	
		Volts							
1N4733AM	1N4733AM	5.1	49	7	550	1	10	1.0	890
1N4734AM	1N4734AM	5.6	45	5	600			2.0	810
1N4735AM	1N4735AM	6.2	41	2	700			3.0	730
1N4736AM	1N4736AM	6.8	37	3.5	700			4.0	660
1N4737AM	1N4737AM	7.5	34	4	700	0.5		5.0	605
1N4738AM	1N4738AM	8.2	31	4.5	700			6.0	550
1N4739AM	1N4739AM	9.1	28	5	700			7.0	500
1N4740AM	1N4740AM	10	25	7	700	0.25		7.6	454
1N4741AM	1N4741AM	11	23	8	700		5	8.4	414
1N4742AM	1N4742AM	12	21	9	700			9.1	380
1N4743AM	1N4743AM	13	19	10	700			9.9	344
1N4744AM	1N4744AM	15	17	14	700			11.4	304
1N4745AM	1N4745AM	16	15.5	16	700			12.2	285

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Type	Marking	Zener	Current	A and B Sufflx only			Leakage Current		Ta=25℃
		Voltage	I zt	Z zt @ I zt	Z zk@ Izk	Z zk@ Izk	IR	VR	Ir-m A
		Vz@Lzt	mA	Ohms	Ohms	m A	uA Max	Volts B	
		Volts							
1N4746AM	1N4746AM	18	14	20	750			13.7	250
1N4747AM	1N4747AM	20	12.5	22	750			15.2	225
1N4748AM	1N4748AM	22	11.5	23	750			16.7	205
1N4749AM	1N4749AM	24	10.5	25	750			18.2	190
1N4750AM	1N4750AM	27	9.5	35	750			20.6	170
1N4751AM	1N4751AM	30	8.5	40	1000			22.8	150
1N4752AM	1N4752AM	33	7.5	45	1000			25.1	135
1N4753AM	1N4753AM	36	7	50	1000			27.4	125
1N4754AM	1N4754AM	39	6.5	60	1000			29.7	115
1N4755AM	1N4755AM	43	6	70	1500	0.25	5	32.7	110
1N4756AM	1N4756AM	47	5.5	80	1500			35.8	95
1N4757AM	1N4757AM	51	5	95	1500			38.8	90
1N4758AM	1N4758AM	56	4.5	110	2000			42.6	80
1N4759AM	1N4759AM	62	4	125	2000			47.1	70
1N4760AM	1N4760AM	68	3.7	150	2000			51.7	65
1N4761AM	1N4761AM	75	3.3	175	2000			56.0	60
1N4762AM	1N4762AM	82	3	200	3000			62.2	55
1N4763AM	1N4763AM	91	2.8	250	3000			69.2	50
1N4764AM	1N4764AM	100	2.5	350	3000			76.0	45

Vz tolerance : ±5%； Tested with pulese tp=40ms。

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2.Characteristic Curves

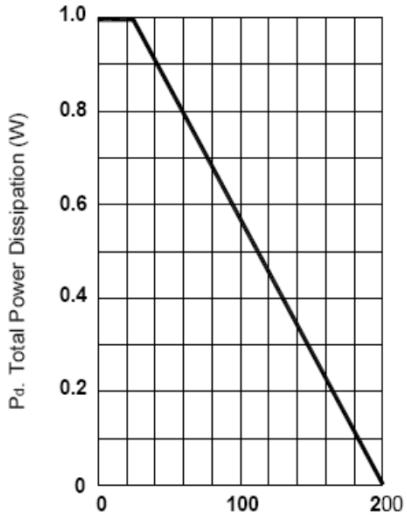

Fig. 1 Power Dissipation vs Ambient Temperature

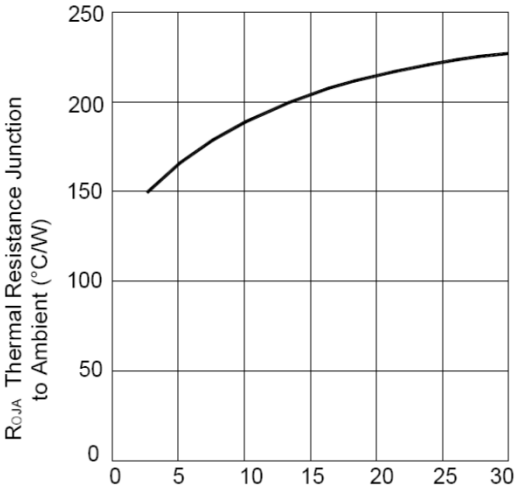

Fig. 2 Typical Thermal Resistance vs. Lead Length

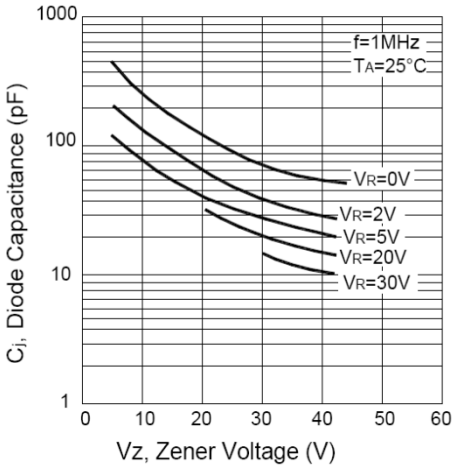

Fig. 3 Junction Capacitance vs Zener Voltage

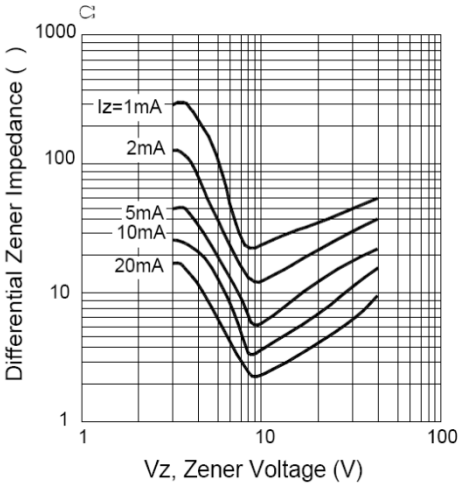

Fig. 4 Typical Zener Impedance vs. Zener Voltage

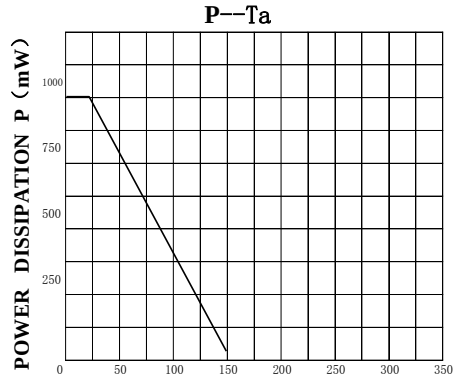

Fig.5AMBIENT TEMPERATURE Ta（℃）

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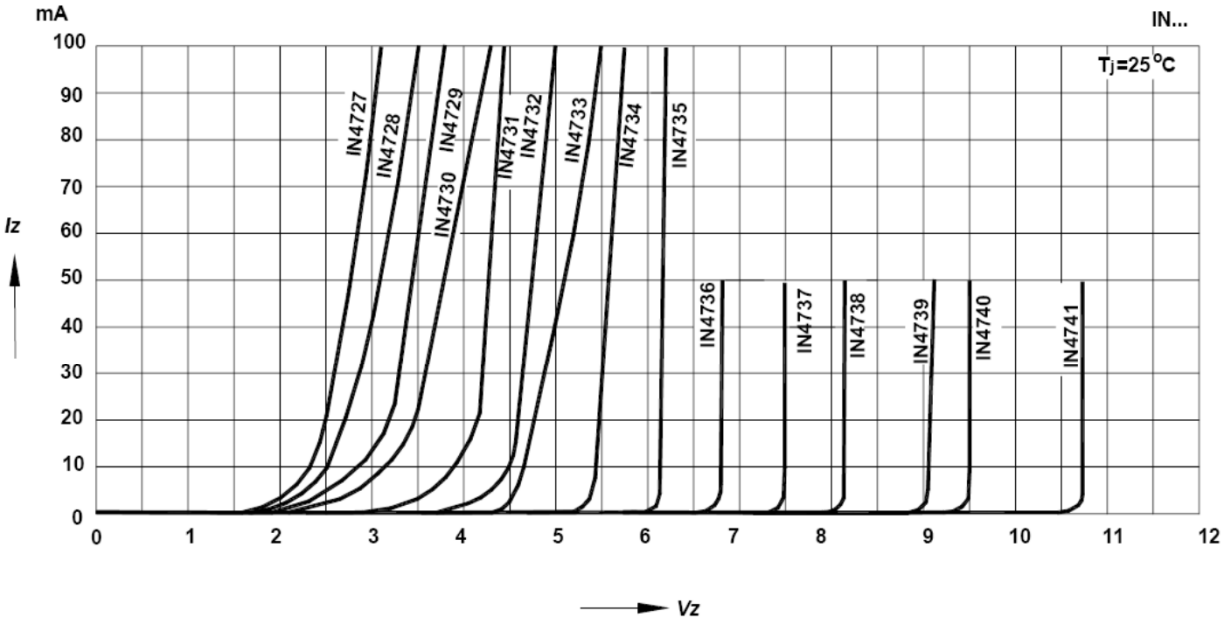
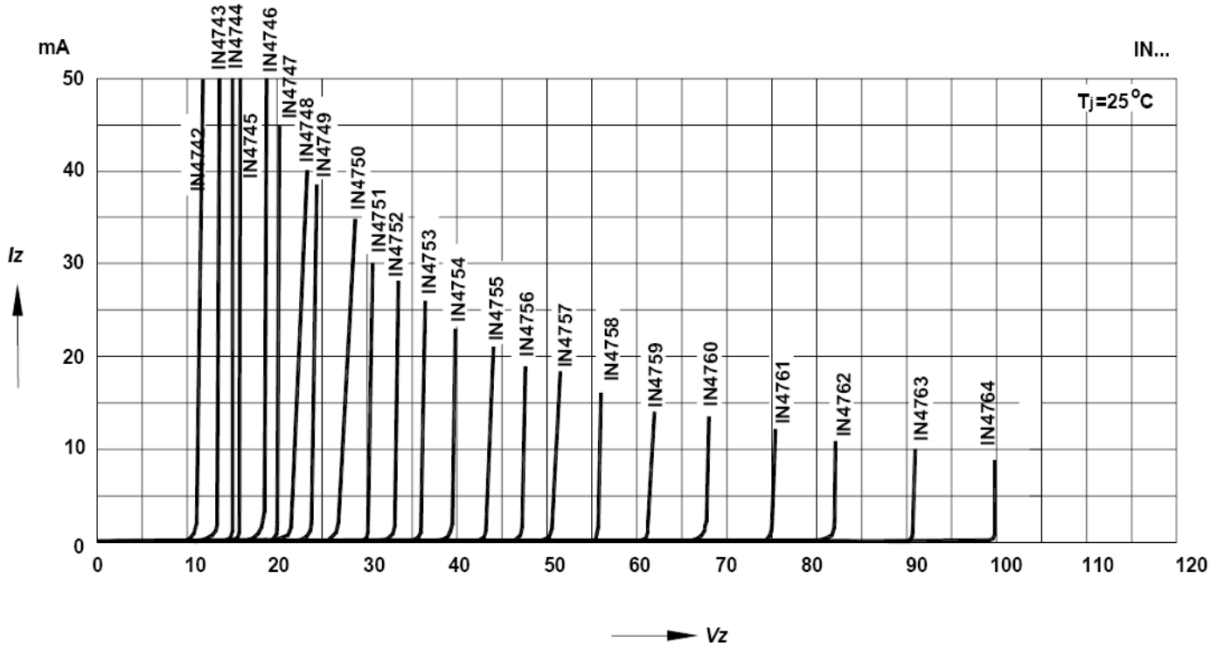
Breakdowm characteristics

T_j=constant(pulsed)





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3.High reliability test capabilities

序号 NO.	试验项目 TEST ITEM	试验条件 TEST CONDITION	样品数 S.S	判定 DECISION		试验依据 TEST CRITERION
				ACC	REJ	
1	间歇工作寿命 IOL	Δ Tj>100℃ Tj≤RatedTjmax Ton=Toff=2min 1000h	77PCS	0	1	MIL-STD-750
2	高温反偏 HTRB	VR=80%ratedVR Tj=150℃	77PCS	0	1	MIL-STD-750
3	高温高湿反偏 H3TRB	VR=80%ratedVR Ta=85℃ RH=85%VRmax≤100V	77PCS	0	1	MIL-STD-750
4	高温储存 HTSL	Ta=Tstgmax 1000h	77PCS	0	1	MIL-STD-750
5	温度循环 TC	Air To Air -55℃/15min 150℃/15min 1000 Cycles	77PCS	0	1	MIL-STD-750
6	高压蒸煮 AC	121℃/2atm/100%RH 96h	77PCS	0	1	MIL-STD-750
7	浪涌 Fw.Surge	Ta=55℃/I_{FSM}=Rated I_{FSM} one sine half wave 8.3ms	15PCS	0	1	MIL-STD-750
8	耐焊接热 RSH	260℃±5℃ 10s	30PCS	0	1	MIL-STD-750
9	可焊性 SOLDERABILITY	245±5℃ 5s	10PCS	0	1	MIL-STD-750
10	静电放电试验 ESD	HBM 模式 2000V	30PCS	0	1	MIL-STD-750
11	弯曲试验	Do-41,Do-15 产品按 0.5KG; Do-201AD 按 1KG；90°；2 次	10PCS	0	1	BG/T2423.60-2008 IEC60068-2-21：2006
12	拉力	Do-41,Do-15 产品按 1KG; Do-201AD 按 2KG	10PCS	0	1	BG/T2423.60-2008 IEC60068-2-21：2006

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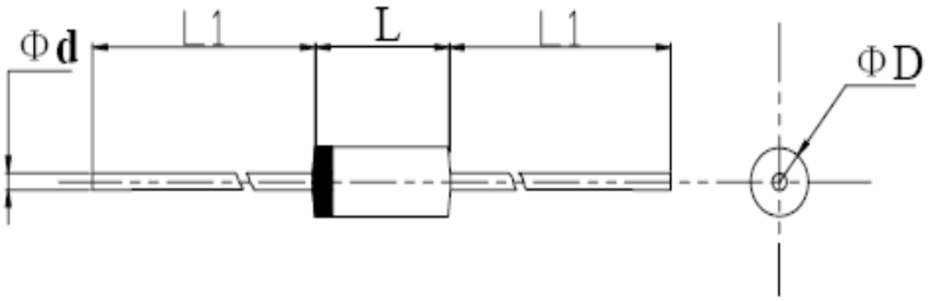
4.Package Dimensions in inches and (millmeters)

Package outline



Dimensions					Note:
	inches		mm		DO-41
	Min.	Max.	Min.	Max.	molded plastic case
L	0.166	0.205	4.2	5.2	The marking band indicates the cathode
L1	0.866	-	22	-	
ΦD	0.080	0.107	2.0	2.7	
Φd	0.028	0.034	0.7	0.9	

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5. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	周杰	2010.08.10
2	增加1N4751AM	周杰	2010.09.13
3	增加1N47**AM系列	周杰	2011.04.25
4	去掉6.8V以下型号	周杰	2011.08.15
5	增加5.1~6.2V	周杰	2014.08.12
6	增加参数曲线和可靠性标准	谭志伟	2016.09.01