

Voltage regulator diodes

1N4728A to 1N4749A

FEATURES

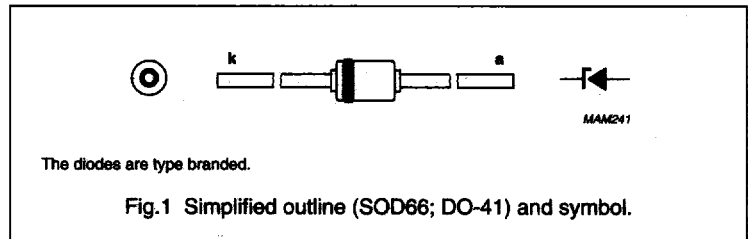
- Total power dissipation: max. 1000 mW
- Tolerance series: $\pm 5\%$
- Working voltage range: nom. 3.3 to 24 V.

APPLICATIONS

- Low voltage stabilizers.

DESCRIPTION

Low voltage regulator diodes in hermetically sealed SOD66 (DO-41) packages. The series consists of 22 types with nominal working voltages from 3.3 to 24 V.



LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_F	continuous forward current		–	500	mA
I_{ZM}	working current		see Table "Per type"		
I_{ZSM}	non-repetitive peak reverse current		see Table "Per type"		
P_{tot}	total power dissipation	$T_{amb} = 50\text{ }^\circ\text{C}$	–	1000	mW
T_{stg}	storage temperature		–65	+200	$^\circ\text{C}$
T_j	junction temperature		–65	+200	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

Total series

$T_j = 25\text{ }^\circ\text{C}$; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_F	forward voltage	$I_F = 200\text{ mA}$; see Fig.3	–	1.2	V

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Per type

$T_j = 25\text{ }^\circ\text{C}$; unless otherwise specified.

TYPE No.	WORKING VOLTAGE V_Z (V) ⁽¹⁾ at I_{Ztest}		TEST CURRENT I_{Ztest} (mA)	DIFFERENTIAL RESISTANCE			REVERSE CURRENT at REVERSE VOLTAGE		WORKING CURRENT I_{ZM} (mA)	NON-REPETITIVE PEAK REVERSE CURRENT I_{ZSM} (mA) ⁽²⁾
	NOM.	$r_{diff}(\Omega)$ at I_{Ztest}		$r_{diff}(\Omega)$ at I_Z	I_R (μ A)	V_R (V)	MAX.	MAX.		
1N4728A	3.3	10	76	10	400	1	100	1	276	1380
1N4729A	3.6	10	69	10	400	1	100	1	252	1260
1N4730A	3.9	9	64	9	400	1	50	1	234	1190
1N4731A	4.3	9	58	9	400	1	10	1	217	1070
1N4732A	4.7	8	53	8	500	1	10	1	193	970
1N4733A	5.1	7	49	7	550	1	10	1	178	890
1N4734A	5.6	5	45	5	600	1	10	2	162	810
1N4735A	6.2	2	41	2	700	1	10	3	146	730
1N4736A	6.8	3.5	37	3.5	700	1	10	4	133	660
1N4737A	7.5	4	34	4	700	0.5	10	5	121	605
1N4738A	8.2	4.5	31	4.5	700	0.5	10	6	110	550
1N4739A	9.1	5	28	5	700	0.5	10	7	100	500
1N4740A	10	7	25	7	700	0.25	10	7.6	91	454
1N4741A	11	8	23	8	700	0.25	5	8.4	83	414
1N4742A	12	9	21	9	700	0.25	5	9.1	76	380
1N4743A	13	10	19	10	700	0.25	5	9.9	69	344
1N4744A	15	14	17	14	700	0.25	5	11.4	61	304
1N4745A	16	16	15.5	16	700	0.25	5	12.2	57	285
1N4746A	18	20	14	20	750	0.25	5	13.7	50	250
1N4747A	20	22	12.5	22	750	0.25	5	15.2	45	225
1N4748A	22	23	11.5	23	750	0.25	5	16.7	41	205
1N4749A	24	25	10.5	25	750	0.25	5	18.2	38	190

Notes

- V_Z is measured with device at thermal equilibrium while held in clips at 10 mm from body in still air at 25 °C.
- Half square wave or equivalent sinewave pulse $1/120$ second duration superimposed on I_{Ztest} .

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THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-tp}$	thermal resistance from junction to tie-point	lead length 4 mm; see Fig.2	110	K/W

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GRAPHICAL DATA

