Voltage regulator diodes 1N4728A to 1N4749A

FEATURES

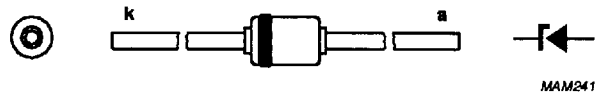
- Total power dissipation: max. 1000 mW
- Tolerance series: ±5%
- Working voltage range: nom. 3.3 to 24 V.

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.



The diodes are type branded.

Fig.1 Simplified outline (SOD66; DO-41) and symbol.

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 °C	–	1000	mW
T_{stg}	storage temperature		−65	+200	°C
T_j	junction temperature		−65	+200	°C

ELECTRICAL CHARACTERISTICS

Total series

T_j = 25 °C; unless otherwise specified.

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

Per type

T_j = 25 °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)
			r_{dif} (Ω) at I_{Ztest}	r_{dif} (Ω) at I_Z	I_Z (mA)	I_R (μA)	V_R (V)		
	NOM.		MAX.	MAX.		MAX.		MAX.	MAX.
1N4728A	3.3	76	10	400	1	100	1	276	1380
1N4729A	3.6	69	10	400	1	100	1	252	1260
1N4730A	3.9	64	9	400	1	50	1	234	1190
1N4731A	4.3	58	9	400	1	10	1	217	1070
1N4732A	4.7	53	8	500	1	10	1	193	970
1N4733A	5.1	49	7	550	1	10	1	178	890
1N4734A	5.6	45	5	600	1	10	2	162	810
1N4735A	6.2	41	2	700	1	10	3	146	730
1N4736A	6.8	37	3.5	700	1	10	4	133	660
1N4737A	7.5	34	4	700	0.5	10	5	121	605
1N4738A	8.2	31	4.5	700	0.5	10	6	110	550
1N4739A	9.1	28	5	700	0.5	10	7	100	500
1N4740A	10	25	7	700	0.25	10	7.6	91	454
1N4741A	11	23	8	700	0.25	5	8.4	83	414
1N4742A	12	21	9	700	0.25	5	9.1	76	380
1N4743A	13	19	10	700	0.25	5	9.9	69	344
1N4744A	15	17	14	700	0.25	5	11.4	61	304
1N4745A	16	15.5	16	700	0.25	5	12.2	57	285
1N4746A	18	14	20	750	0.25	5	13.7	50	250
1N4747A	20	12.5	22	750	0.25	5	15.2	45	225
1N4748A	22	11.5	23	750	0.25	5	16.7	41	205
1N4749A	24	10.5	25	750	0.25	5	18.2	38	190

Notes

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

THERMAL CHARACTERISTICS

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

GRAPHICAL DATA

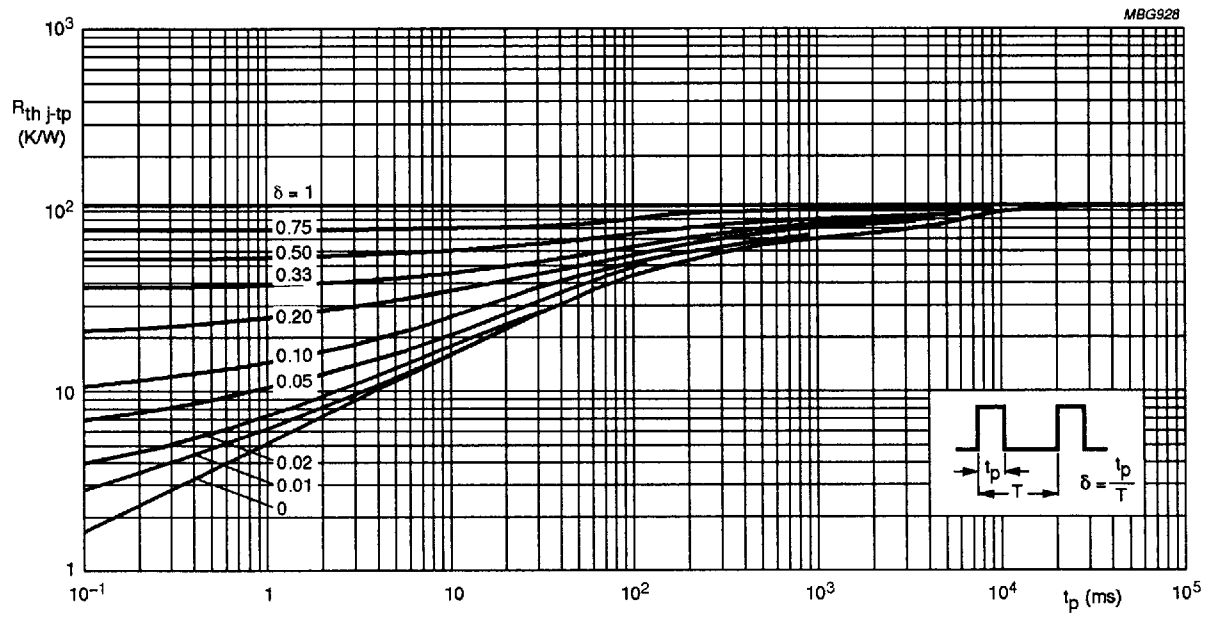
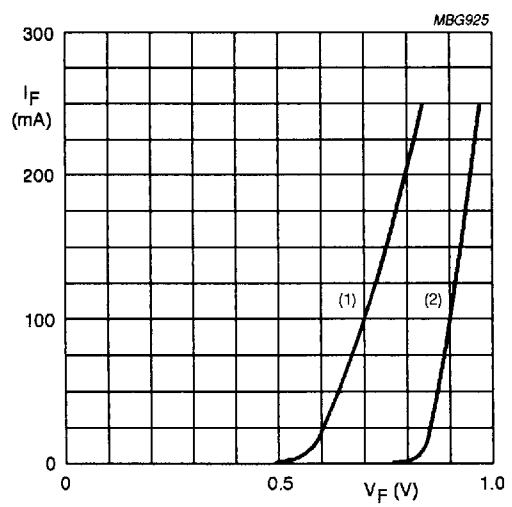


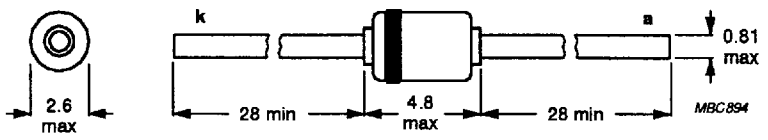
Fig.2 Thermal resistance from junction to tie-point; lead length 4 mm.



(1) T_j = 200 °C; typical values.
(2) T_j = 25 °C; typical values.

Fig.3 Forward current as a function of forward voltage.

PACKAGE OUTLINE



Dimensions in mm.

Fig.4 SOD66 (DO-41).

DEFINITIONS

Data sheet status	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
Limiting values	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

LIFE SUPPORT APPLICATIONS

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