MICROPOWER VOLTAGE REFERENCE

- Operating Current Range ...20µA to 20mA
- Reverse Breakdown Voltage ...2.500V(nom)
- 1.5% and 3% Initial Voltage Tolerance
- Reference Impedance
  AS285, AS385 ...0.6Ω Max at 25^{0}C
  AS385B .....1.0Ω Max at 25^{0}C
- All Devices .....1.5Ω Max Over Full Temperature Range
- Designed to be Interchangeable With National LM285-2.5, LM385-2.5

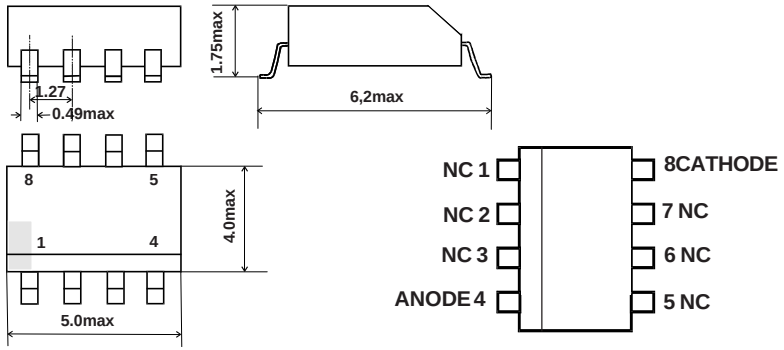
AVAILABLE OPTIONS

T_A	V_Z Tolerance	Packade	
		Plastic TO-92 (P)	Plastic 8-pin Small Outline (D)
0^{0}C to 70^{0}C	1.5%	AS385BP-2.5	AS385BD-2.5
	3.0%	AS385P-2.5	AS385D-2.5
-40^{0}C to 85^{0}C	1.5%	AS285P-2.5	AS285D-2.5

Absolute maximum ratings over operating free-air temperature range

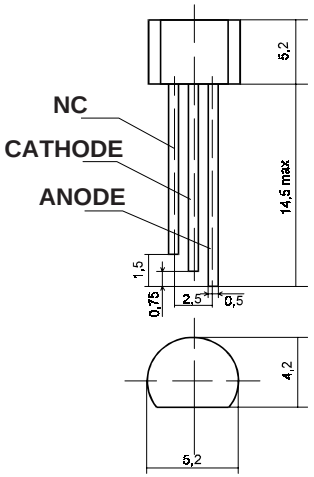
- Revers Current, I_R 30mA
- Forward Current, I_F 10mA
- Storage temperature range ..... -65^{0}C to 150^{0}C
- Lead temperature 1.6mm from cases for 10sec. .....260^{0}C
- Operating free-air temperature range:
  AS385-2.5 ..... 0^{0}C to 70^{0}C
  AS285-2.5 ..... -40^{0}C to 85^{0}C

Connection Diagrams



Note: NC-No intermal connection

Package: 8-lead plastic SO



Package: TO-92

Semiconductor Plant
ALFA Jt.-St. Co. Riga, Latvia
AS285-2.5
AS385-2.5

Electrical characteristics at specified free-air temperature

PARAMETER		TEST CONDITIONS	T_A *	AS285-2.5			AS385-2.5			AS385B-2.5			UNIT
				MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	
V_Z	Reference voltage	I_Z=20µA to 20mA	25°C	2.462	2.5	2.538	2.425	2.5	2.575	2.462	2.5	2.538	V
αV_Z	Average temperature coefficient of reference voltage**	I_Z=20µA to 20mA			±20	±50		±20	±150		±20	±50	ppm/°C
ΔV_Z	Change in reference voltage with current	I_Z=20µA to 1mA	25°C		1			2			2		mV
			Full range			1.5			2			2	
		I_Z=1mA to 20mA	25°C		10			20			20		
			Full range			20			25			25	
$\Delta V_Z / \Delta t$	Long-term change reference voltage	I_Z=100µA	25°C		±20			±20			±20		ppm/khr
$I_{Z(MIN)}$	Minimum reference current		Full range		8	20		8	20		8	20	µA
Z_Z	Reference impedance	I_Z=100µA	25°C		0.3	0.6		0.5	1		0.5	1	Ω
			Full range			1.5			1.5			1.5	
V_n	Broadband noise voltage	I_Z=100µA f=10Hz to 10 kHz	25°C		120			120			120		µV

* Full range is 0°C to 70°C for the AS385-2.5 and AS385B-2.5, -40°C to 85°C for the AS285-2.5

** The average temperature coefficient of reference voltage is defined as the total change in reference voltage divided by the specified temperature range