- 1N5283-1 THRU 1N5314-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS PER MIL-PRF-19500/463
- CURRENT REGULATOR DIODES
- HIGH SOURCE IMPEDANCE
- METALLURGICALLY BONDED
- DOUBLE PLUG CONSTRUCTION

1N5283 thru 1N5314 and 1N5283-1 thru 1N5314-1

MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C
Storage Temperature: -65°C to +175°C
DC Power Dissipation: 500mW @ T_L= +50°C, L = 3/8”
Power Derating: 4 mW / °C above +50°C
Peak Operating Voltage: 100 Volts

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise speci½ed

TYPE NUMBER	REGULATOR CURRENT I p (mA) @ V_S = 25V			MINIMUM DYNAMIC IMPEDANCE @V_S = 25V Z_S (M)	MINIMUM KNEE IMPEDANCE @V_K = 6.0 V Z_K (M)	MAXIMUM LIMITING VOLTAGE @ I_L = 0.8 Ip (min)
	NOM	MIN	MAX	(Note 1)	(Note 2)	V_L (VOLTS)
1N5283	0.22	0.198	0.242	25.0	2.75	1.00
1N5284	0.24	0.216	0.264	19.0	2.35	1.00
1N5285	0.27	0.243	0.297	14.0	1.95	1.00
1N5286	0.30	0.270	0.330	9.0	1.60	1.00
1N5287	0.33	0.297	0.363	6.6	1.35	1.00
1N5288	0.39	0.351	0.429	4.10	1.00	1.05
1N5289	0.43	0.387	0.473	3.30	0.870	1.05
1N5290	0.47	0.423	0.517	2.70	0.750	1.05
1N5291	0.56	0.504	0.616	1.90	0.560	1.10
1N5292	0.62	0.558	0.682	1.55	0.470	1.13
1N5293	0.68	0.612	0.748	1.35	0.400	1.15
1N5294	0.75	0.675	0.825	1.15	0.335	1.20
1N5295	0.82	0.738	0.902	1.00	0.290	1.25
1N5296	0.91	0.819	1.001	0.880	0.240	1.29
1N5297	1.00	0.900	1.100	0.800	0.205	1.35
1N5298	1.10	0.990	1.210	0.700	0.180	1.40
1N5299	1.20	1.08	1.32	0.640	0.155	1.45
1N5300	1.30	1.17	1.43	0.580	0.135	1.50
1N5301	1.40	1.26	1.54	0.540	0.115	1.55
1N5302	1.50	1.35	1.65	0.510	0.105	1.60
1N5303	1.60	1.44	1.76	0.475	0.092	1.65
1N5304	1.80	1.62	1.98	0.420	0.074	1.75
1N5305	2.00	1.80	2.20	0.395	0.061	1.85
1N5306	2.20	1.98	2.42	0.370	0.052	1.95
1N5307	2.40	2.16	2.64	0.345	0.044	2.00
1N5308	2.70	2.43	2.97	0.320	0.035	2.15
1N5309	3.00	2.70	3.30	0.300	0.029	2.25
1N5310	3.30	2.97	3.63	0.280	0.024	2.35
1N5311	3.60	3.24	3.96	0.265	0.020	2.50
1N5312	3.90	3.51	4.29	0.255	0.017	2.60
1N5313	4.30	3.87	4.73	0.245	0.014	2.75
1N5314	4.70	4.23	5.17	0.235	0.012	2.90

NOTE 1 Z_S is derived by superimposing A 90Hz RMS signal equal to 10% of V_S on V_S

NOTE 2 Z_K is derived by superimposing A 90Hz RMS signal equal to 10% of V_K on V_K

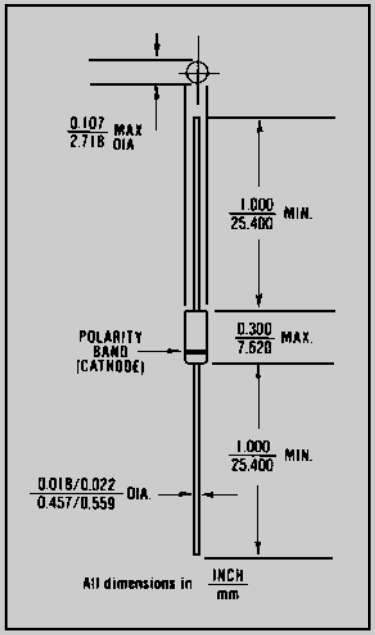

FIGURE 1

DESIGN DATA

CASE: Hermetically sealed glass case. DO – 7 outline.

LEAD MATERIAL: Copper clad steel.

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ($R_{\Theta JEC}$): 250 °C/W maximum at L = .375 inch

THERMAL IMPEDANCE: ($Z_{\Theta JX}$): 25 °C/W maximum

POLARITY: Diode to be operated with the banded (Cathode) end negative.

WEIGHT: 0.2 grams.

MOUNTING POSITION: Any.

Microsemi

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1N5283 thru 1N5314
INCLUDING -1 VERSIONS

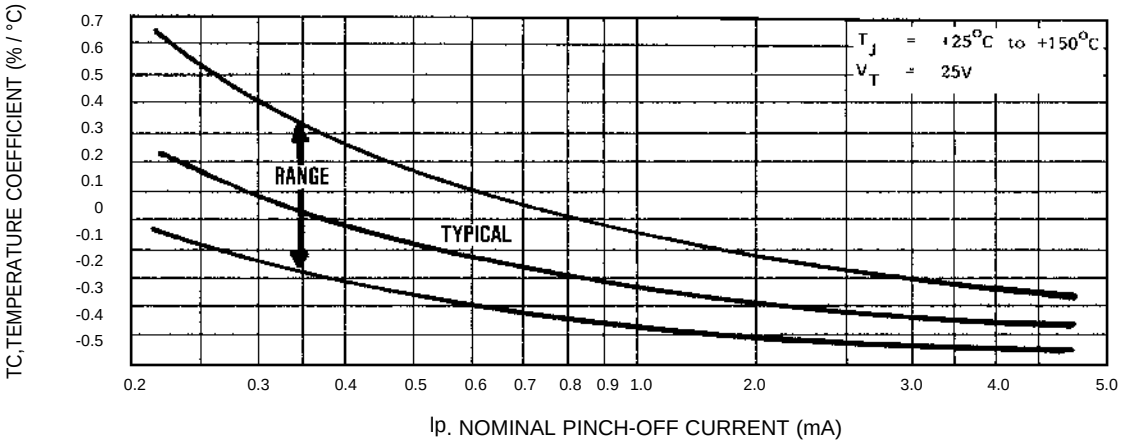

FIGURE 2 TEMPERATURE COEFFICIENT

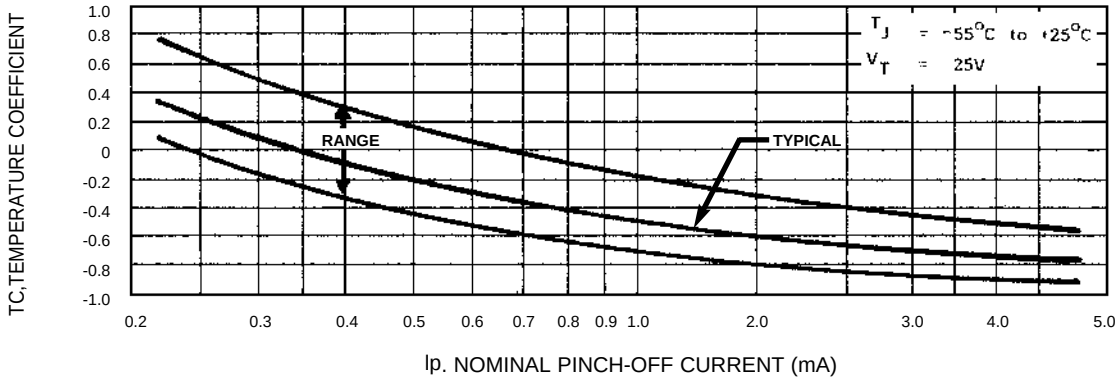

FIGURE 3 TEMPERATURE COEFFICIENT

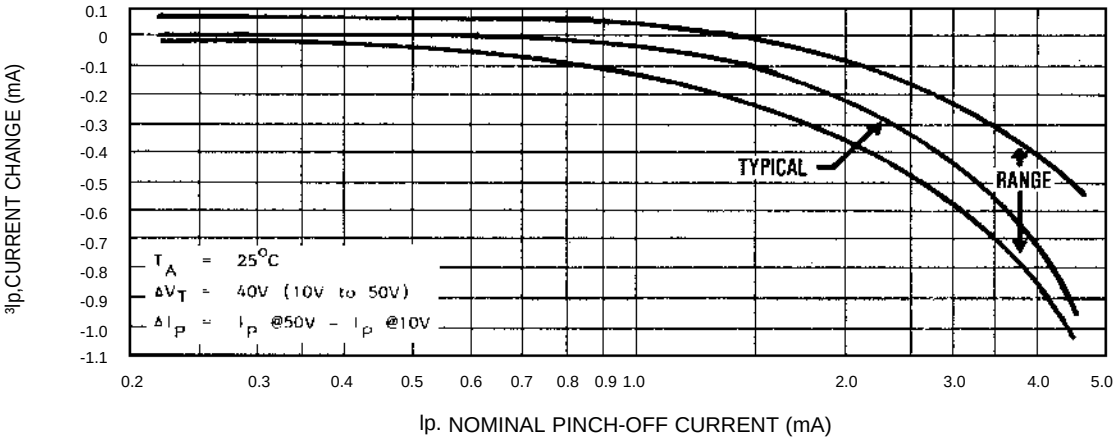

FIGURE 4 CURRENT REGULATION FACTOR