

- 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 @  $T_L = +50^\circ\text{C}$ ,  $L = 3/8"$   
Power Derating: 4 mW / °C above +50°C  
Peak Operating Voltage: 100 Volts

### ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified

TYPE NUMBER	REGULATOR CURRENT $I_p$ (mA) @ $V_S = 25V$			MINIMUM DYNAMIC IMPEDANCE @ $V_S = 25V$ $Z_S$ (MΩ) (Note 1)	MINIMUM KNEE IMPEDANCE @ $V_K = 6.0V$ $Z_K$ (MΩ) (Note 2)	MAXIMUM LIMITING VOLTAGE @ $I_L = 0.8Ip$ (min) $V_L$ (VOLTS)
	NOM	MIN	MAX			
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  $V_K$

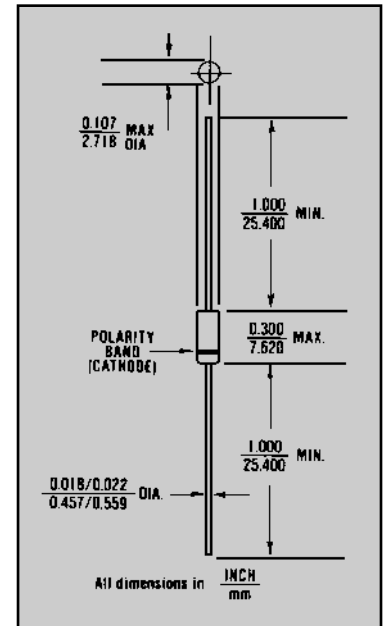


FIGURE 1

### DESIGN DATA

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

LEAD MATERIAL: Copper clad steel.

LEAD FINISH: Tin / Lead

THERMAL RESISTANCE: ( $R_{\theta JC}$ ): 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.



**COMPENSATED DEVICES INCORPORATED**

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# 1N5283 thru 1N5314 INCLUDING -1 VERSIONS

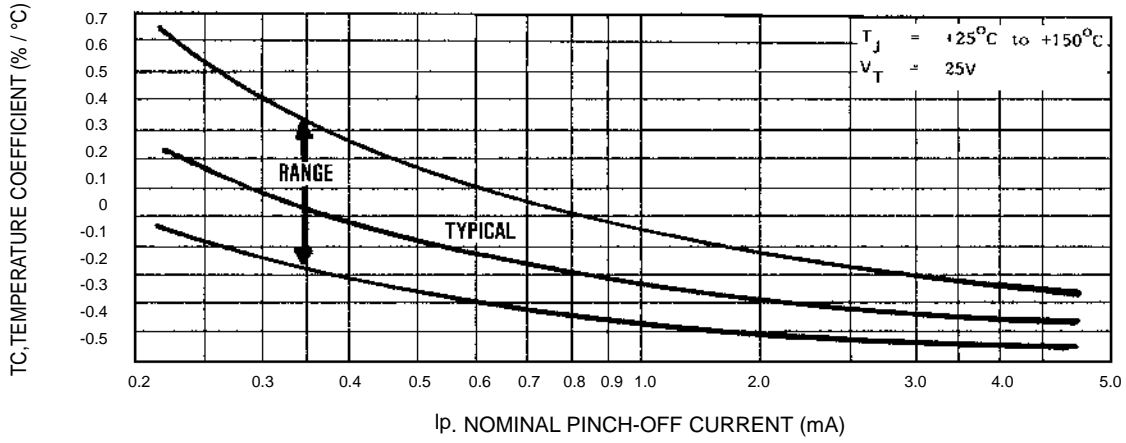


FIGURE 2 TEMPERATURE COEFFICIENT

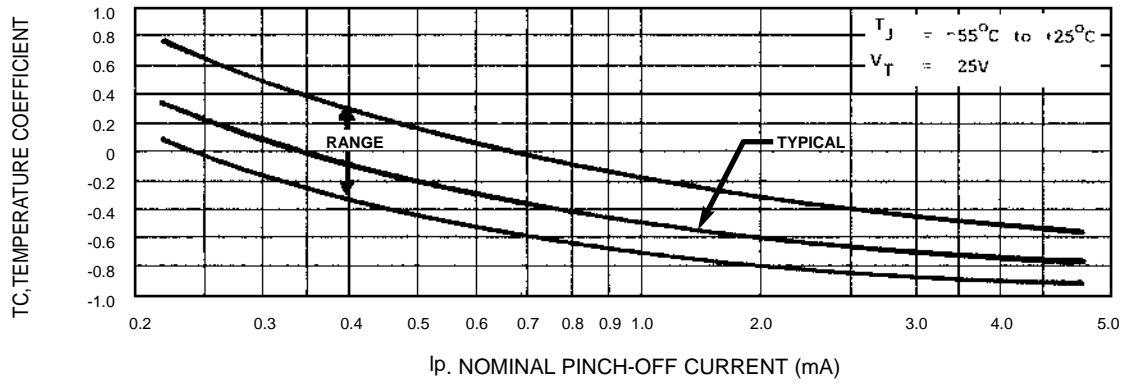


FIGURE 3 TEMPERATURE COEFFICIENT

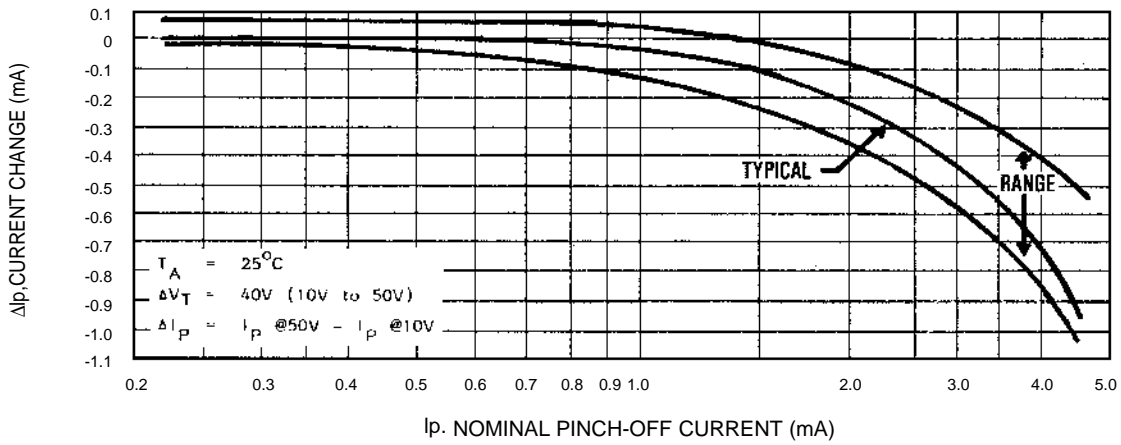


FIGURE 4 CURRENT REGULATION FACTOR