

- 1N5283 THRU 1N5314 AVAILABLE IN JANHC AND JANKC  
PER MIL-PRF-19500/463
- CURRENT REGULATOR CHIPS
- ALL JUNCTIONS COMPLETELY PROTECTED WITH SILICON DIOXIDE
- ELECTRICALLY EQUIVALENT TO 1N5283 THRU 1N5314
- CONSTANT CURRENT OVER WIDE VOLTAGE RANGE
- COMPATIBLE WITH ALL WIRE BONDING AND DIE ATTACH TECHNIQUES,  
WITH THE EXCEPTION OF SOLDER REFLOW

**CD5283**  
**thru**  
**CD5314**

## MAXIMUM RATINGS

Operating Temperature: -55°C to +175°C  
Storage Temperature: -55°C to +175°C  
Peak Operating Voltage: 100 VOLTS

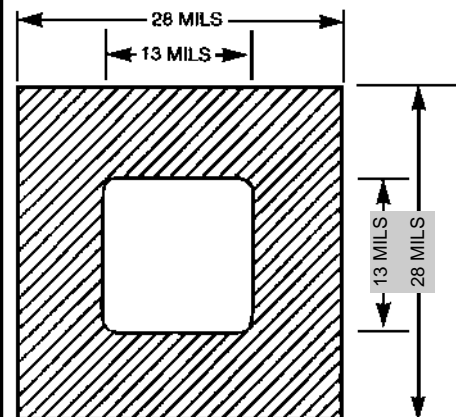
**ELECTRICAL CHARACTERISTICS** @ 25°C, unless otherwise specified

TYPE NUMBER	REGULATOR CURRENT I <sub>p</sub> (mA) @ V <sub>T</sub> = 25V (Note 3)			MINIMUM DYNAMIC IMPEDANCE @ V <sub>T</sub> = 25V Z <sub>T</sub> (MΩ) (Note 1)	MINIMUM KNEE IMPEDANCE @ V <sub>K</sub> = 6.0 V Z <sub>K</sub> (MΩ) (Note 2)	MAXIMUM LIMITING VOLTAGE @ I <sub>L</sub> = 0.8 I <sub>p</sub> (min) V <sub>L</sub> (VOLTS)
	NOM	MIN	MAX			
CD5283	0.22	0.198	0.242	25.0	2.75	1.00
CD5284	0.24	0.216	0.264	19.0	2.35	1.00
CD5285	0.27	0.243	0.297	14.0	1.95	1.00
CD5286	0.30	0.270	0.330	9.0	1.60	1.00
CD5287	0.33	0.297	0.363	6.6	1.35	1.00
CD5288	0.39	0.351	0.429	4.10	1.00	1.05
CD5289	0.43	0.387	0.473	3.30	0.870	1.05
CD5290	0.47	0.423	0.517	2.70	0.750	1.05
CD5291	0.56	0.504	0.616	1.90	0.560	1.10
CD5292	0.62	0.558	0.682	1.55	0.470	1.13
CD5293	0.68	0.612	0.748	1.35	0.400	1.15
CD5294	0.75	0.675	0.825	1.15	0.335	1.20
CD5295	0.82	0.738	0.902	1.00	0.290	1.25
CD5296	0.91	0.819	1.001	0.880	0.240	1.29
CD5297	1.00	0.900	1.100	0.800	0.205	1.35
CD5298	1.10	0.990	1.210	0.700	0.180	1.40
CD5299	1.20	1.08	1.32	0.640	0.155	1.45
CD5300	1.30	1.17	1.43	0.580	0.135	1.50
CD5301	1.40	1.26	1.54	0.540	0.115	1.55
CD5302	1.50	1.35	1.65	0.510	0.105	1.60
CD5303	1.60	1.44	1.76	0.475	0.092	1.65
CD5304	1.80	1.62	1.98	0.420	0.074	1.75
CD5305	2.00	1.80	2.20	0.395	0.061	1.85
CD5306	2.20	1.98	2.42	0.370	0.052	1.95
CD5307	2.40	2.16	2.64	0.345	0.044	2.00
CD5308	2.70	2.43	2.97	0.320	0.035	2.15
CD5309	3.00	2.70	3.30	0.300	0.029	2.25
CD5310	3.30	2.97	3.63	0.280	0.024	2.35
CD5311	3.60	3.24	3.96	0.265	0.020	2.50
CD5312	3.90	3.51	4.29	0.255	0.017	2.60
CD5313	4.30	3.87	4.73	0.245	0.014	2.75
CD5314	4.70	4.23	5.17	0.235	0.012	2.90

**NOTE 1** Z<sub>T</sub> is derived by superimposing A 90Hz RMS signal equal to 10% of V<sub>T</sub> on V<sub>T</sub>.

**NOTE 2** Z<sub>K</sub> is derived by superimposing A 90Hz RMS signal equal to 10% of V<sub>K</sub> on V<sub>K</sub>.

**NOTE 3** I<sub>p</sub> is read using a pulse measurement, 10 milliseconds maximum.



**BACKSIDE IS CATHODE**

**A = Anode**

## DESIGN DATA

### METALLIZATION:

Top: (Anode).....Al  
Back: (Cathode).....Au

**AL THICKNESS**.....25,000 Å Min

**GOLD THICKNESS**...4,000 Å Min

**CHIP THICKNESS**.....10 Mils

**TOLERANCES:** ALL Dimensions  
± 2 mils, Except Anode Pad  
Where Tolerance is ± 0.1 mils.



**COMPENSATED DEVICES INCORPORATED**

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# CD5283 thru CD5314

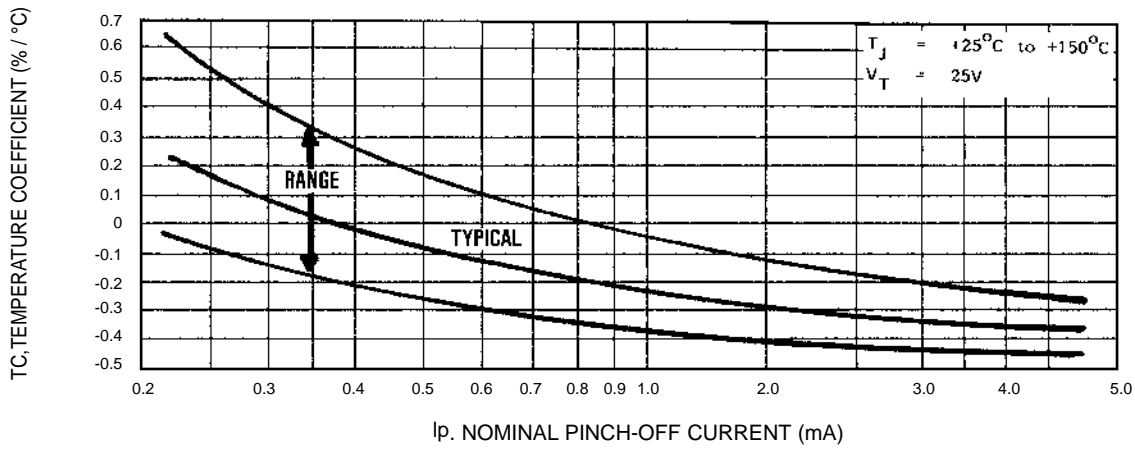


FIGURE 2 TEMPERATURE COEFFICIENT

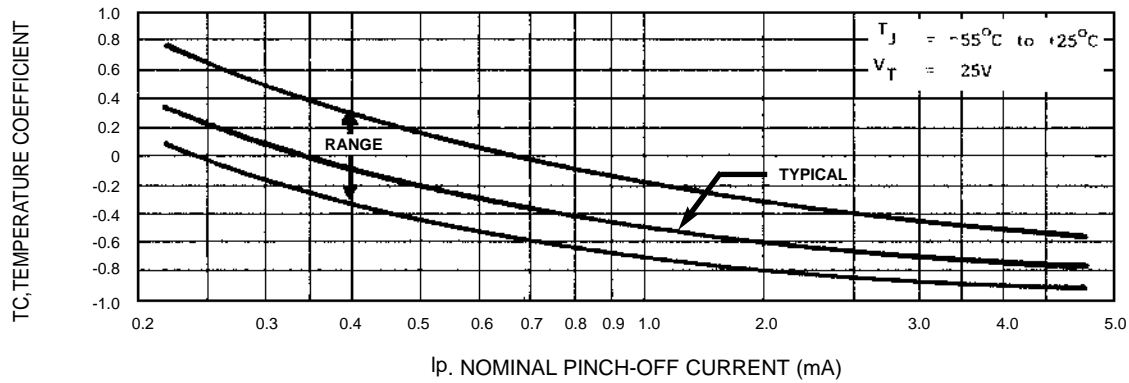


FIGURE 3 TEMPERATURE COEFFICIENT

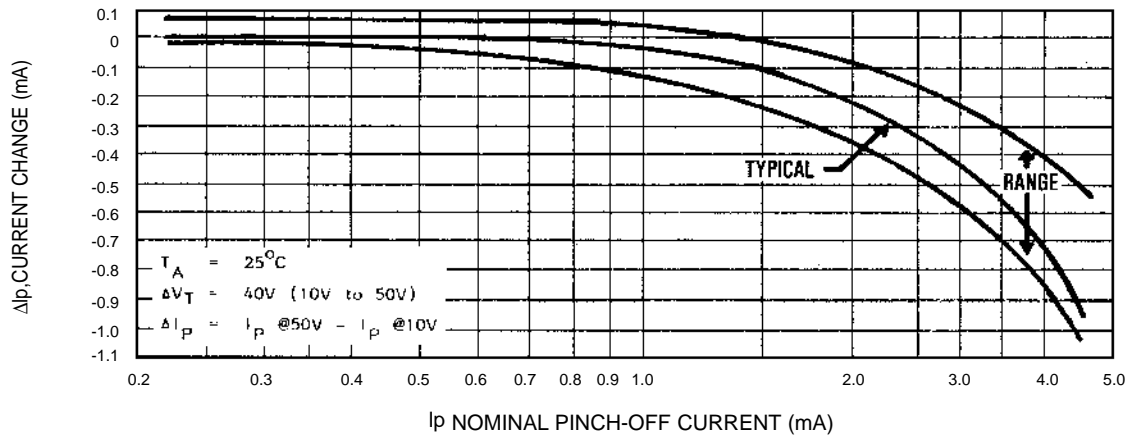


FIGURE 4 TEMPERATURE COEFFICIENT