

- 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

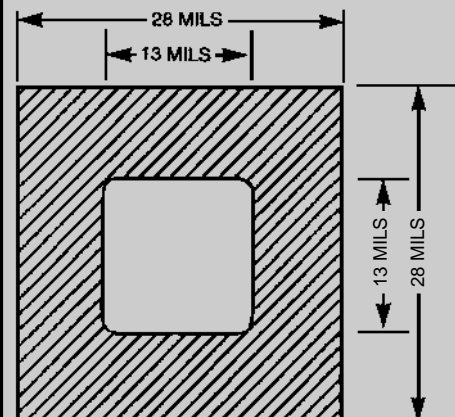
ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified

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> (M) (Note 1)	MINIMUM KNEE IMPEDANCE @V <sub>K</sub> = 6.0 V Z <sub>K</sub> (M) (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

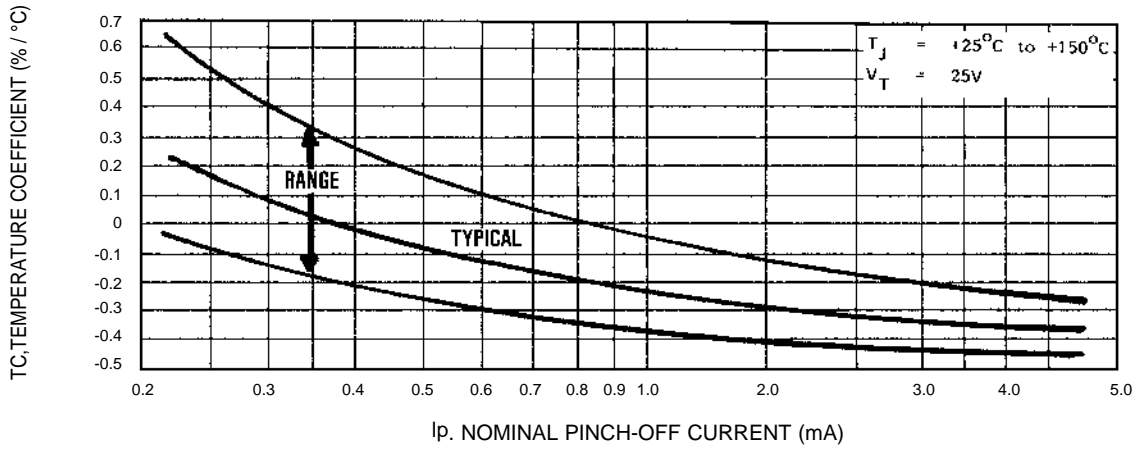
± 2 mils, Except Anode Pad  
Where Tolerance is ± 0.1 mils.



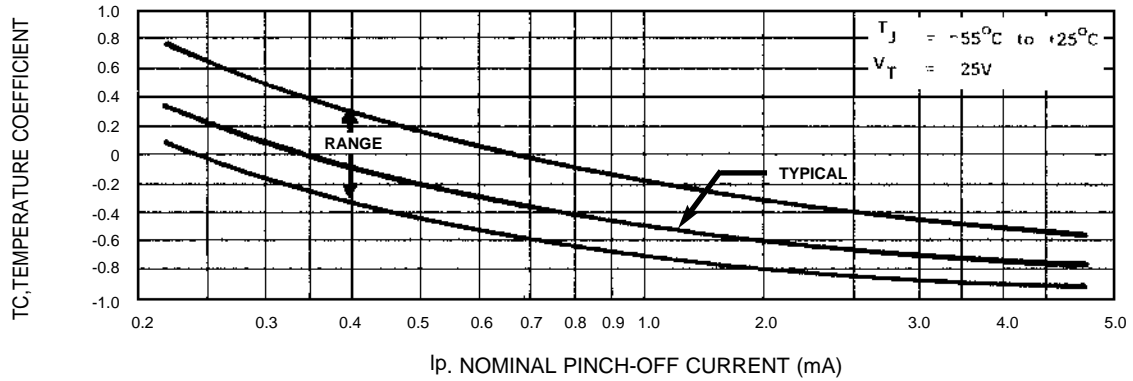
6 LAKE STREET, LAWRENCE, MASSACHUSETTS 01841  
PHONE (978) 620-2600  
WEBSITE: <http://www.microsemi.com>

FAX (978) 689-0803

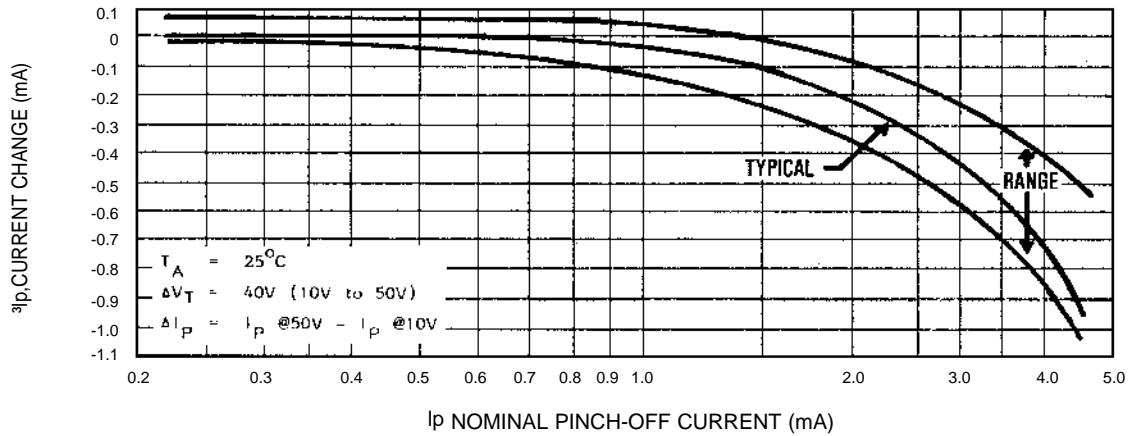
# CD5283 thru CD5314



**FIGURE 2 TEMPERATURE COEFFICIENT**



**FIGURE 3 TEMPERATURE COEFFICIENT**



**FIGURE 4 TEMPERATURE COEFFICIENT**