

**CURRENT REGULATOR DIODES – LEADLESS PACKAGE FOR SURFACE MOUNT**  
**– METALLURGICALLY BONDED**

Qualified per MIL-PRF-19500/463

DEVICES

**1N5283UR-1 Thru 1N5314UR-1**  
**CDLL5283 Thru CDLL5314**

QUALIFIED LEVELS

**JAN**  
**JANTX**  
**JANTXV**  
**JANS**

**MAXIMUM RATING AT 25°C**

Operating Temperature: -65°C to +175°C  
 Storage Temperature: -65°C to +175°C  
 DC Power Dissipation: 500mW @ +75°C @ T<sub>EC</sub> = +125°C  
 Power Derating: 10mW / °C above T<sub>EC</sub> = +125°C  
 Peak Operating Voltage: 100 Volts

**ELECTRICAL CHARACTERISTICS (TA = 25°C, unless otherwise specified)**

TYPE NUMBER	REGULATOR CURRENT I <sub>p</sub> (mA) @ V <sub>S</sub> = 25V			MINIMUM DYNAMIC IMPEDANCE @ V <sub>S</sub> = 25 Z <sub>S</sub> (M) (Note 1)	MINIMUM KNEE IMPEDANCE @ V <sub>K</sub> = 6.0V 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			
CDLL5283	0.22	0.198	0.242	25.0	2.75	1.00
CDLL5284	0.24	0.216	0.264	19.0	2.35	1.00
CDLL5285	0.27	0.243	0.297	14.0	1.95	1.00
CDLL5286	0.30	0.270	0.330	9.0	1.60	1.00
CDLL5287	0.33	0.297	0.363	6.6	1.35	1.00
CDLL5288	0.39	0.351	0.429	4.10	1.00	1.05
CDLL5289	0.43	0.387	0.473	3.30	0.870	1.05
CDLL5290	0.47	0.423	0.517	2.70	0.750	1.05
CDLL5291	0.56	0.504	0.616	1.90	0.560	1.10
CDLL5292	0.62	0.558	0.682	1.55	0.470	1.13
CDLL5293	0.68	0.612	0.748	1.35	0.400	1.15
CDLL5294	0.75	0.675	0.825	1.15	0.335	1.20
CDLL5295	0.82	0.738	0.902	1.00	0.290	1.25
CDLL5296	0.91	0.819	1.001	0.880	0.240	1.29
CDLL5297	1.00	0.900	1.100	0.800	0.205	1.35
CDLL5298	1.10	0.990	1.210	0.700	0.180	1.40
CDLL5299	1.20	1.08	1.32	0.640	0.155	1.45
CDLL5300	1.30	1.17	1.43	0.580	0.135	1.50
CDLL5301	1.40	1.26	1.54	0.540	0.115	1.55
CDLL5302	1.50	1.35	1.65	0.510	0.105	1.60
CDLL5303	1.60	1.44	1.76	0.475	0.092	1.65
CDLL5304	1.80	1.62	1.98	0.420	0.074	1.75
CDLL5305	2.00	1.80	2.20	0.395	0.061	1.85
CDLL5306	2.20	1.98	2.42	0.370	0.052	1.95
CDLL5307	2.40	2.16	2.64	0.345	0.044	2.00
CDLL5308	2.70	2.43	2.97	0.320	0.035	2.15
CDLL5309	3.00	2.70	3.30	0.300	0.029	2.25
CDLL5310	3.30	2.97	3.63	0.280	0.024	2.35
CDLL5311	3.60	3.24	3.96	0.265	0.020	2.50
CDLL5312	3.90	3.51	4.29	0.255	0.017	2.60
CDLL5313	4.30	3.87	4.73	0.245	0.014	2.75
CDLL5314	4.70	4.23	5.17	0.235	0.012	2.90



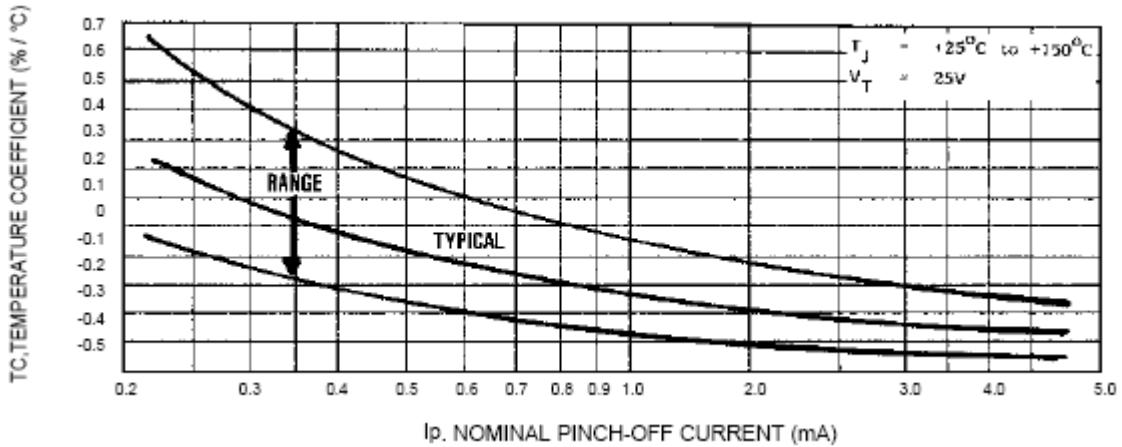
DO-213AB

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

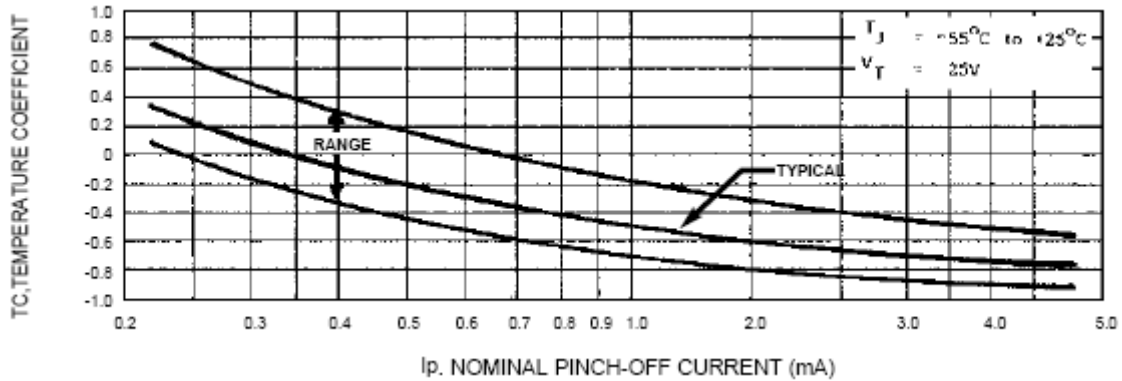
**NOTE 2:** Z<sub>K</sub> is derived by superimposing A 90Hz RMS signal equal to 10% of V<sub>K</sub> on V<sub>K</sub>

## GRAPHS

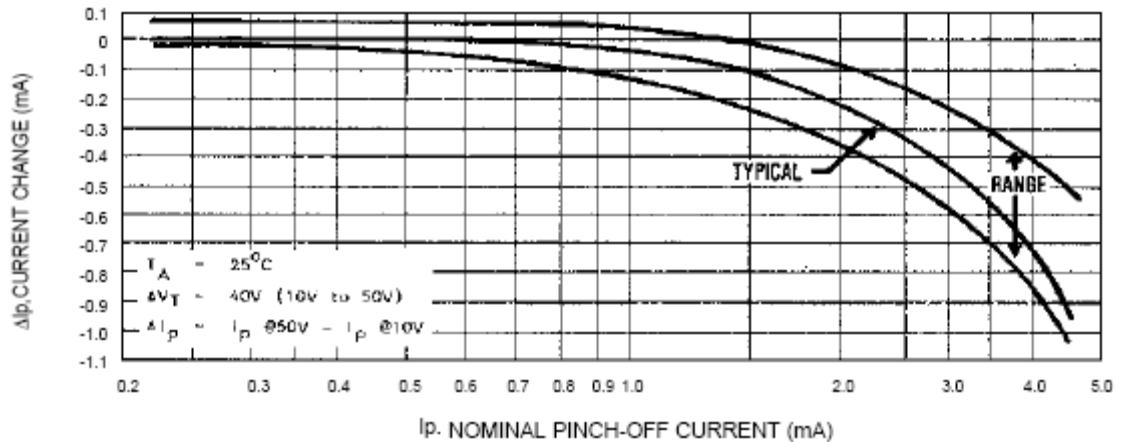
**FIGURE 2: TEMPERATURE COEFFICIENT**

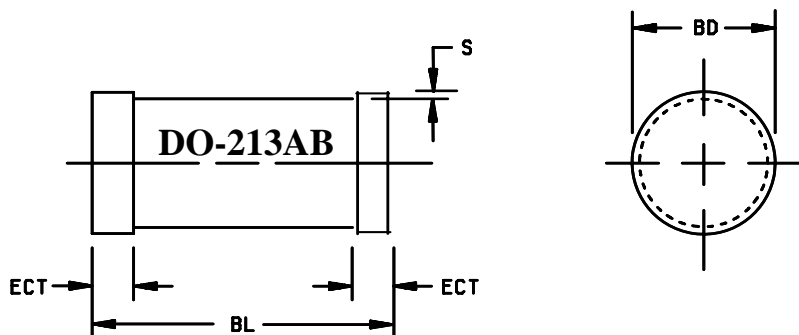


**FIGURE 3: TEMPERATURE COEFFICIENT**



**FIGURE 4: CURRENT REGULATION FACTOR**



**PACKAGE DIMENSIONS**

**NOTE:**

1. Dimensions are in inches.
2. Millimeters are given for general information only.
3. In accordance with ASME Y14.5M, diameters are equivalent to  $\Phi x$  symbology.

Ltr	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
BD	.094	.105	2.39	2.67
BL	.189	.205	4.80	5.21
ECT	.016	.022	0.41	0.55
S	.001 min		0.03 min	

**FIGURE 1.** Physical dimensions (DO-213AB).

**DESIGN DATA**

**CASE:** DO-213AB, Hermetically sealed glass case. (MELF, LL41).

**LEAD FINISH:** Tin / Lead

**THERMAL RESISTANCE:** ( $R_{\theta EC}$ ): 50°C/W maximum at L = 0 inch

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

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

**MOUNTING SURFACE SELECTION:** The Axial Coefficient of Expansion (COE) of this device is approximately +6PPM/°C. The COE of the Mounting Surface System should be selected to provide A suitable match with this device.