

• 1N5283UR-1 THRU 1N5314UR-1 AVAILABLE IN JAN, JANTX, JANTXV AND JANS

PER MIL-PRF-19500/463

- CURRENT REGULATOR DIODES
- LEADLESS PACKAGE FOR SURFACE MOUNT
- METALLURGICALLY BONDED

1N5283UR-1 thru 1N5314UR-1  
and  
CDLL5283 thru CDLL5314

### MAXIMUM RATINGS

Operating Temperature: -65°C to +175°C  
Storage Temperature: -65°C to +175°C  
DC Power Dissipation: 500mW @ +75°C @  $T_{EC} = +125^{\circ}C$   
Power Derating: 10 mW / °C above  $T_{EC} = +125^{\circ}C$   
Peak Operating Voltage: 100 Volts

ELECTRICAL CHARACTERISTICS @ 25°C, unless otherwise specified

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

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

**LEAD FINISH:** Tin / Lead

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



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# CDLL5283 thru CDLL5314



**FIGURE 2 TEMPERATURE COEFFICIENT**



**FIGURE 3 TEMPERATURE COEFFICIENT**



**FIGURE 4 CURRENT REGULATION FACTOR**