



# Current Limiting Diode

## 1N5283 Thru 1N5314 JEDEC DO-35 Case

### FEATURES

- LOW COST
- HIGH RELIABILITY
- SMALLER CASE SIZE THAN COMPETITION
- SPECIAL SELECTIONS AVAILABLE
- SUPERIOR LOT-TO-LOT CONSISTENCY
- SURFACE MOUNT DEVICES AVAILABLE

### DESCRIPTION

The CENTRAL SEMICONDUCTOR 1N5283 series types are silicon field effect current regulator diodes designed for applications requiring a constant current over a wide voltage range. These devices are manufactured in the cost-effective DO-35 double plug case which provides many benefits to the user, including space savings and improved thermal characteristics. Special selections of  $I_p$  (regulator current) are available for critical applications. Lower cost units are available in the CCL0035 series.

### MAXIMUM RATINGS ( $T_L = 75^\circ\text{C}$ )

Peak Operating Voltage  
 Power Dissipation  
 Operating and Storage Junction Temperature

### SYMBOL

POV 100  
 $P_D$  600  
 $T_J, T_{STG}$  -65 to +200

### UNIT

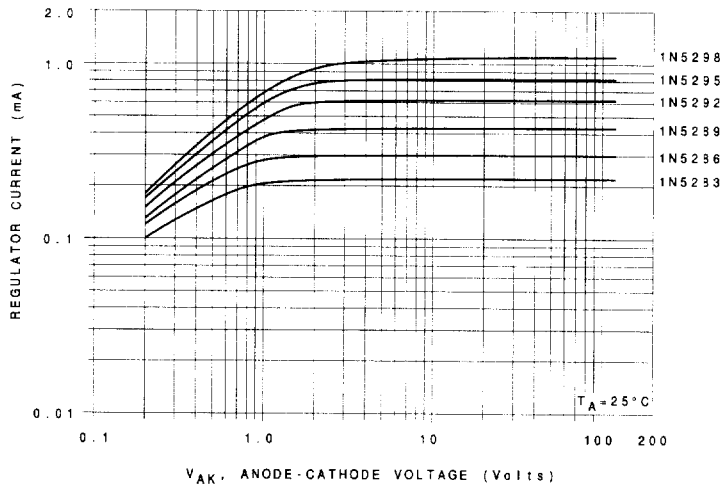
V  
 mW  
 $^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ )

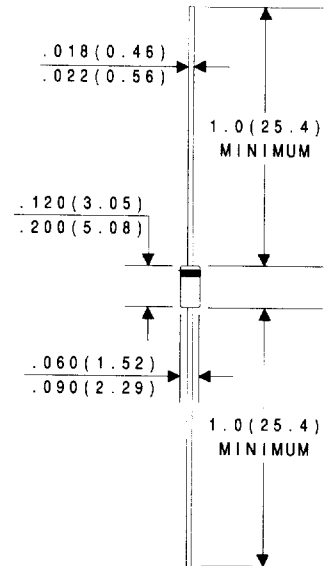
TYPE NO.	REGULATOR CURRENT <sup>(1)</sup>			DYNAMIC IMPEDANCE		KNEE IMPEDANCE		LIMITING VOLTAGE	
	$I_p @ V_T = 25V$			$Z_T @ V_T = 25V$		$Z_K @ V_K = 6.0V$		$V_L @ I_L = 0.8 I_p \text{ MIN}$	
	MIN	NOM	MAX	MIN	MAX	MIN	MAX	MIN	MAX
1N5283	0.198	0.22	0.242	25.0		2.75		1.00	
1N5284	0.216	0.24	0.264	19.0		2.35		1.00	
1N5285	0.243	0.27	0.297	14.0		1.95		1.00	
1N5286	0.270	0.30	0.330	9.0		1.60		1.00	
1N5287	0.297	0.33	0.363	6.6		1.35		1.00	
1N5288	0.351	0.39	0.429	4.10		1.00		1.05	
1N5289	0.387	0.43	0.473	3.30		0.870		1.05	
1N5290	0.423	0.47	0.517	2.70		0.750		1.05	
1N5291	0.504	0.56	0.616	1.90		0.560		1.10	
1N5292	0.558	0.62	0.682	1.55		0.470		1.13	
1N5293	0.612	0.68	0.748	1.35		0.400		1.15	
1N5294	0.675	0.75	0.825	1.15		0.335		1.20	
1N5295	0.738	0.82	0.902	1.00		0.290		1.25	
1N5296	0.819	0.91	1.001	0.880		0.240		1.29	
1N5297	0.900	1.00	1.10	0.800		0.205		1.35	
1N5298	0.990	1.10	1.21	0.700		0.180		1.40	
1N5299	1.08	1.20	1.32	0.640		0.155		1.45	
1N5300	1.17	1.30	1.43	0.580		0.135		1.50	
1N5301	1.26	1.40	1.54	0.540		0.115		1.55	
1N5302	1.35	1.50	1.65	0.510		0.105		1.60	
1N5303	1.44	1.60	1.76	0.475		0.092		1.65	
1N5304	1.62	1.80	1.98	0.420		0.074		1.75	
1N5305	1.80	2.00	2.20	0.395		0.061		1.85	
1N5306	1.98	2.20	2.42	0.370		0.052		1.95	
1N5307	2.16	2.40	2.64	0.345		0.044		2.00	
1N5308	2.43	2.70	2.97	0.320		0.035		2.15	
1N5309	2.70	3.00	3.30	0.300		0.029		2.25	
1N5310	2.97	3.30	3.63	0.280		0.024		2.35	
1N5311	3.24	3.60	3.96	0.265		0.020		2.50	
1N5312	3.51	3.90	4.29	0.255		0.017		2.60	
1N5313	3.87	4.30	4.73	0.245		0.014		2.75	
1N5314	4.23	4.70	5.17	0.235		0.012		2.90	

(1) PULSED METHOD. PULSE WIDTH (ms) =  $\frac{27.5}{I_p \text{ NOM (mA)}}$

## Typical Regulator Current vs. Voltage

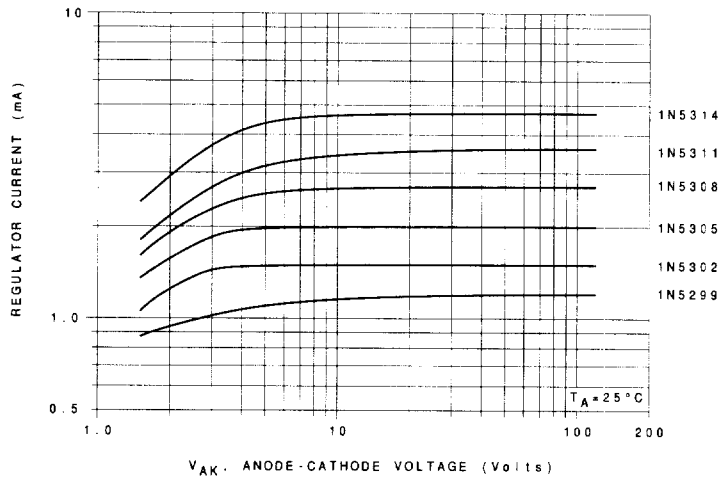


HERMETICALLY SEALED GLASS CASE  
WITH TINNED COPPER LEADS



Dimensions in Inches (mm)

## Typical Regulator Current vs. Voltage



## Typical Regulator Current vs. Temperature

