

**1N5518C THRU 1N5546C**

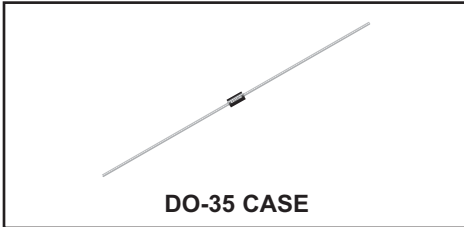
**SILICON ZENER DIODES  
400mW, 3.3 THRU 33 VOLT  
±2% TOLERANCE**



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**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 1N5518C series silicon Zener diode is designed for low leakage, low current, and low noise applications.



**DO-35 CASE**

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Power Dissipation  
Operating and Storage Junction Temperature

**SYMBOL**

$P_D$   
 $T_J, T_{stg}$

**UNITS**

400  
-65 to +200  
mW  
°C

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$ )  $V_F=1.1\text{V MAX @ } I_F=200\text{mA}$  (for all types)

Type	Zener Voltage $V_Z @ I_{ZT}$			Test Current	Maximum Zener Impedance (Note 1)	Maximum Reverse Current		Maximum Voltage Regulation (Note 2)		Maximum Regulator Current	Maximum Noise Density (Note 3)	Maximum Temperature Coefficient @ $I_{ZT}$
	MIN	NOM	MAX			$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$I_R @ V_R$	$\Delta V_Z @ I_{ZL}$			
	V	V	V	mA	$\Omega$	$\mu\text{A}$	V	V	mA	mA	$N_D @ 250\mu\text{A}$ $\mu\text{V}/\sqrt{\text{Hz}}$	% / °C
1N5518C	3.234	3.3	3.366	20	26	5.0	1.0	0.9	2.0	115	0.5	-0.070
1N5519C	3.528	3.6	3.672	20	24	3.0	1.0	0.9	2.0	105	0.5	-0.065
1N5520C	3.822	3.9	3.978	20	22	1.0	1.0	0.85	2.0	98	0.5	-0.060
1N5521C	4.214	4.3	4.386	20	18	3.0	1.5	0.75	2.0	88	0.5	-0.055 +0.020
1N5522C	4.606	4.7	4.794	10	22	2.0	2.0	0.60	1.0	81	0.5	-0.043 +0.025
1N5523C	4.998	5.1	5.202	5.0	26	2.0	2.5	0.65	0.25	75	0.5	-0.030 +0.030
1N5524C	5.488	5.6	5.712	3.0	30	2.0	3.5	0.30	0.25	68	1.0	-0.030 +0.045
1N5525C	6.076	6.2	6.324	1.0	30	1.0	5.0	0.20	0.01	61	1.0	+0.050
1N5526C	6.664	6.8	6.936	1.0	30	1.0	6.2	0.10	0.01	56	1.0	+0.052
1N5527C	7.350	7.5	7.650	1.0	35	0.5	6.8	0.05	0.01	51	2.0	+0.058
1N5528C	8.036	8.2	8.364	1.0	40	0.5	7.5	0.05	0.01	46	4.0	+0.062
1N5529C	8.918	9.1	9.282	1.0	45	0.1	8.2	0.05	0.01	42	4.0	+0.068
1N5530C	9.800	10	10.20	1.0	60	0.05	9.1	0.10	0.01	38	4.0	+0.075
1N5531C	10.78	11	11.22	1.0	80	0.05	9.9	0.20	0.01	35	5.0	+0.075
1N5532C	11.76	12	12.24	1.0	90	0.05	10.8	0.20	0.01	32	10	+0.080
1N5533C	12.74	13	13.26	1.0	90	0.01	11.7	0.20	0.01	29	15	+0.080
1N5534C	13.72	14	14.28	1.0	100	0.01	12.6	0.20	0.01	27	20	+0.082
1N5535C	14.70	15	15.30	1.0	100	0.01	13.5	0.20	0.01	25	20	+0.082
1N5536C	15.68	16	16.32	1.0	100	0.01	14.4	0.20	0.01	24	20	+0.083
1N5537C	16.66	17	17.34	1.0	100	0.01	15.3	0.20	0.01	22	20	+0.085
1N5538C	17.64	18	18.36	1.0	100	0.01	16.2	0.20	0.01	21	20	+0.085

- Notes: 1. Measured with 10%, 60Hz AC superimposed on  $I_{ZT}$ .  
2. Difference between  $V_Z @ I_{ZT}$  and  $I_{ZL}$ .  
3. Measured from 1.0kHz to 3.0kHz.

R0 (3-August 2017)

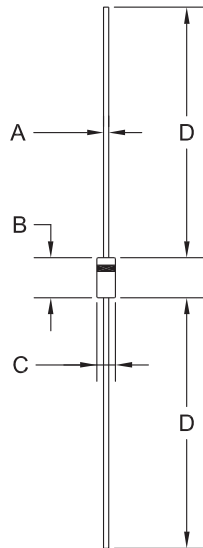
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ELECTRICAL CHARACTERISTICS - Continued: ( $T_A=25^\circ\text{C}$ )  $V_F=1.1\text{V MAX @ } I_F=200\text{mA}$  (for all types)

Type	Zener Voltage $V_Z @ I_{ZT}$			Test Current	Maximum Zener Impedance (Note 1)	Maximum Reverse Current		Maximum Voltage Regulation (Note 2)		Maximum Regulator Current	Maximum Noise Density (Note 3)	Maximum Temperature Coefficient @ $I_{ZT}$
	MIN	NOM	MAX			$I_R$	@ $V_R$	$\Delta V_Z @ I_{ZL}$	$I_{ZM}$			
	V	V	V	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$\mu\text{A}$	V	V	mA	mA	$N_D @ 250\mu\text{A}$	$\theta_{VZ}$
				mA	$\Omega$						$\mu\text{V}/\sqrt{\text{Hz}}$	% / $^\circ\text{C}$
1N5539C	18.62	19	19.38	1.0	100	0.01	17.1	0.20	0.01	20	20	+0.086
1N5540C	19.60	20	20.40	1.0	100	0.01	18.0	0.20	0.01	19	20	+0.086
1N5541C	21.56	22	22.44	1.0	100	0.01	19.8	0.25	0.01	17	20	+0.087
1N5542C	23.52	24	24.48	1.0	100	0.01	21.6	0.30	0.01	16	20	+0.088
1N5543C	24.50	25	25.50	1.0	100	0.01	22.4	0.35	0.01	15	20	+0.090
1N5544C	27.44	28	28.56	1.0	100	0.01	25.2	0.40	0.01	14	20	+0.091
1N5545C	29.40	30	30.60	1.0	100	0.01	27.0	0.45	0.01	13	20	+0.091
1N5546C	32.34	33	33.66	1.0	100	0.01	29.7	0.50	0.01	12	20	+0.092

DO-35 CASE - MECHANICAL OUTLINE



R1

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.018	0.022	0.46	0.56
B	0.120	0.200	3.05	5.08
C	0.060	0.090	1.52	2.29
D	1.000	-	25.40	-

DO-35 (REV: R1)

MARKING: FULL PART NUMBER

R0 (3-August 2017)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

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