

CS18BZ  
CS18DZ  
CS18MZ  
CS18NZ

**SILICON CONTROLLED RECTIFIERS  
1.0 AMP, 200 THRU 800 VOLT**



**TO-18 CASE**



[www.centralemi.com](http://www.centralemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CS18BZ series types are hermetically sealed silicon controlled rectifiers manufactured in a TO-18 case, designed for control systems and sensing circuit applications.

**MARKING: FULL PART NUMBER**

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

	SYMBOL	CS18BZ	CS18DZ	CS18MZ	CS18NZ	UNITS
Peak Repetitive Off-State Voltage	$V_{DRM}, V_{RRM}$	200	400	600	800	V
RMS On-State Current ( $T_C=90^\circ\text{C}$ )	$I_T(\text{RMS})$			1.0		A
Nonrept. On-State Current	$I_{TSM}$			10		A
Fusing Current ( $t=10\text{ms}$ )	$I^2t$			0.24		$\text{A}^2\text{s}$
Peak Gate Current ( $t=10\mu\text{s}$ )	$I_{GM}$			1.0		A
Peak Gate Dissipation ( $t=10\mu\text{s}$ )	$P_{GM}$			2.0		W
Gate Dissipation	$P_{G(AV)}$			0.1		W
Operating Junction Temperature	$T_J$		-40 to +125			$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-40 to +150			$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$			32		$^\circ\text{C/W}$
Thermal Resistance	$\theta_{JA}$			200		$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

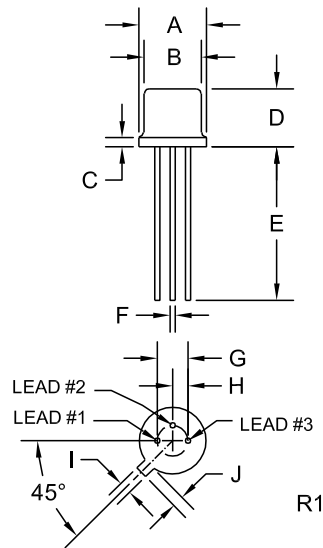
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, R_{GK}=1.0\text{K}\Omega$			1.0	$\mu\text{A}$
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, R_{GK}=1.0\text{K}\Omega, T_C=125^\circ\text{C}$			0.1	$\text{mA}$
$V_{TM}$	$I_T=2.0\text{A}$		1.6	2.15	V
$I_{GT}$	$V_D=12\text{V}, R_L=10\Omega$			20	$\mu\text{A}$
$V_{GT}$	$V_D=12\text{V}, R_L=10\Omega$		0.65	0.8	V
$I_H$	$R_{GK}=1.0\text{K}\Omega$		0.5	5.0	$\text{mA}$
$dv/dt$	$V_D=0.67\text{V} \times V_{DRM}, R_{GK}=1.0\text{K}\Omega, T_C=125^\circ\text{C}$	25			$\text{V}/\mu\text{s}$

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**TO-18 CASE - MECHANICAL OUTLINE**



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.209	0.230	5.31	5.84
B (DIA)	0.178	0.195	4.52	4.95
C	-	0.030	-	0.76
D	0.170	0.210	4.32	5.33
E	0.500	-	12.70	-
F (DIA)	0.016	0.019	0.41	0.48
G (DIA)	0.100		2.54	
H	0.050		1.27	
I	0.036	0.046	0.91	1.17
J	0.028	0.048	0.71	1.22

TO-18 (REV: R1)

**LEAD CODE:**

- 1) Cathode
- 2) Gate
- 3) Anode

**MARKING:**

**FULL PART NUMBER**

R0 (13-February 2013)

## 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

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