

CS18B  
CS18D  
CS18M  
CS18N

**SILICON CONTROLLED RECTIFIER**  
**1 AMP, 200 THRU 800 VOLTS**



**TO-18 CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CS18B 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	CS18B	CS18D	CS18M	CS18N	UNITS
Peak Repetitive Off-State Voltage	$V_{\text{DRM}}, V_{\text{RRM}}$	200	400	600	800	V
RMS On-State Current ( $T_C=90^\circ\text{C}$ )	$I_{\text{T(RMS)}}$			1.0		A
Nonrept. On-State Current	$I_{\text{TSM}}$			10		A
Fusing Current ( $t=10\text{ms}$ )	$I^2t$			0.24		$\text{A}^2\text{s}$
Peak Gate Current ( $t=10\mu\text{s}$ )	$I_{\text{GM}}$			1.0		A
Peak Gate Dissipation ( $t=10\mu\text{s}$ )	$P_{\text{GM}}$			2.0		W
Gate Dissipation	$P_{\text{G(AV)}}$			0.1		W
Operating Junction Temperature	$T_{\text{J}}$		-40 to +125			$^\circ\text{C}$
Storage Temperature	$T_{\text{stg}}$		-40 to +150			$^\circ\text{C}$
Thermal Resistance	$\theta_{\text{JC}}$		32			$^\circ\text{C/W}$
Thermal Resistance	$\theta_{\text{JA}}$		200			$^\circ\text{C/W}$

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

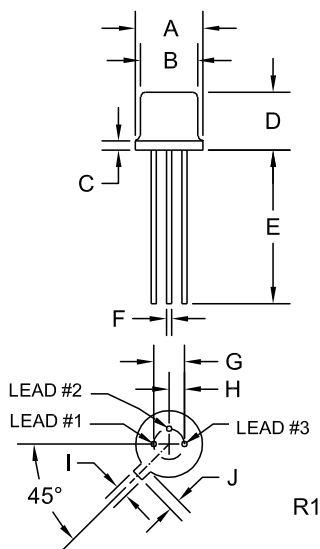
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1.0\text{K}\Omega$			1.0	$\mu\text{A}$
$I_{\text{DRM}}, I_{\text{RRM}}$	Rated $V_{\text{DRM}}, V_{\text{RRM}}, R_{\text{GK}}=1.0\text{K}\Omega, T_C=125^\circ\text{C}$			0.1	mA
$V_{\text{TM}}$	$I_{\text{T}}=2.0\text{A}$		1.6	2.15	V
$I_{\text{GT}}$	$V_{\text{D}}=12\text{V}, R_{\text{L}}=10\Omega$		20	200	$\mu\text{A}$
$V_{\text{GT}}$	$V_{\text{D}}=12\text{V}, R_{\text{L}}=10\Omega$		0.65	0.8	V
$I_{\text{H}}$	$R_{\text{GK}}=1.0\text{K}\Omega$		0.5	5.0	mA
dv/dt	$V_{\text{D}}=0.67\text{V} \times V_{\text{DRM}}, R_{\text{GK}}=1.0\text{K}\Omega, T_C=125^\circ\text{C}$	25			$\text{V}/\mu\text{s}$

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# TO-18 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	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

R2 (18-January 2010)

## 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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