

CS18B  
CS18D  
CS18M  
CS18N

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



**TO-18 CASE**

**Central**<sup>TM</sup>  
**Semiconductor Corp.**

**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 CODE: 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	$V_{DRM}, V_{RRM}$	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	$P_G (\text{AV})$			0.1		W
Storage Temperature	$T_{stg}$		-40 to +150			$^\circ\text{C}$
Junction Temperature	$T_J$		-40 to +125			$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$			32		$^\circ\text{C}/\text{W}$
Thermal Resistance	$\theta_{JA}$			200		$^\circ\text{C}/\text{W}$

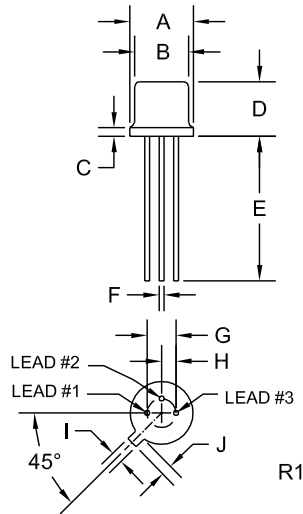
**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

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	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	200	$\mu\text{A}$
$V_{GT}$	$V_D=12\text{V}, R_L=10\Omega$		0.65	0.8	V
$I_H$	$R_{GK}=1.0\text{K}\Omega$		0.5	5.0	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			$\text{V}/\mu\text{s}$

R1 (18-August 2004)

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

**TO-18 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) CATHODE
- 2) GATE
- 3) ANODE

**MARKING CODE:**

**FULL PART NUMBER**

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)

R1 (18-August 2004)