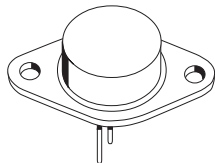


CS3-16B  
 CS3-16D  
 CS3-16M  
 CS3-16N

SILICON CONTROLLED RECTIFIER  
 16 AMP, 200 THRU 800 VOLTS



TO-3 50 MIL CASE

# Central™

Semiconductor Corp.

## DESCRIPTION:

The CENTRAL SEMICONDUCTOR CS3-16B series type is a Silicon Controlled Rectifier designed for sensing circuit applications and control systems.

MARKING CODE: FULL PART NUMBER

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

	SYMBOL	CS3 -16B	CS3 -16D	CS3 -16M	CS3 -16N	UNITS
Peak Repetitive Off-State Voltage	$V_{DRM}, V_{RRM}$	200	400	600	800	V
RMS On-State Current ( $T_C=90^\circ\text{C}$ )	$I_T(\text{RMS})$			16		A
Peak One Cycle Surge ( $t=10\text{ms}$ )	$I_{TSM}$			160		A
$I^2t$ Value for Fusing ( $t=10\text{ms}$ )	$I^2t$			128		A <sup>2</sup> s
Peak Gate Power ( $t_p=10\mu\text{s}$ )	$P_{GM}$			40		W
Average Gate Power Dissipation	$P_G (AV)$			1.0		W
Peak Forward Gate Current ( $t_p=10\mu\text{s}$ )	$I_{FGM}$			4.0		A
Peak Forward Gate Voltage ( $t_p=10\mu\text{s}$ )	$V_{FGM}$			16		V
Peak Reverse Gate Voltage ( $t_p=10\mu\text{s}$ )	$V_{RGM}$			5.0		V
Critical Rate of Rise of On-State Current	$di/dt$			100		A/ $\mu\text{s}$
Storage Temperature	$T_{stg}$		-40 to +150			$^\circ\text{C}$
Junction Temperature	$T_J$		-40 to +125			$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$			1.5		$^\circ\text{C/W}$

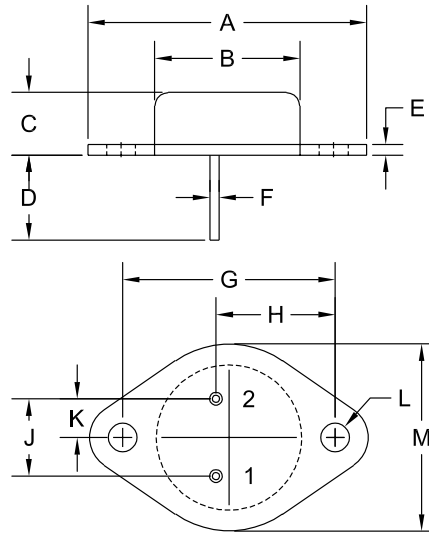
ELECTRICAL CHARACTERISTICS: ( $T_C=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}$			10	$\mu\text{A}$
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, T_C=125^\circ\text{C}$			2.0	mA
$I_{GT}$	$V_D=12\text{V}, R_L=10\Omega$		3.4	15	mA
$I_H$	$I_T=100\text{mA}$		8.8	20	mA
$V_{GT}$	$V_D=12\text{V}, R_L=10\Omega$		0.64	1.50	V
$V_{TM}$	$I_{TM}=32\text{A}, t_p=380\mu\text{s}$		1.40	1.60	V
$dv/dt$	$V_D=2/3 V_{DRM}, T_C=125^\circ\text{C}$	500			V/ $\mu\text{s}$

R1 (18-August 2004)

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

**TO-3 50 MIL CASE - MECHANICAL OUTLINE**



R0

**LEAD CODE:**

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

**MARKING CODE:**

**FULL PART NUMBER**

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	1.516	1.573	38.50	39.96
B (DIA)	0.748	0.875	19.00	22.23
C	0.250	0.450	6.35	11.43
D	0.433	0.516	11.00	13.10
E	0.054	0.065	1.38	1.65
F	0.048	0.051	1.22	1.30
G	1.177	1.197	29.90	30.40
H	0.650	0.681	16.50	17.30
J	0.420	0.440	10.67	11.18
K	0.205	0.225	5.21	5.72
L (DIA)	0.151	0.172	3.84	4.36
M	0.984	1.050	25.00	26.67

TO-3 50 MIL (REV: R0)

R1 (18-August 2004)