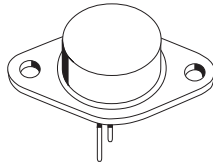


CS3-16B
CS3-16D
CS3-16M
CS3-16N

SILICON CONTROLLED RECTIFIER
16 AMP, 200 THRU 800 VOLTS



TO-3 50 MIL CASE

CentralTM
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 ($T_C=90^\circ\text{C}$)	$I_{T(RMS)}$		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 ² 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/ μs
Storage Temperature	T_{stg}		-40 to +150			$^\circ\text{C}$
Junction Temperature	T_J		-40 to +125			$^\circ\text{C}$
Thermal Resistance	θ_{JC}		1.5			$^\circ\text{C/W}$

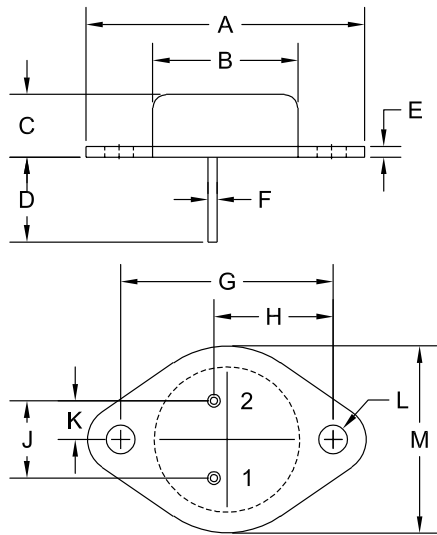
ELECTRICAL CHARACTERISTICS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}, I_{RRM}	Rated V_{DRM}, V_{RRM}			10	μA
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/ μs

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

DIMENSIONS				
SYMBOL	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)