

**CS89M
CS89N**

**0.8 AMP SCR
600 THRU 800 VOLTS**



SOT-89 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CS89M series type is an Epoxy Molded 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	CS89M	CS89N	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}, V_{RRM}	600	800	V
RMS On-State Current ($T_C=60^\circ\text{C}$)	$I_T(\text{RMS})$		0.8	A
Peak One Cycle Surge ($t=10\text{ms}$)	I_{TSM}		10	A
I^2t Value for Fusing ($t=10\text{ms}$)	I^2t		0.24	A^2s
Peak Gate Power ($t_p=10\mu\text{s}$)	P_{GM}		2.0	W
Average Gate Power Dissipation	$P_{G(AV)}$		0.1	W
Peak Gate Current ($t_p=10\mu\text{s}$)	I_{GM}		1.0	A
Peak Gate Voltage ($t_p=10\mu\text{s}$)	V_{GM}		8.0	V
Storage Temperature	T_{stg}	-40 to +150		$^\circ\text{C}$
Junction Temperature	T_J	-40 to +125		$^\circ\text{C}$
Thermal Resistance	θ_{JA}		104	$^\circ\text{C/W}$

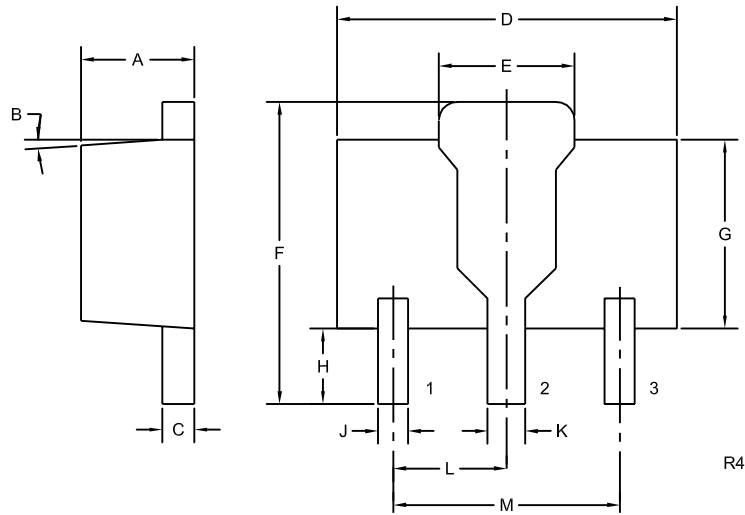
ELECTRICAL CHARACTERISTICS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}, I_{RRM}	Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega$			1.0	μA
I_{DRM}, I_{RRM}	Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega, T_C=125^\circ\text{C}$			100	μA
I_{GT}	$V_D=12\text{V}$		20	200	μA
I_H	$R_{GK}=1\text{K}\Omega$		0.25	5.0	mA
V_{GT}	$V_D=12\text{V}$		0.61	0.8	V
V_{TM}	$I_{TM}=1.0\text{A}, t_p=380\mu\text{s}$		1.2	1.7	V
dv/dt	$V_D=2/3 V_{DRM}, R_{GK}=1\text{K}\Omega, T_C=125^\circ\text{C}$	25			$\text{V}/\mu\text{s}$

R0 (10-May 2004)

SOT-89 CASE - MECHANICAL OUTLINE

Bottom View



LEAD CODE:

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

MARKING CODE:

FULL PART NUMBER

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.067	1.40	1.70
B	4°		4°	
C	0.014	0.018	0.35	0.46
D	0.173	0.185	4.40	4.70
E	0.064	0.074	1.62	1.87
F	0.146	0.177	3.70	4.50
G	0.090	0.106	2.29	2.70
H	0.028	0.051	0.70	1.30
J	0.014	0.019	0.36	0.48
K	0.017	0.023	0.44	0.58
L	0.059		1.50	
M	0.118		3.00	

SOT-89 (REV: R4)