Central™
Semiconductor Corp.
145 Adams Ave., Hauppauge, NY 11788 USA
Phone (631) 435-1110 FAX (631) 435-1824
Manufacturers of World Class Discrete Semiconductors
www.centralsemi.com

MCR22-6
MCR22-8

SENSITIVE GATE
SILICON CONTROLLED RECTIFIER

TO-92 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MCR22 series types are PNPN Sensitive Gate Silicon Controlled Rectifiers manufactured in a TO-92 case, designed for CD ignition, fuel igniters, flash circuits, and motor control applications.

MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

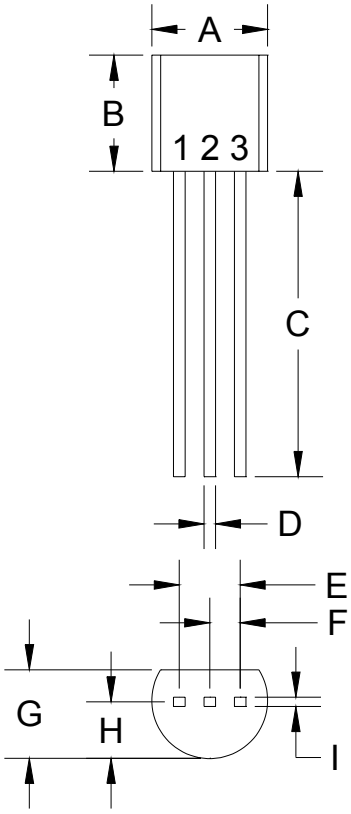
	SYMBOL	MRC22-6	MRC22-8	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}, V_{RRM}	400	600	V
RMS On-State Current (T_C = 80°C)	$I_{T(RMS)}$	1.5		A
Non Rept. On-State Current	I_{TSM}	15		A
Fusing Current (t=8.3ms)	I^2t	0.9		A^2s
Peak Reverse Gate Voltage (t≤1.0μs)	V_{GRM}	5.0		V
Forward Peak Gate Current (t≤1.0μs)	I_{FGM}	0.2		A
Peak Gate Dissipation (t≤1.0μs)	P_{GM}	0.5		W
Gate Dissipation (t=8.3ms)	$P_{G\ (AV)}$	0.1		W
Operating Junction Temperature	T_J	-40 to +125		°C
Storage Temperature	T_{stg}	-40 to +150		°C
Thermal Resistance	Θ_{JC}	50		°C/W
Thermal Resistance	Θ_{JA}	160		°C/W

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}, I_{RRM}	Rated V_{DRM}, V_{RRM}, R_{GK}=1.0kΩ, T_C = 25°C			10	μA
I_{DRM}, I_{RRM}	Rated V_{DRM}, V_{RRM}, R_{GK}=1.0kΩ, T_C = 125°C			200	μA
V_{TM}	I_T=1.0A			1.7	V
I_{GT}	V_{AK}= 6.0V, R_L=100Ω, T_C = 25°C			200	μA
I_{GT}	V_{AK}= 6.0V, R_L=100Ω, T_C = -40°C			500	μA
V_{GT}	V_{AK}= 7.0V, R_L=100Ω, T_C = 25°C			0.8	V
V_{GT}	V_{AK}= 7.0V, R_L=100Ω, T_C = -40°C			1.2	V
V_{GD}	V_{AK}= 12V, R_L=100Ω, T_C = 110°C	0.1			V
I_H	V_{AK}= 12V, I_{AK}=200mA, T_C = 25°C			5.0	mA
I_H	V_{AK}= 12V, I_{AK}=200mA, T_C = -40°C			10	mA
dv/dt	T_C = 110°C		25		V/μs

(SEE REVERSE SIDE)

TO-92 PACKAGE - MECHANICAL OUTLINE



R1

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A (DIA)	0.175	0.205	4.45	5.21
B	0.170	0.210	4.32	5.33
C	0.500	-	12.70	-
D	0.016	0.022	0.41	0.56
E	0.100		2.54	
F	0.050		1.27	
G	0.125	0.165	3.18	4.19
H	0.080	0.105	2.03	2.67
I	0.015		0.38	

TO-92 (REV: R1)

Lead Code: 1) Cathode
2) Gate
3) Anode

Central™
Semiconductor Corp.
145 Adams Ave., Hauppauge, NY 11788 USA
Phone (631) 435-1110 FAX (631) 435-1824
Manufacturers of World Class Discrete Semiconductors
www.centralsemi.com

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd 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

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).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centralsemi.com

Worldwide Field Representatives:
www.centralsemi.com/wwreps

Worldwide Distributors:
www.centralsemi.com/wwdistributors