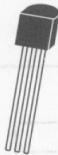


MCR22-6  
MCR22-8

**SENSITIVE GATE  
SILICON CONTROLLED RECTIFIER  
1.5 AMP, 400 THRU 600 VOLTS**



**TO-92 CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR MCR22-6 and MCR22-8 are PNP Sensitive Gate Silicon Controlled Rectifiers manufactured in a TO-92 case, and designed for CD ignition, fuel igniters, flash circuits, and motor control applications.

**MARKING CODE: FULL PART NUMBER**

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

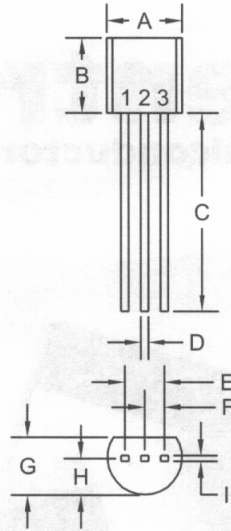
	<u>SYMBOL</u>	<u>MCR22-6</u>	<u>MCR22-8</u>	<u>UNITS</u>
Peak Repetitive Off-State Voltage	$V_{DRM}, V_{RRM}$	400	600	V
RMS On-State Current ( $T_C=80^\circ\text{C}$ )	$I_T(\text{RMS})$		1.5	A
Non Rept. On-State Current	$I_{TSM}$		15	A
Fusing Current ( $t=8.3\text{ms}$ )	$I_2t$		0.9	$\text{A}^2\text{s}$
Peak Reverse Gate Voltage ( $t\leq 1.0\mu\text{s}$ )	$V_{GRM}$		5.0	V
Forward Peak Gate Current ( $t\leq 1.0\mu\text{s}$ )	$I_{FGM}$		0.2	A
Peak Gate Dissipation ( $t\leq 1.0\mu\text{s}$ )	$P_{GM}$		0.5	W
Gate Dissipation ( $t=8.3\text{ms}$ )	$P_G(\text{AV})$		0.1	W
Operating Junction Temperature	$T_J$	-40 to +125		$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 to +150		$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$		50	$^\circ\text{C}/\text{W}$
Thermal Resistance	$\theta_{JA}$		160	$^\circ\text{C}/\text{W}$

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

<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>TYP</u>	<u>MAX</u>	<u>UNITS</u>
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega, T_C=25^\circ\text{C}$			10	$\mu\text{A}$
$I_{DRM}, I_{RRM}$	Rated $V_{DRM}, V_{RRM}, R_{GK}=1\text{K}\Omega, T_C=125^\circ\text{C}$			200	$\mu\text{A}$
$V_{TM}$	$I_T=1.0\text{A}$			1.7	V
$I_{GT}$	$V_{AK}=6.0\text{V}, R_L=100\Omega, T_C=25^\circ\text{C}$			200	$\mu\text{A}$
$I_{GT}$	$V_{AK}=6.0\text{V}, R_L=100\Omega, T_C=-40^\circ\text{C}$			500	$\mu\text{A}$
$V_{GT}$	$V_{AK}=7.0\text{V}, R_L=100\Omega, T_C=25^\circ\text{C}$			0.8	V
$V_{GT}$	$V_{AK}=7.0\text{V}, R_L=100\Omega, T_C=-40^\circ\text{C}$			1.2	V
$V_{GD}$	$V_{AK}=12\text{V}, R_L=100\Omega, T_C=110^\circ\text{C}$	0.1			V
$I_H$	$V_{AK}=12\text{V}, I_{AK}=200\text{mA}, T_C=25^\circ\text{C}$			5.0	$\text{mA}$
$I_H$	$V_{AK}=12\text{V}, I_{AK}=200\text{mA}, T_C=-40^\circ\text{C}$			10	$\text{mA}$
dv/dt	$T_C=110^\circ\text{C}$		25		$\text{V}/\mu\text{s}$

**SENSITIVE GATE  
SILICON CONTROLLED RECTIFIER  
1.5 AMP, 400 THRU 600 VOLTS**

**TO-92 CASE - MECHANICAL OUTLINE**



DATA SHEETS

**LEAD CODE:**

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

**MARKING CODE:  
FULL PART NUMBER**

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	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)