

2N5060 THRU 2N5064**SILICON CONTROLLED RECTIFIERS
0.8 AMP, 30 THRU 200 VOLT**
www.centrasemi.com

The CENTRAL SEMICONDUCTOR 2N5060 series devices are epoxy molded SCRs designed for control systems and sensing circuit applications.

**TO-92 CASE****MARKING: FULL PART NUMBER****MAXIMUM RATINGS:** ($T_A=25^\circ\text{C}$ unless otherwise noted)

	SYMBOL	2N5060	2N5061	2N5062	2N5063	2N5064	UNITS
Peak Repetitive Off-State Voltage	V_{DRM}, V_{RRM}	30	60	100	150	200	V
RMS On-State Current (Note 1; $T_C=80^\circ\text{C}$)	$I_T(\text{RMS})$			0.8			A
Average On-State Current (Note 1; $T_C=67^\circ\text{C}$)	$I_T(\text{AV})$			0.51			A
Average On-State Current (Note 1; $T_C=102^\circ\text{C}$)	$I_T(\text{AV})$			0.255			A
Peak One Cycle Surge Current (60Hz)	I_{TSM}			10			A
I^2t Value for Fusing ($t=8.3\text{ms}$)	I^2t			0.4			A^2s
Peak Forward Gate Power ($t_p \leq 1.0\mu\text{s}$)	P_{GM}			0.1			W
Average Forward Gate Power ($t=8.3\text{ms}$)	$P_{G(\text{AV})}$			0.01			W
Peak Forward Gate Current ($t_p \leq 1.0\mu\text{s}$)	I_{GM}			1.0			A
Peak Reverse Gate Voltage ($t_p \leq 1.0\mu\text{s}$)	V_{RGM}			5.0			V
Operating Junction Temperature	T_J			-40 to +125			$^\circ\text{C}$
Storage Temperature	T_{stg}			-40 to +150			$^\circ\text{C}$
Thermal Resistance (Note 2)	θ_{JC}			75			$^\circ\text{C/W}$
Thermal Resistance	θ_{JA}			200			$^\circ\text{C/W}$

Notes: 1) 180° Conduction Angles

2) Measured with the "flat side down" on a heatsink and held in position by a metal clamp over the curved surface.

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{DRM}, I_{RRM}	$V_D=\text{Rated } V_{DRM}, R_{GK}=1.0\text{k}\Omega$			10	μA
I_{DRM}, I_{RRM}	$V_D=\text{Rated } V_{DRM}, R_{GK}=1.0\text{k}\Omega, T_C=110^\circ\text{C}$			50	μA
I_{GT}	$V_D=7.0\text{V}, R_L=100\Omega$			200	μA
I_{GT}	$V_D=7.0\text{V}, R_L=100\Omega, T_C=-40^\circ\text{C}$			350	μA
I_H	Initiating Current, $I_T=20\text{mA}, R_{GK}=1.0\text{k}\Omega$			5.0	mA
I_H	Initiating Current, $I_T=20\text{mA}, R_{GK}=1.0\text{k}\Omega, T_C=-40^\circ\text{C}$			10	mA
V_{GT}	$V_D=7.0\text{V}, R_L=100\Omega$			0.8	V
V_{GT}	$V_D=7.0\text{V}, R_L=100\Omega, T_C=-40^\circ\text{C}$			1.2	V
V_{GD}	$V_D=\text{Rated } V_{DRM}, R_L=100\Omega, T_C=110^\circ\text{C}$	0.1			V
V_{TM}	$I_{TM}=1.2\text{A}, T_A=25^\circ\text{C}$			1.7	V
dv/dt	$V_D=\text{Rated } V_{DRM}, R_{GK}=1.0\text{k}\Omega$		30		$\text{V}/\mu\text{s}$

R5 (7-May 2015)

2N5060 THRU 2N5064

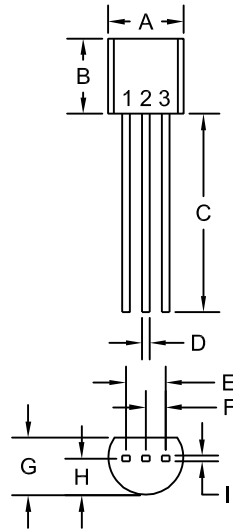
SILICON CONTROLLED RECTIFIERS 0.8 AMP, 30 THRU 200 VOLT



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

SYMBOL	TEST CONDITIONS	2N5060 2N5061	2N5062 2N5063 2N5064	UNITS
		TYP	TYP	
t_d	$V_D=\text{Rated } V_{DRM}, I_{GT}=1.0\text{mA}$	3.0	3.0	μs
t_r	Forward Current=1.0A, $di/dt=6.0\text{A}/\mu\text{s}$	0.2	0.2	μs
t_q	Forward Current=1.0A, $t_p=50\mu\text{s}$, 0.1% Duty Cycle, $di/dt=6.0\text{A}/\mu\text{s}$, $dv/dt=20\text{V}/\mu\text{s}$, $I_{GT}=1.0\text{mA}$	10	30	μs

TO-92 CASE - MECHANICAL OUTLINE



R1

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)

LEAD CODE:

- 1) Cathode
- 2) Gate
- 3) Anode

MARKING:

FULL PART NUMBER

R5 (7-May 2015)

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

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