

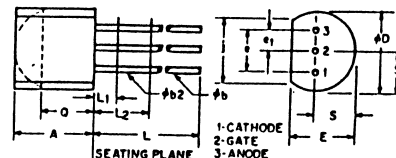
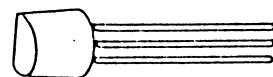
Silicon Controlled Rectifier

0.8A RMS UP TO 200 VOLTS

2N5060
thru
2N5064

TYPICAL APPLICATIONS:

- Sensors
 - Temperature
 - Pressure
 - Dryness
 - Proximity
 - Voltage
 - Current
- Amplifiers (gate)
- Timers
- Logic Circuits
- Controls
 - Small Motors
 - Small Lamps
 - Remote
- Switching
 - Solid-State Relay
 - Relay Driver
 - Counter
 - Low Power Inverter
- 120V AC Line Operation.

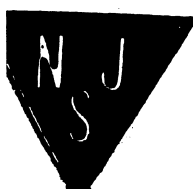


FEATURES:

- 200 μ A Gate Sensitivity
- 6-Amp Surge
- 30 through 200 Volt Selection
- Plastic TO-92 Package
- Low V_F
- High dv/dt

SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN	MAX	MIN	MAX	
A	.170	.210	4.38	5.33	
ϕ_b	0.16	0.21	4.07	5.33	1,3
ϕ_{b2}	0.16	0.19	4.07	4.82	3
ϕ_d	.175	.205	4.96	5.20	
E	.125	.165	3.94	4.19	
ϕ	.095	.105	2.42	2.66	
ϕ_1	.045	.055	1.15	1.39	
J	.135	—	3.43	—	
L	.500	—	12.70	—	1,3
L1	—	.050	—	1.27	3
L2	.250	—	6.35	—	3
Q	.115	—	2.93	—	2
S	0.080	.105	2.42	2.66	

NOTES:
 1. THREE LEADS.
 2. CONTOUR OF THE PACKAGE BEYOND THIS ZONE IS UNCONTROLLED.
 3. (THREE LEADS) ϕ_{b2} APPLIES BETWEEN L1 AND L2. ϕ_b APPLIES BETWEEN L2 AND .5 INCH (12.70 MM) FROM SEATING PLANE. DIAMETER IS UNCONTROLLED IN L1 AND BEYOND .5 INCH (12.70 MM FROM SEATING PLANE).



MAXIMUM ALLOWABLE RATINGS

TYPE	REPETITIVE PEAK OFF-STATE VOLTAGE, $V_{DRM}^{(1)}$ $T_C = -65^\circ\text{C to } +125^\circ\text{C}$	REPETITIVE PEAK REVERSE VOLTAGE, $V_{DRM}^{(2)}$ $T_C = -65^\circ\text{C to } +125^\circ\text{C}$	NON-REPETITIVE PEAK REVERSE VOLTAGE, $V_{BSM}^{(2,3)}$ $T_C = -65^\circ\text{C to } +125^\circ\text{C}$
2N5060	30 Volts*	30 Volts*	45 Volts*
2N5061	60 Volts*	60 Volts*	80 Volts*
2N5062	100 Volts*	100 Volts*	125 Volts*
2N5063	150 Volts*	150 Volts*	180 Volts*
2N5064	200 Volts*	200 Volts*	230 Volts*

RMS On-State Current, $I_{T(RMS)}^{(4)}$08 Ampere*
Peak One Cycle Surge (non-rep) On-State Current, I_{TSM}	6 Amperes*
Peak Gate Power Dissipation, P_{GM}	5 Watts*
Average Gate Power Dissipation, $P_{G(AV)}$001 Watt*
Peak Forward Gate Current, I_{GM}	1 Ampere*
Peak Reverse Gate Voltage, V_{GM}	5 Volts*
Storage Temperature, T_{STG}	$-65^\circ\text{C to } +150^\circ\text{C}$ *
Operating Junction Temperature, T_j	$-65^\circ\text{C to } +125^\circ\text{C}$ *

CHARACTERISTICS

TEST	SYMBOL	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
Peak Reverse and Off-State Current (All Types)	I_{RRM} or I_{DRM}	—	—	1.0	μA	$T_C = +25^\circ\text{C}$, $R_{GK} = 1000$ ohms $V_{RRM} = V_{DRM} = \text{Rated Value}$.
		—	—	*50		$T_C = +125^\circ\text{C}$, $R_{GK} = 1000$ ohms $V_{RRM} = V_{DRM} = \text{Rated Value}$.
DC Gate Trigger Current	I_{GT}	—	—	200	$\mu\text{A dc}$	$T_C = +25^\circ\text{C}$, $V_D = 7\text{Vdc}$, $R_L = 100$ ohms.
		—	—	*350		$T_C = -65^\circ\text{C}$, $V_D = 7\text{Vdc}$, $R_L = 100$ ohms.
DC Gate Trigger Voltage	V_{GT}	—	—	0.8	Vdc	$T_C = +25^\circ\text{C}$, $V_D = 7\text{Vdc}$, $R_L = 100$ ohms.
		—	—	*1.2		$T_C = -65^\circ\text{C}$, $V_D = 7\text{Vdc}$, $R_L = 100$ ohms.
		*0.1	—	—		$T_C = +125^\circ\text{C}$, Rated V_{DRM} , $R_L = 100$ ohms.
Peak On-State Voltage	V_{TM}	—	—	*1.7	V	$T_C = +25^\circ\text{C}$, $I_{TM} = 1.2\text{A peak}$, 1 msec. wide pulse, Duty Cycle $\leq 2\%$
Holding Current	I_H	—	—	5.0	mA dc	Anode source voltage = 7Vdc, $R_{GK} = 1000$ ohms. $T_C = +25^\circ\text{C}$
		—	—	*10.0		$T_C = -65^\circ\text{C}$
Critical Rate-of-Rise of Off-State Voltage	dv/dt	—	20	—	$\text{V}/\mu\text{sec}$	$T_C = +25^\circ\text{C}$, Rated V_{DRM} , $R_{GK} = 1000$ ohms.
Circuit Commutated Turn-Off Time	t_q	—	15	—	μsec	$T_C = +125^\circ\text{C}$, rectangular current waveform. Rate-of-rise of current $< 10\text{A}/\mu\text{sec}$. Rate reversal of current $< 5\text{A}/\mu\text{sec}$. $I_{TM} = 1\text{A}$ (50 μsec . pulse). Rep. Rate = 60 pps. $V_{RRM} = \text{Rated}$, $V_{RX} = 15\text{V Min.}$, $V_{DRM} = \text{Rated}$. Rate-of-rise of reapplied off-state voltage = 20V/ μsec .; Gate Bias = 0 Volts, 100 Ohms (during turn-off time interval).
Steady State Thermal Resistance	$R_{\theta JC}$	—	—	*75	$^\circ\text{C}/\text{W}$	Junction-to-case (flat side of case is temperature reference point).
	$R_{\theta JA}$	—	—	230		Junction-to-ambient (free convection).