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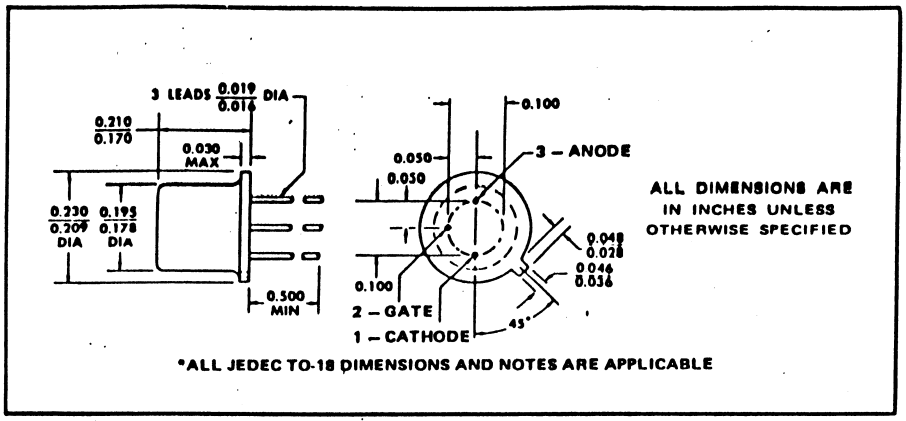
2N3008
SILICON REVERSE-BLOCKING TRIODE THYRISTOR



*ALL JEDEC TO-18 DIMENSIONS AND NOTES ARE APPLICABLE

absolute maximum ratings over operating free-air temperature range (unless otherwise noted)

	2N3008	UNIT
*Static Off-State Voltage, V_D (See Note 1)	200	V
*Repetitive Peak Off-State Voltage, V_{DRM} (See Note 1)	200	V
*Static Reverse Voltage, V_R (See Note 2)	200	V
*Repetitive Peak Reverse Voltage, V_{RRM} (See Note 2)	200	V
*Continuous or RMS On-State Current at (or below) 55°C Free-Air Temperature	350	mA
*Average On-State Current (180° Conduction Angle) at (or below) 55°C Free-Air Temperature	250	mA
*Surge On-State Current (See Note 3)	6	A
Peak Negative Gate Voltage	8	V
*Peak Positive Gate Current (Pulse Width ≤ 8 ms)	250	mA
*Average Gate Power Dissipation	100	mW
*Operating Free-Air Temperature Range	−65 to 200	°C
*Storage Temperature Range	−65 to 175	°C
*Lead Temperature 1/16 Inch from Case for 10 Seconds	300	°C

NOTES: 1. These values apply when the gate-cathode resistance $R_{GK} \leq 1\ k\Omega$.
2. These values apply when the gate-cathode resistance $R_{GK} < \infty$.
3. This value applies for one 60-Hz half sine wave when the device is operating at (or below) rated values of peak reverse voltage and on-state current. Surge may be repeated after the device has returned to original thermal equilibrium.

*JEDEC registered data. This data sheet contains all applicable registered data in effect at the time of publication.

*electrical characteristics at 25°C free-air temperature (unless otherwise noted)

PARAMETER		TEST CONDITIONS				MIN	TYP	MAX	UNIT
I_D	Static Off-State Current	V_D = Rated V_D,	R_{GK} = 1 kΩ					0.1	μA
		V_D = Rated V_D,	R_{GK} = 1 kΩ,		T_A = 150°C			100	
I_G	Gate Current	V_G = −5 V,	I_A = 0					−5	μA
I_{GT}	Gate Trigger Current	V_{AA} = 5 V,	R_L = 12 Ω,	$t_{p(g)} \geq 10\ \mu s$			90	200	μA
V_{GT}	Gate Trigger Voltage	V_{AA} = 5 V,	R_L = 12 Ω,	$t_{p(g)} > 10\ \mu s$,	T_A = −65°C			0.9	V
		V_{AA} = 5 V,	R_L = 12 Ω,	$t_{p(g)} > 10\ \mu s$			0.6	0.8	
		V_{AA} = 5 V,	R_L = 12 Ω,	$t_{p(g)} > 10\ \mu s$,	T_A = 150°C	0.2			
I_H	Holding Current	R_{GK} = 1 kΩ,	R_L = 2 kΩ				1.8	5	mA
		R_{GK} = 1 kΩ,	R_L = 2 kΩ,		T_A = −65°C			8	
V_T	On-State Voltage	I_T = 350 mA,	$R_{GK} \geq 1$ kΩ,	See Note 6				1.2	V