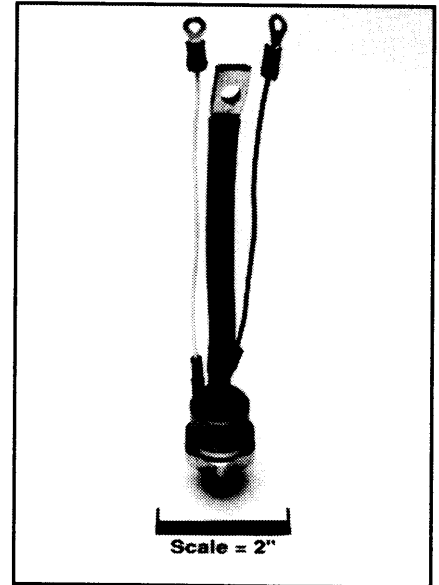
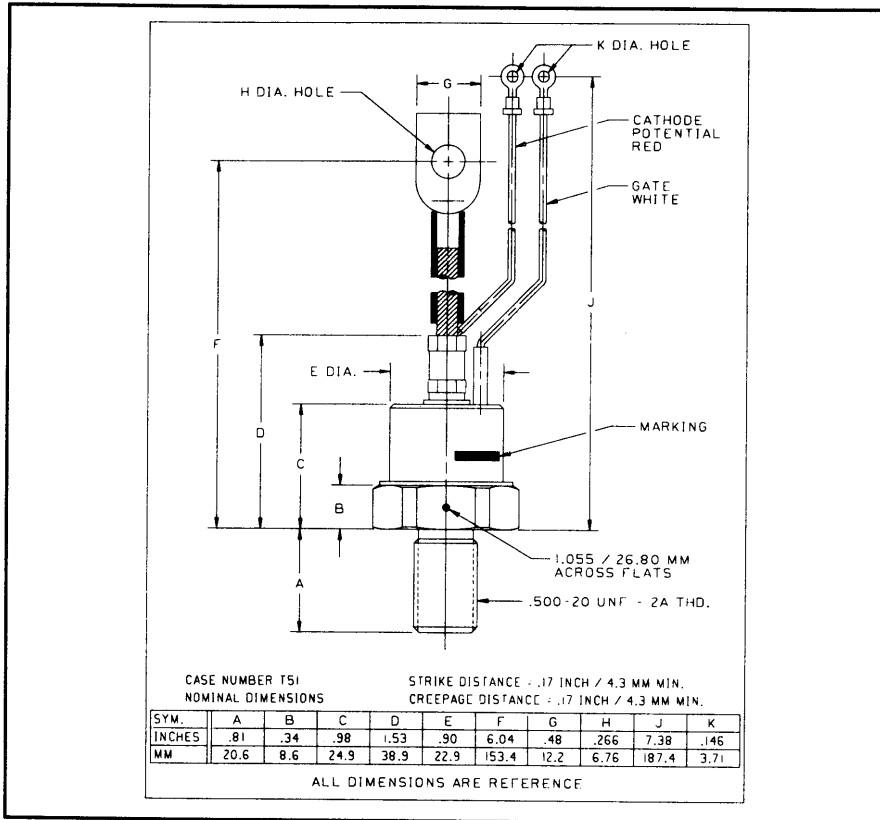


Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272  
 Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

**Phase Control SCR**  
 70 Amperes Average (110 RMS)  
 1400 Volts



**2N4361-2N4371**  
**Phase Control SCR**  
 70 Amperes Average (110 RMS),  
 1400 Volts

**2N4361-2N4371** (Outline Drawing)

### Ordering Information:

Select the complete six digit part number you desire from the table, i.e. 2N4368 is a 1400 Volt, 70 Ampere Phase Control SCR.

		Voltage	Current
Type		$V_{DRM}$ $V_{RRM}$	$I_{T(av)}$
2N4361	2N4371	100	70
2N4362	2N4372	200	
2N4363	2N4373	400	
2N4364	2N4374	600	
2N4365	2N4375	800	
2N4366	2N4376	1000	
2N4367	2N4377	1200	
2N4368	2N4378	1400	

### Features:

- All Diffused Design
- Low Gate Current
- Low  $V_{TM}$
- Compression Bonded Encapsulation
- Low Thermal Impedance

### Applications:

- Phase Control
- Power Supplies
- Motor Control



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### Absolute Maximum Ratings

Characteristics	Symbol	2N4361 - 2N4371	Units
RMS Forward Current	$I_T(\text{rms})$	110	Amperes
Average Forward Current	$I_T(\text{av})$	70	Amperes
One-half Cycle Surge Current	$I_{TSM}$	1600	Amperes
3 Cycle Surge Current	$I_{TSM}$	1250	Amperes
10 Cycle Surge Current	$I_{TSM}$	1080	Amperes
Minimum Rate of Rise of On-State Current (Non-Repetitive)	$di/dt$	800	A/ $\mu\text{sec}$
$I^2t$ (for Fusing), $\geq 8.3$ milliseconds	$I^2t$	10700	A <sup>2</sup> sec
Storage Temperature	$T_{\text{stg}}$	-40 to +150	°C
Operating Temperature	$T_j$	-40 to +125	°C
Mounting Torque		130	in-lb



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2N4361-2N4371

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## Electrical and Thermal Characteristics

Characteristics	Symbol	2N4361 2N4371	2N4362 2N4372	2N4363 2N4373	2N4364 2N4374	2N4365 2N4375	2N4366 2N4376	2N4367 2N4377	2N4368 2N4378	Units
<b>Current - Conducting State Maximums, <math>T_j = 125^\circ\text{C}</math></b>										
Forward Voltage Drop at $I_{TM} = 500\text{A}$ Average, $T_j = 25^\circ\text{C}$	$V_{TM}$	2.5 (All Types)								Volts
<b>Voltage - Blocking State Maximums</b>										
Repetitive Peak Forward Blocking Voltage	$V_{DRM}$	100	200	400	600	800	1000	1200	1400	Volts
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	200	400	600	800	1000	1200	1400	Volts
Non-rep. Trans. Peak Rev. Voltage	$V_{RSM}$	200	300	500	700	950	1200	1450	1700	Volts
Forward Leakage Current	$I_{DRM}$	10 (All Types)								mA
Reverse Leakage Current	$I_{RRM}$	10 (All Types)								mA
<b>Switching</b>										
Typical Turn-off Time, $I_T = 50\text{A}$ , $di_T/dt = 5\text{ A/sec}$ , reapplied $dv/dt = 20\text{V}/\mu\text{sec}$ linear to $0.8 V_{DRM}$ , $T_j = 125^\circ\text{C}$	$t_q$	100 (All Types)								$\mu\text{sec}$
Typical Turn-on Time, $I_T = 100\text{A}$ , $V_D = 100\text{V}$	$t_{on}$	4 (All Types)								$\mu\text{sec}$
Minimum Critical $dv/dt$ Exponential to $V_{DRM}$ , $T_j = 125^\circ\text{C}$	$dv/dt$	100 (All Types)								$\text{V}/\mu\text{sec}$
<b>Thermal</b>										
Maximum Resistance, Junction to Case	$R_{\theta(j-c)}$	0.28 (All Types)								$^\circ\text{C}/\text{Watt}$
Maximum Resistance, Case to Sink (Lubricated)	$R_{\theta(c-s)}$	0.12 (All Types)								$^\circ\text{C}/\text{Watt}$
<b>Gate - Maximim Parameters</b>										
Gate Current to Trigger, $T_j = 25^\circ\text{C}$ , $V_D = 12\text{V}$	$I_{GT}$	250 (All Types)								mA
Gate Voltage to Trigger, $T_j = 25^\circ\text{C}$ , $V_D = 12\text{V}$	$V_{GT}$	3 (All Types)								Volts
Non-Triggering Gate Voltage, $T_j = 125^\circ\text{C}$ , $V_{DRM} = \text{Rated}$	$V_{GDM}$	0.15 (All Types)								Volts
Peak Forward Gate Current	$I_{GTM}$	4 (All Types)								Amperes
Peak Reverse Gate Voltage	$V_{GRM}$	5 (All Types)								Volts

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