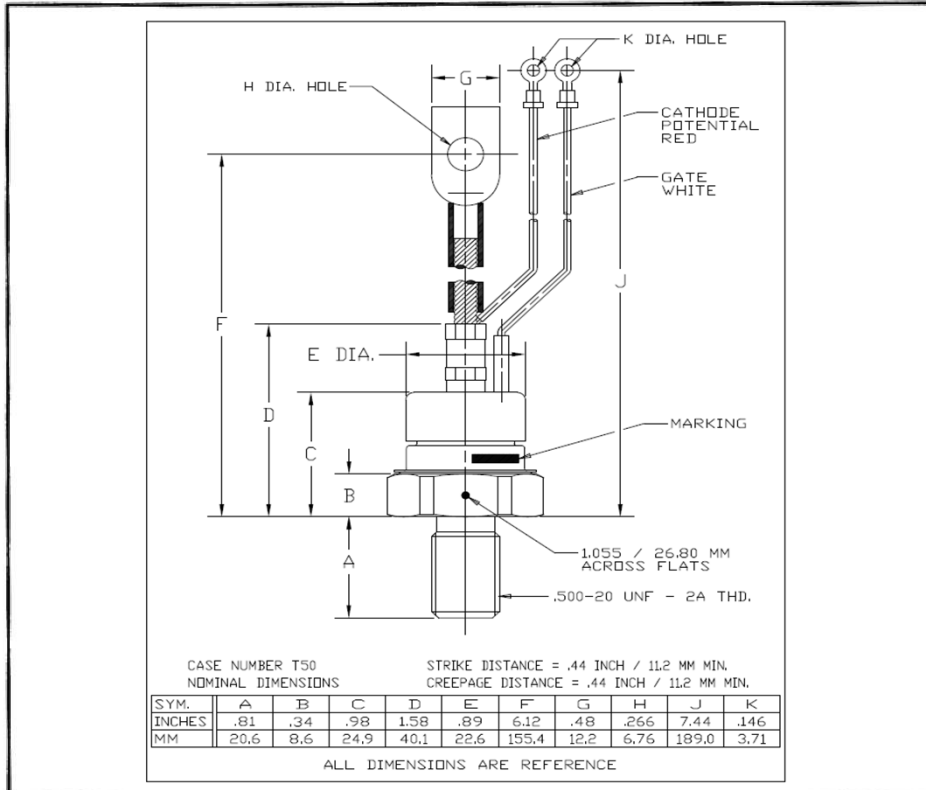


Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
 Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

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.

Type	Voltage		Current
	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/ μsec
I^2t (for Fusing), ≥ 8.3 milliseconds	I^2t	10700	A ² sec
Storage Temperature	T_{stg}	-40 to +150	°C
Operating Temperature	T_j	-40 to +125	°C
Mounting Torque		130	in-lb



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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
Current - Conducting State Maximums, $T_j = 125^\circ\text{C}$										
Forward Voltage Drop at $I_{TM} = 500\text{A}$ Average, $T_j = 25^\circ\text{C}$	I_{TM}	2.5 (All Types)								Volts
Voltage - Blocking State Maximums										
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
Switching										
Typical Turn-off Time, $I_T = 50\text{A}$, $di_R/dt = 5\text{ A/sec}$, 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)								μsec
Typical Turn-on Time, $I_T = 100\text{A}$, $V_D = 100\text{V}$	t_{on}	4 (All Types)								μsec
Minimum Critical dv/dt Exponential to V_{DRM} , $T_j = 125^\circ\text{C}$	dv/dt	100 (All Types)								$\text{V}/\mu\text{sec}$
Thermal										
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)								$^\circ\text{C}/\text{Watt}$
Gate - Maximim Parameters										
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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