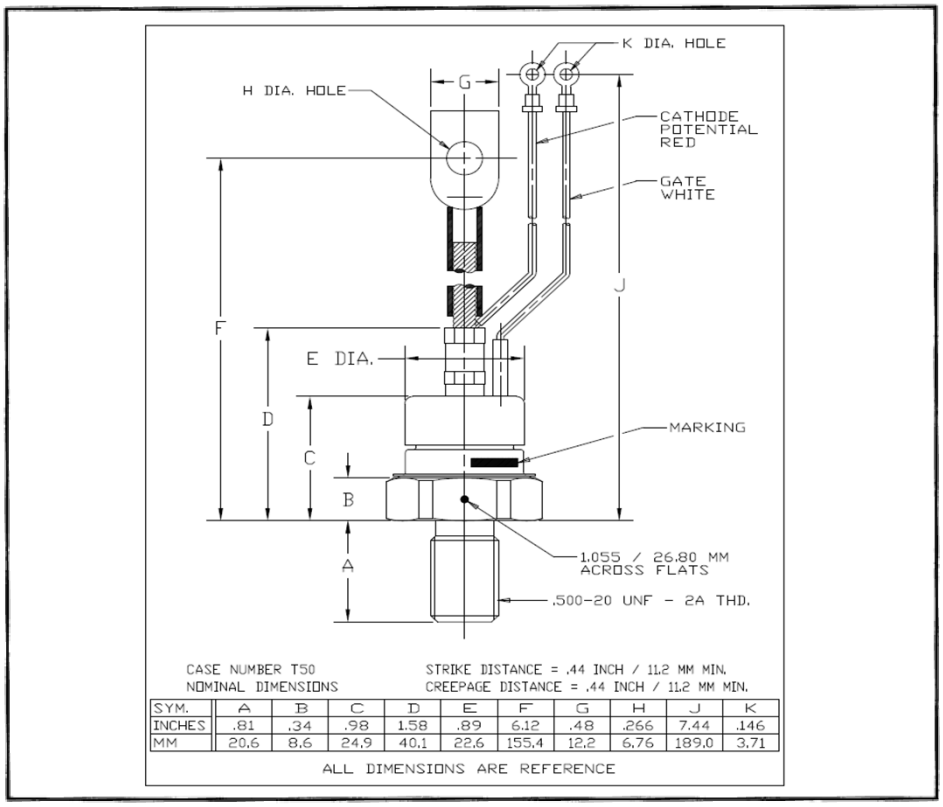
Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

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



SYM.	A	B	C	D	E	F	G	H	J	K
INCHES	.81	.34	.98	1.58	.89	6.12	.48	.266	7.44	.146
MM	20.6	8.6	24.9	40.1	22.6	155.4	12.2	6.76	189.0	3.71

2N4361-2N4371 (Outline Drawing)

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

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 V_{DRM} V_{RRM}	Current $I_{T(av)}$
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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2N4361-2N4371
Phase Control SCR
70 Ampere Average (110 RMS), 1400 Volts

Absolute Maximum Ratings

Characteristics	Symbol	2N4361 - 2N4371	Units
RMS Forward Current	$I_{T(rms)}$	110	Amperes
Average Forward Current	$I_{T(av)}$	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^2sec
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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2N4361-2N4371
Phase Control SCR
70 Ampere Average (110 RMS), 1400 Volts

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°C										
Forward Voltage Drop at I_{TM} = 500A Average, T_j = 25°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 = 50A, di_R/dt = 5 A/sec, reapplied dv/dt = 20V/µsec linear to 0.8 V_{DRM}, T_j = 125°C	t_q	100 (All Types)								µsec
Typical Turn-on Time, I_T = 100A, V_D = 100V	t_{on}	4 (All Types)								µsec
Minimum Critical dv/dt Exponential to V_{DRM} T_j = 125°C	dv/dt	100 (All Types)								V/µsec
Thermal										
Maximum Resistance, Junction to Case	$R_{\theta(j-c)}$	0.28 (All Types)								°C/Watt
Maximum Resistance, Case to Sink (Lubricated)	$R_{\theta(c-s)}$	0.12 (All Types)								°C/Watt
Gate - Maximim Parameters										
Gate Current to Trigger, T_j = 25°C, V_D = 12V	I_{GT}	250 (All Types)								mA
Gate Voltage to Trigger, T_j = 25°C, V_D = 12V	V_{GT}	3 (All Types)								Volts
Non-Triggering Gate Voltage, T_j = 125°C, V_{DRM} = 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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Phase Control SCR
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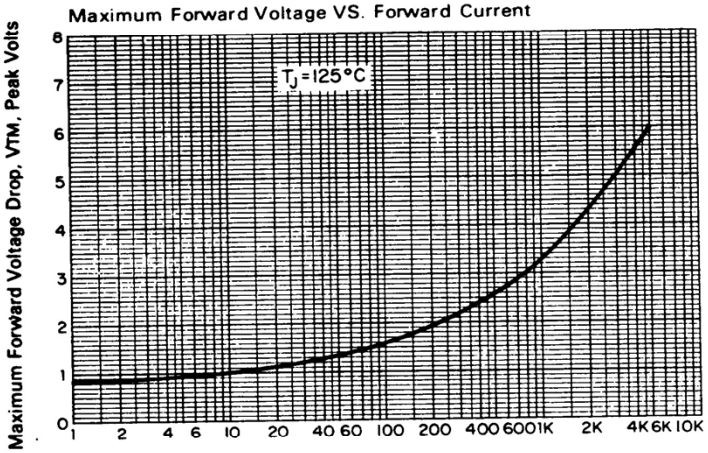
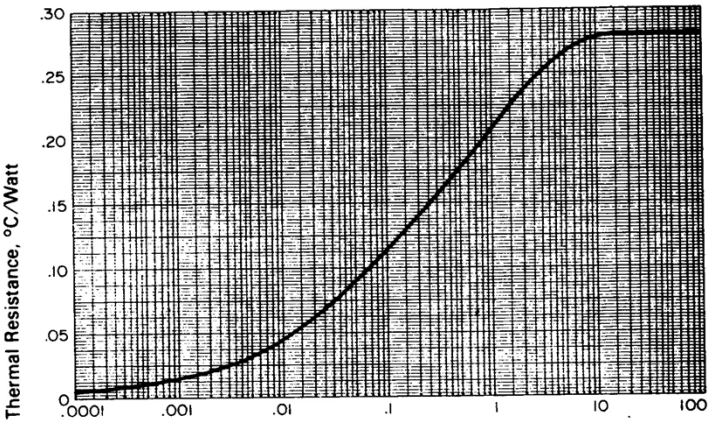
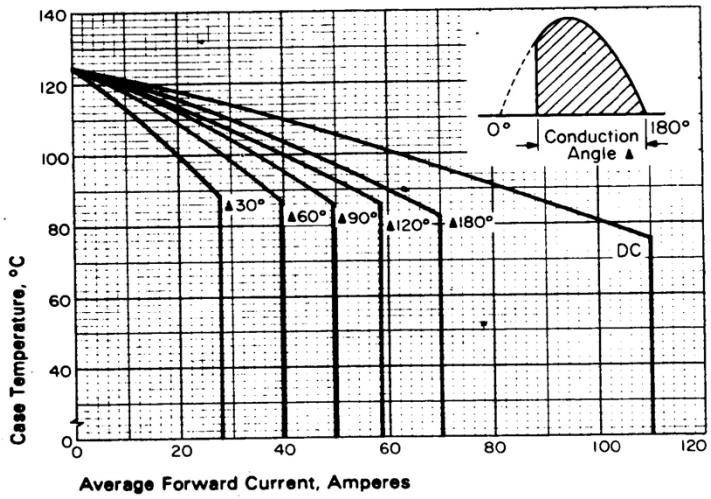
Maximum Forward Voltage VS. Forward Current



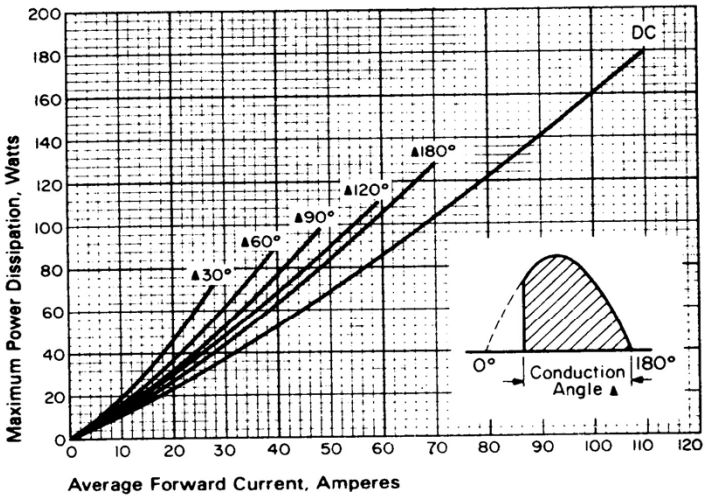
Transient Thermal Impedance VS. Time



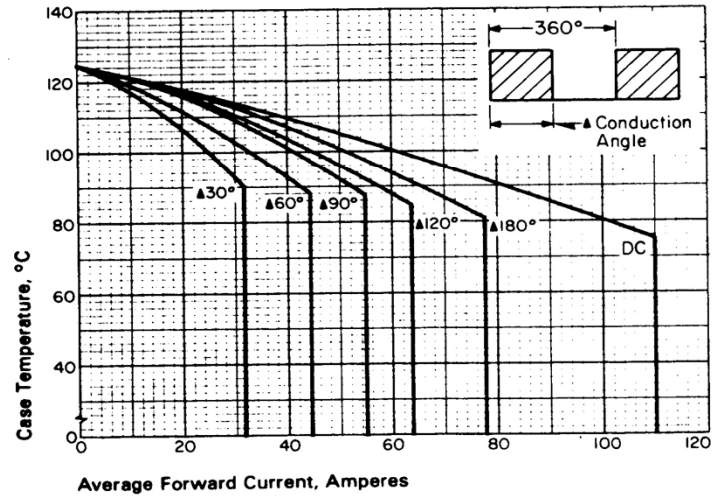
Maximum Case Temperature VS. Forward Current



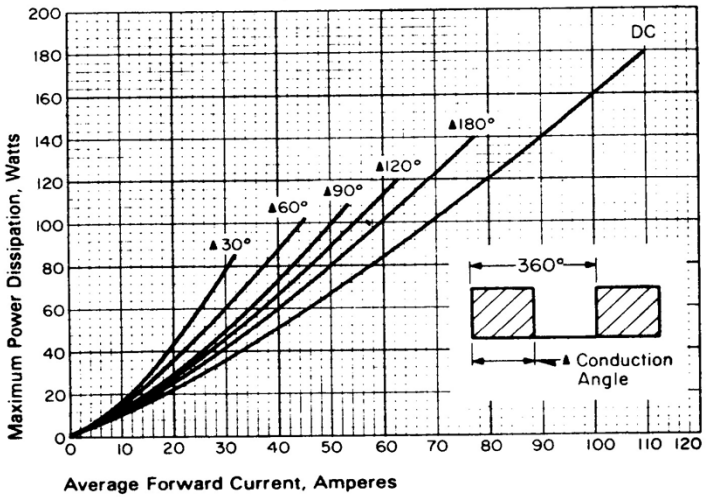
Maximum Power Dissipation VS. Forward Current



Maximum Case Temperature VS. Forward Current



Maximum Power Dissipation VS. Forward Current



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