Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

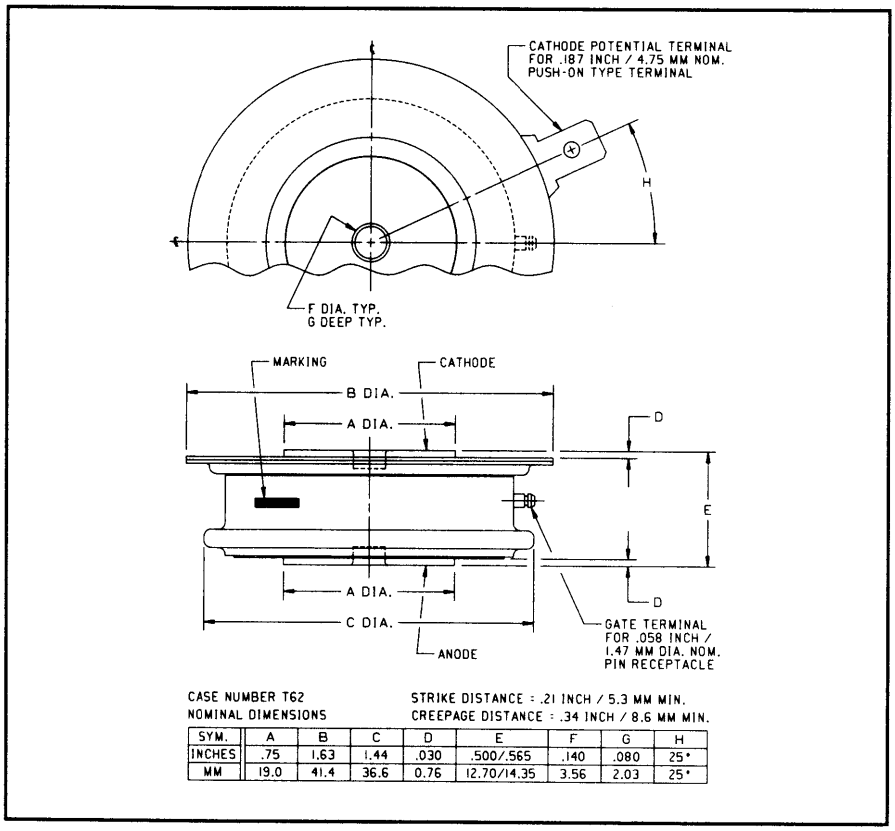
We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

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
200-300 Amperes
1600 Volts

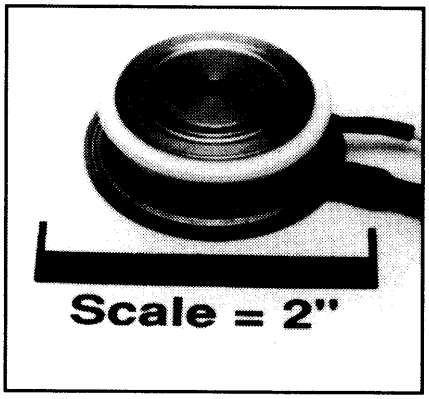


CASE NUMBER T62
NOMINAL DIMENSIONS

STRIKE DISTANCE = .21 INCH / 5.3 MM MIN.
CREEPAGE DISTANCE = .34 INCH / 8.6 MM MIN.

SYM.	A	B	C	D	E	F	G	H
INCHES	.75	1.63	1.44	.030	.500/.565	.140	.080	25°
MM	19.0	41.4	36.6	0.76	12.70/14.35	3.56	2.03	25°

T620 (Outline Drawing)



T620 Phase Control SCR
200-300 Amperes, 1600 Volts

Description:
Powerex Silicon Controlled Rectifiers (SCR) are designed for phase control applications. These are all-diffused, Press-Pak (Pow-R-Disc) devices employing the field-proven amplifying (di/namic) gate.

Features:
- ☐ Low On-State Voltage
- ☐ High di/dt
- ☐ High dv/dt
- ☐ Hermetic Packaging
- ☐ Excellent Surge and I^2t Ratings

Applications:
- ☐ Power Supplies
- ☐ Battery Chargers
- ☐ Motor Control
- ☐ Welders

Ordering Information:
Select the complete eight digit part number you desire from the table, i.e. T6201620 is a 1600 Volt, 200 Ampere Phase Control SCR.

	Voltage		Current	
Type	V_{RRM} V_{DRM}	Code	$I_{T(av)}$	Code
T620	200	02	200	20
	400	04	300	30
	600	06		
	800	08		
	1000	10		
	1200	12		
	1400	14		
	1600	16		

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

T620
Phase Control SCR
200-300 Amperes, 1600 Volts

Absolute Maximum Ratings

	Symbol	T620_ _20	T620_ _30	Units
RMS On-State Current	$I_{T(RMS)}$	315	470	Amperes
Average On-State Current	$I_{T(av)}$	200	300	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)	I_{TSM}	4000	5500	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)	I_{TSM}	3650	5000	Amperes
Critical Rate-of-Rise of On-State Current (Non-Repetitive)	di/dt	800	800	Amperes/μs
Critical Rate-of-Rise of On-State Current (Repetitive)	di/dt	150	150	Amperes/μs
I^2t (for Fusing), 8.3 milliseconds	I^2t	64,400	120,000	A^2sec
Peak Gate Power Dissipation	P_{GM}	16	16	Watts
Average Gate Power Dissipation	$P_{G(av)}$	3	3	Watts
Storage Temperature	T_{STG}	−40 to 150	−40 to 150	°C
Operating Temperature	T_J	−40 to 125	−40 to 125	°C
Mounting Force		1000 to 1400	1000 to 1400	lb.
Mounting Force		450 to 635	450 to 635	kg

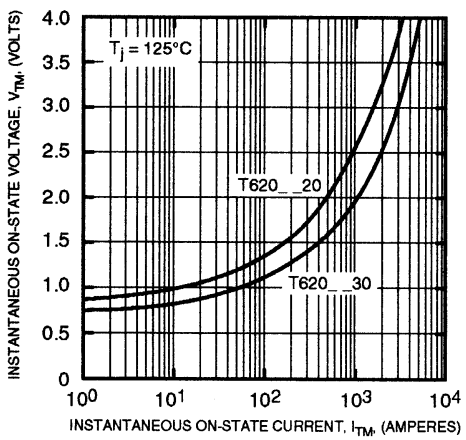
Electrical and Thermal Characteristics

Characteristics	Symbol	Test Conditions	T620_ _20	T620_ _30	Units
Current—Conducting State Maximums					
Peak On-State Voltage	V_{TM}	I_{TM} = 625A, T_J = 25°C	2.05	1.55	Volts
			T620		
Voltage—Blocking State Maximums					
Forward Leakage, Peak	I_{DRM}	T_J = 125°C, V_{DRM} = rated	25		mA
Reverse Leakage, Peak	I_{RRM}	T_J = 125°C, V_{RRM} = rated	25		mA
Switching					
Typical Turn-Off Time	t_q	I_T = 150A, T_J = 125°C, di_R/dt = 12.5A/μsec, reapplied dv/dt = 20V/μsec linear to 0.8V_{DRM}	100		μsec
Typical Turn-On Time	t_{on}	I_T = 100A, V_D = 100V	5		μsec
Min. Critical dv/dt exponential to V_{DRM}	dv/dt	T_J = 125°C	300		V/μsec
Thermal					
Maximum Thermal Resistance, double sided cooling					
Junction to Case	$R_{\theta JC}$		0.08		°C/Watt
Case to Sink, Lubricated	$R_{\theta CS}$		0.02		°C/Watt
Gate—Maximum Parameters					
Gate Current to Trigger	I_{GT}	T_J = 25°C, V_D = 12V	150		mA
Gate Voltage to Trigger	V_{GT}	T_J = 25°C, V_D = 12V	3		Volts
Non-Triggering Gate Voltage	V_{GDM}	T_J = 125°C, rated V_{DRM}	0.15		Volts
Peak Forward Gate Current	I_{GTM}		4		Amperes
Peak Reverse Gate Voltage	V_{GRM}		5		Volts

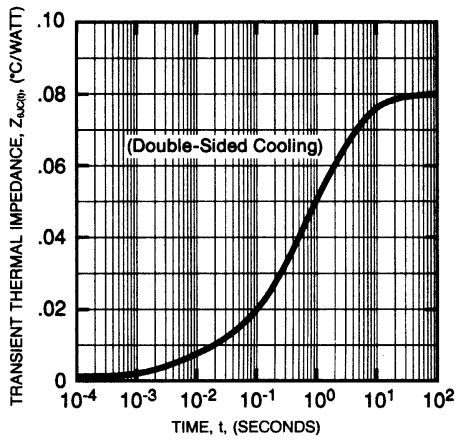
Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

T620
Phase Control SCR
200-300 Amperes, 1600 Volts

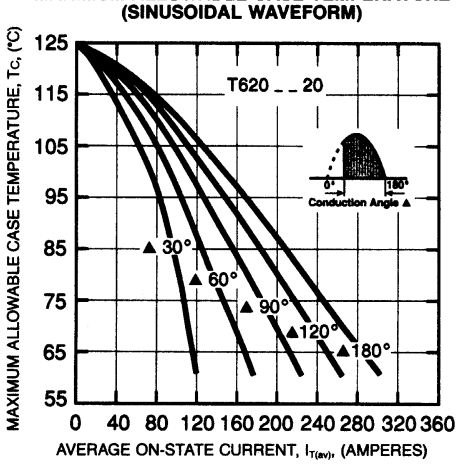
MAXIMUM ON-STATE CHARACTERISTICS



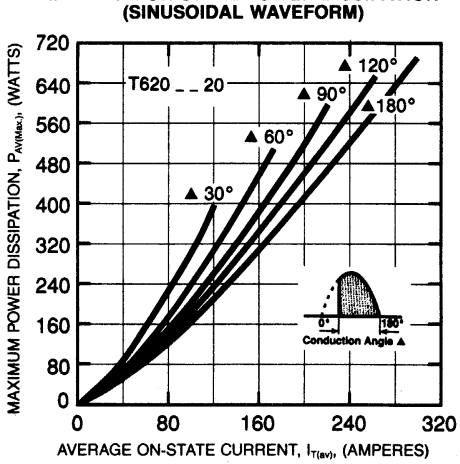
TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS (JUNCTION TO CASE)



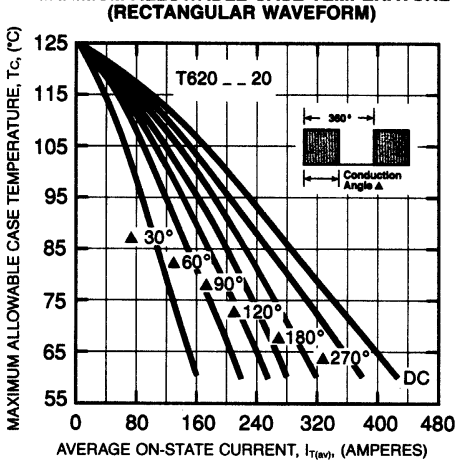
MAXIMUM ALLOWABLE CASE TEMPERATURE (SINUSOIDAL WAVEFORM)



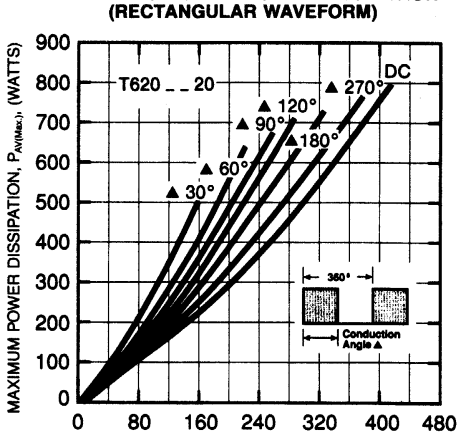
MAXIMUM ON-STATE POWER DISSIPATION (SINUSOIDAL WAVEFORM)



MAXIMUM ALLOWABLE CASE TEMPERATURE (RECTANGULAR WAVEFORM)



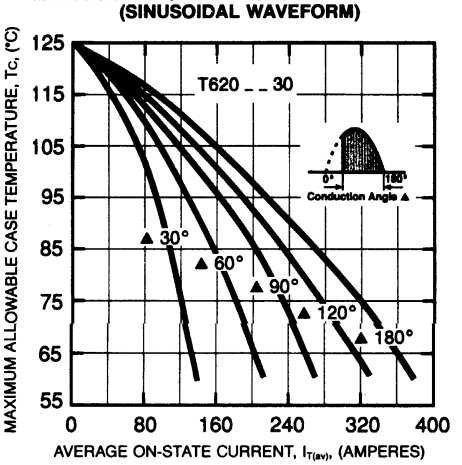
MAXIMUM ON-STATE POWER DISSIPATION (RECTANGULAR WAVEFORM)



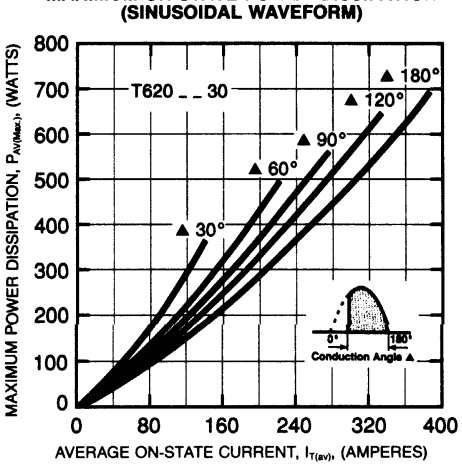
Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

T620
Phase Control SCR
200-300 Amperes, 1600 Volts

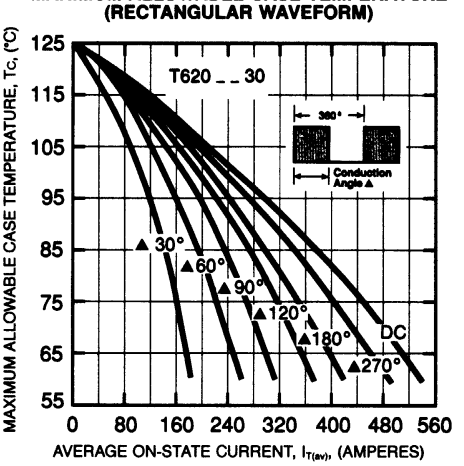
MAXIMUM ALLOWABLE CASE TEMPERATURE (SINUSOIDAL WAVEFORM)



MAXIMUM ON-STATE POWER DISSIPATION (SINUSOIDAL WAVEFORM)



MAXIMUM ALLOWABLE CASE TEMPERATURE (RECTANGULAR WAVEFORM)



MAXIMUM ON-STATE POWER DISSIPATION (RECTANGULAR WAVEFORM)