



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

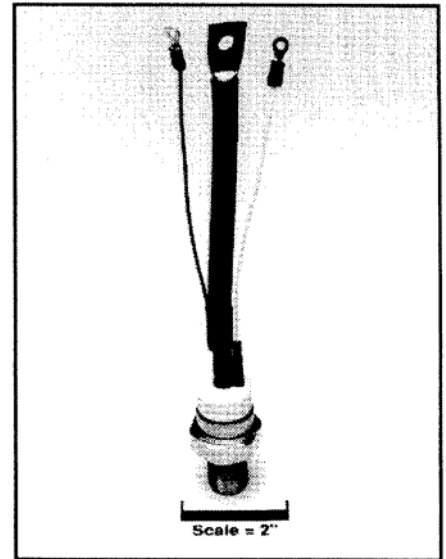
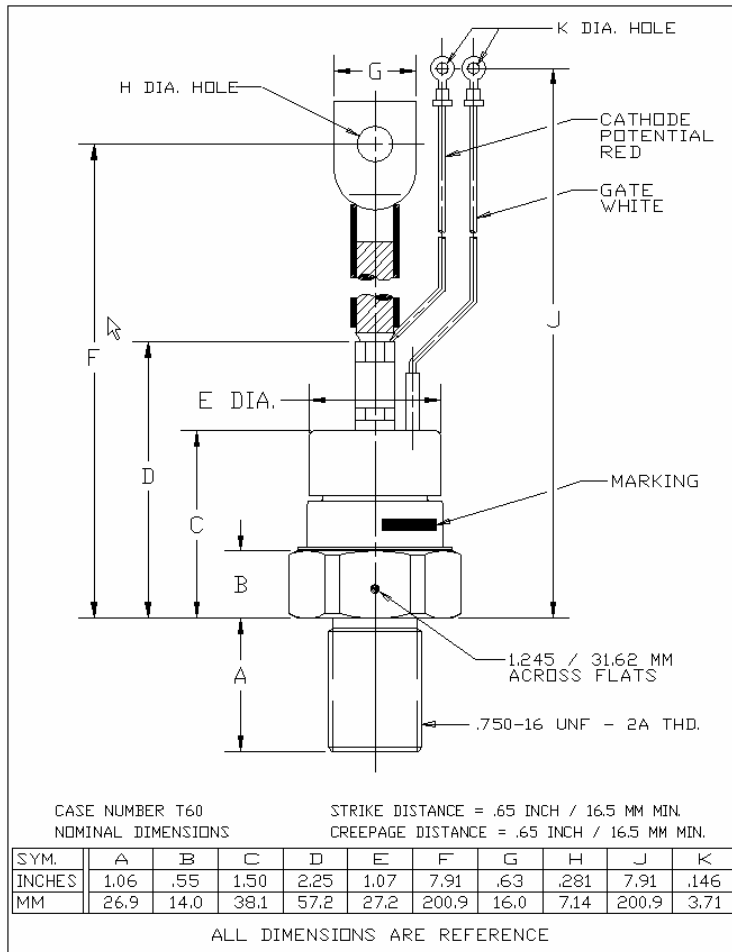
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**Phase Control SCR**  
**150-175 Amperes**  
**1600 Volts**



**T600 Phase Control SCR**  
 150-175 Amperes, 100-1600 Volts

**Description:**

Powerex Silicon Controlled Rectifiers (SCR) are designed for phase control applications. These are all-diffused, compression bonded encapsulated (CBE) devices employing the field-proven amplifying (di/damic) gate.

**Ordering Information:**

Select the complete 12 digit part number you desire from the table, i.e. T600121504BT is a 1200V, 150A Phase Control SCR.

Type	Voltage		Current		Turn off	Gate Current	Leads
	V <sub>DRM</sub> V <sub>RRM</sub>	Code	I <sub>T(av)</sub>	Code	t <sub>q</sub> Code	I <sub>GT</sub> Code	Code
T600	100	01	150	15	0	4	BT
	200	02	175	18			
	300	03			100 μsec (Typical)	150 mA	TO-93
	400	04					
	500	05					
	600	06					
	700	07					
	800	08					
	900	09					
	1000	10					
	1100	11					
	1200	12					
	1300	13					
	1400	14					
	1500	15					
	1600	16					

**Features:**

- Low On-State Voltage
- High di/dt
- High dv/dt
- Hermetic Packaging
- Excellent Surge and I<sup>2</sup>t Ratings

**Applications:**

- Power Supplies
- Battery Chargers
- Motor Control
- Welders

**Absolute Maximum Ratings**

	Symbol	T600 _ _ 15	T600 _ _ 18	Units
RMS On-State Current	$I_{T(RMS)}$	235	275	Amperes
Average On-State Current	$I_{T(av)}$	150	175	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/ $\mu$ s
Critical Rate-of-Rise of On-State Current (Repetitive)	$di/dt$	150	150	Amperes/ $\mu$ s
$I^2t$ (for Fusing), 8.3 milliseconds	$I^2t$	66,000	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	$^{\circ}C$
Operating Temperature	$T_J$	-40 to 125	-40 to 125	$^{\circ}C$
Mounting Torque		300	300	in.-lb.
Mounting Torque (Lubricated)		340	340	kg-cm

**Electrical and Thermal Characteristics**

Characteristics	Symbol	Test Conditions	T600 _ _ 15	T600 _ _ 18	Units
<b>Current—Conducting State Maximums</b>					
Peak On-State Voltage	$V_{TM}$	$T_J = 25^{\circ}C, I_T = 625A$	1.8	1.55	Volts
<b>T600</b>					
<b>Voltage—Blocking State Maximums</b>					
Forward Leakage, Peak	$I_{DRM}$	$T_J = 125^{\circ}C, V_{DRM} = \text{rated}$		25	mA
Reverse Leakage, Peak	$I_{RRM}$	$T_J = 125^{\circ}C, V_{RRM} = \text{rated}$		25	mA
<b>Switching</b>					
Typical Turn-Off Time	$t_q$			100	$\mu$ sec
Typical Turn-On Time	$t_{on}$	$I_T = 100A, V_D = 100V$		5	$\mu$ sec
Min. Critical $dv/dt$ exponential to $V_{DRM}$	$dv/dt$	$T_J = 125^{\circ}C$		300	$V/\mu$ sec
<b>Thermal</b>					
Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$			0.13	$^{\circ}C/Watt$
Case to Sink, Lubricated	$R_{\theta CS}$			0.075	$^{\circ}C/Watt$
<b>Gate—Maximum Parameters</b>					
Gate Current to Trigger	$I_{GT}$	$T_J = 25^{\circ}C, V_D = 12V$		150	mA
Gate Voltage to Trigger	$V_{GT}$	$T_J = 25^{\circ}C, V_D = 12V$		3	Volts
Non-Triggering Gate Voltage	$V_{GDM}$	$T_J = 125^{\circ}C, V_{DRM} = \text{rated}$		0.15	Volts
Peak Forward Gate Current	$I_{GTM}$			4	Amperes
Peak Reverse Gate Voltage	$V_{GRM}$			5	Volts

