



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

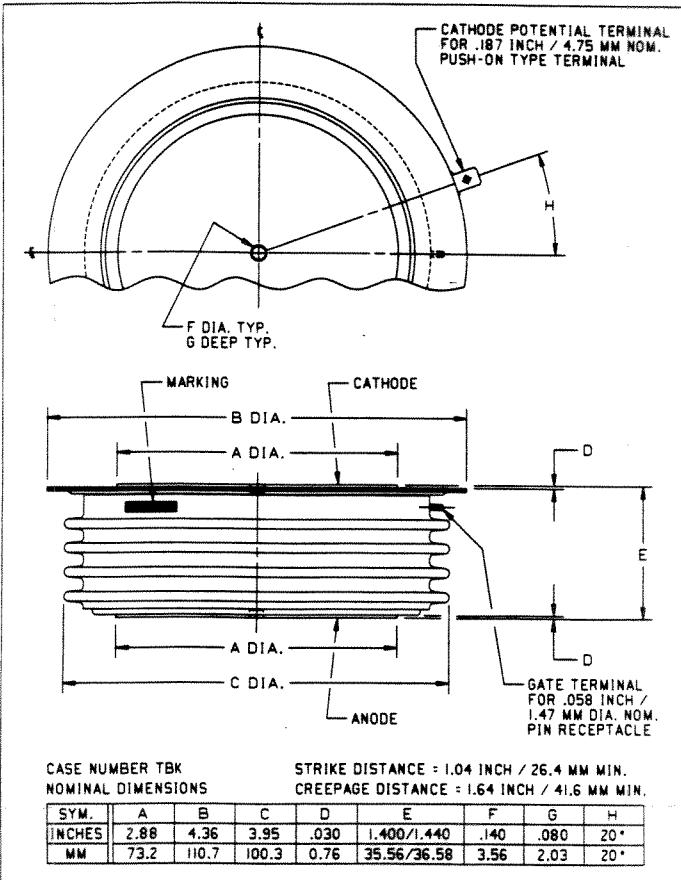
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Powerex, Inc., Hillis Street, Youngwood, Pennsylvania 15697 (412)925-7272
 Powerex Europe, S.A., 428 Avenue G. Durand, BP107, 72003 Le Mans, France(43) 72.75.15



Also available in thin package - 26mm

Fast Switching Thyristor
 2100 Amperes/Up to 2000 Volts

Description:

Powerex Silicon Controlled Rectifiers (SCR) are designed for high current, fast switching applications. The involute, interdigitated gate pattern optimizes the turn-on area for high di/dt capability.

Features:

- Fast Turn Off Times
- Low Recovered Charge
- High dv/dt Capability
- Low Forward Voltage
- Also Available in Thin Pack (26mm) for Higher Current Capability

Applications:

- Induction Heating
- UPS Systems
- AC Motor Controls

Ordering Information

Select the complete five or six digit device part number from the table below.

Type	Voltage Code	V _{DRM} V _{RRM}
C770	L	2000 V
	PN	1800 V
	PM	1600 V
	PD	1400 V
	PB	1200 V



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C770

Fast Switching SCR

2100 Amperes Avg / Up to 2000 Volts

Absolute Maximum Ratings

Characteristics	Symbol		Units
RMS On-State Current	$I_{T(RMS)}$	3300	A
Average Current	$I_{T(AV)}$	2100	A
Peak One Cycle Surge On-State Current (Non-Repetitive) 60Hz	I_{TSM}	38,000	A
Peak One Cycle Surge On-State Current (Non-Repetitive) 50Hz	I_{TSM}	35,000	A
Critical Rate-of-Rise of On-State Current (Non-Repetitive)	di/dt	800	A/ μ s
Critical Rate-of-Rise of On-State Current (Repetitive)	di/dt	300	A/ μ s
I^2t for Fusing for One Cycle	I^2t	6.0×10^6	A ² s
Peak Gate Power Dissipation	P_{GM}	16	W
Average Gate Power Dissipation	$P_{G(av)}$	3	W
Operating Temperature	T_{STG}	-40 to 125°C	°C
Storage Temperature	T_J	-40 to 150°C	°C
Mounting Force		8000 to 9000 35.5 - 40.0	lb. kN



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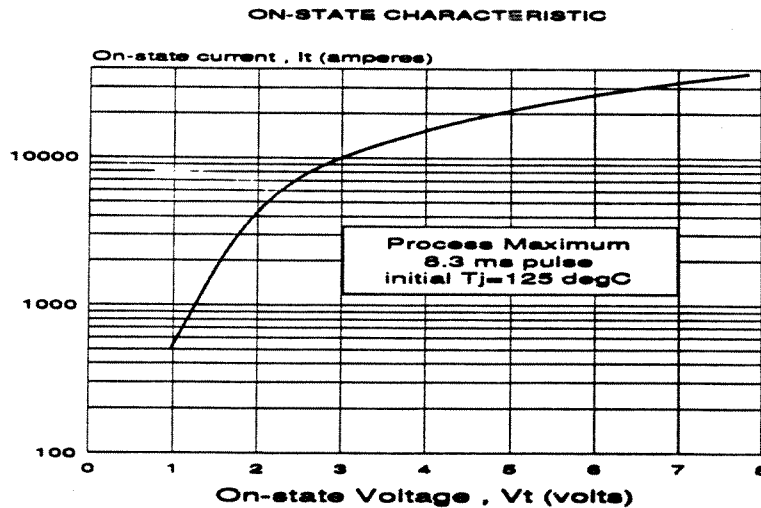
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Electrical Characteristics, $T_J = 25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Repetitive Peak Reverse Leakage Current	I_{RRM}	$T_J = 125^\circ\text{C}, V_R = V_{RRM}$			100	mA
Repetitive Peak Forward Leakage Current	I_{DRM}	$T_J = 125^\circ\text{C}, V_D = V_{DRM}$			100	mA
Peak On-State Voltage	V_{TM}	$T_J = 125^\circ\text{C}, I_{TM} = 2000\text{A}$ $t_p = 8.3\text{ms}$			1.55	V
Typical Delay Time	t_d	$V_D = 67\% V_{DRM}$			2	μs
Maximum Turn-Off Time	t_q	$T_J = 125^\circ\text{C}, I_T = 500\text{A}$ $V_R = 1.5\text{V}, di/dt = 25\text{A}/\mu\text{s}$ $V_D = 50\% V_{DRM}$ $dv/dt = 400\text{V}/\mu\text{s}$ linear to $67\% V_{DRM}$			100	μs
Minimum Critical dv/dt - Linear to VDRM	dv/dt	$T_J = 125^\circ\text{C}, V_{DRM} = 80\% \text{ rated}$	500			$\text{V}/\mu\text{s}$
Gate Trigger Current	I_{GT}	$V_D = 12\text{V}$			300	mA
Gate Trigger Voltage	V_{GT}	$V_D = 12\text{V}_L$			3.0	V
Peak Reverse Gate Voltage	V_{GRM}				5.0	V

Thermal Characteristics

Characteristics	Symbol	Min.	Typ.	Max.	Units
Maximum Thermal Resistance, Double Sided Cooling					
Junction to Case	$R_{\theta JC}$.012	$^\circ\text{C}/\text{W}$
Junction to Sink	$R_{\theta JS}$				$^\circ\text{C}/\text{W}$





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