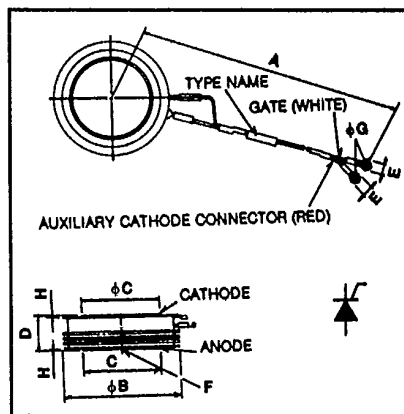


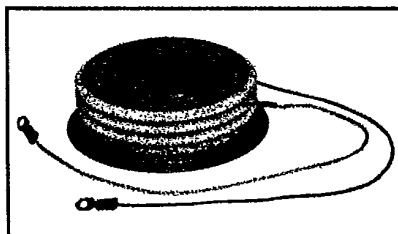
POWEREX**FT2500BH**

Powerex, Inc. Hills Street, Youngwood, Pennsylvania 15697 (412) 925-7272

Powerex Europe, S.A., 428 Ave. G. Durand, BP107, 72003 LeMans, France (43) 72.75.15

Phase Control SCR**2500 Amperes Avg
1600-2800 Volts****FT2500BH
Outline Drawing**

Dimensions	Inches	Metric
A	17.13 $\pm$.40	435 $\pm$ 10
ϕ B	4.73 Max	120 Max
ϕ C	3.15	80
D	1.38 $\pm$.02	35 $\pm$ 0.5
E	.30	7.5
F	M5	M5 $\times$ 0.8
ϕ G	.169	4.3
H	.015 Min	0.4 Min

**FT2500BH
Phase Control SCR
2500 Amperes/1600-2800 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
- ☐ Light Dimmers
- ☐ VAR Generators

Ordering Information

Example: Select the complete ten digit part number you desire from the table – i.e. FT2500BH-40 is a 2000 Volt, 2500 Ampere Phase Control SCR.

Type	Voltage		Current I_T (avg)
	V_{ORM} V_{RRM}	Code	
FT2500BH	1600	-32	2500
	1800	-36	
	2000	-40	
	2500	-50	
	2800	-56	



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FT2500BH

Phase Control SCR

2500 Amperes Avg/1600-2800 Volts

Absolute Maximum Ratings

	Symbol	FT2500BH	Units
RMS On-State Current	$I_{T(RMS)}$	3900	Amperes
Average On-State Current	$I_{T(av)}$	2500	Amperes
Peak One-Cycle Surge (Non Repetitive) On-State Current (60Hz)	I_{TSM}	50×10^3	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)	I_{TSM}	45.6×10^3	Amperes
Critical Rate-of-Rise of On-State Current (Non-Repetitive)	di/dt	600	Amperes/ μs
Critical Rate-of-Rise of On-State Current (Repetitive)	di/dt	250	Amperes/ μs
I^2t (for Fusing), one cycle at 60Hz	I^2t	1.0×10^7	A ² sec
Peak Gate Power Dissipation	P_{GM}	30	Watts
Average Gate Power Dissipation	$P_{G(av)}$	8	Watts
Storage Temperature	T_{STG}	-40 to 150	°C
Operating Temperature	T_J	-40 to 125	°C
Mounting Force [Ⓢ]		8800 to 11,400	lb.
Mounting Force [Ⓢ]		4000 to 5200	kg

Electrical and Thermal Characteristics

Characteristics	Symbol	Test Conditions	FT2500BH	Units
Voltage—Blocking State Maximums				
Forward Leakage, Peak	I_{DRM}	$T_J = 125^\circ C, V_{DRM}$ applied	300	mA
Reverse Leakage, Peak	I_{RRM}	$T_J = 125^\circ C, V_{RRM}$ applied	300	mA
Current—Conducting State Maximums				
Peak On-State Voltage	V_{TM}	$I_{TM} = 8000A, T_J = 125^\circ C$	2.20	Volts
Switching				
Min. Critical dv/dt exponential to V_{DRM}	dv/dt	$T_J = 125^\circ C, V_D = \frac{1}{2}V_{DRM}$	1000	V/ μsec
Thermal				
Maximum Thermal Resistance, [Ⓢ] double sided cooling Junction to Sink	$R_{\theta JS}$		.01	°C/Watt
Gate—Maximum Parameters				
Gate Current to Trigger	I_{GT}	$V_D = 6V, T_J = 25^\circ C, R_L = 2\Omega$	250	mA
Gate Voltage to Trigger	V_{GT}	$V_D = 6V, T_J = 25^\circ C, R_L = 2\Omega$	3.5	Volts
Non-Triggering Gate Voltage	V_{GDM}	$T_J = 125^\circ C, V_D = \frac{1}{2}V_{DRM}$	.20	Volts
Peak Forward Gate Current	I_{GTM}		6	Amperes
Peak Reverse Gate Voltage	V_{GRM}		10	Volts

[Ⓢ] Consult recommended mounting procedures.



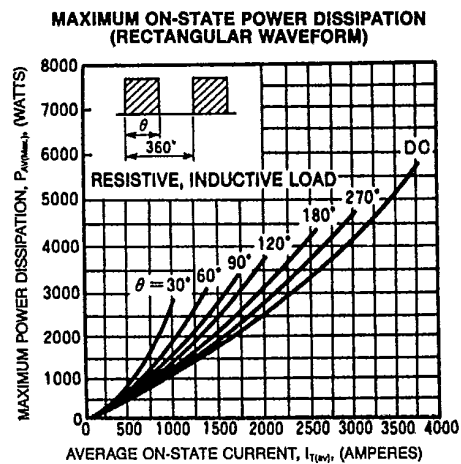
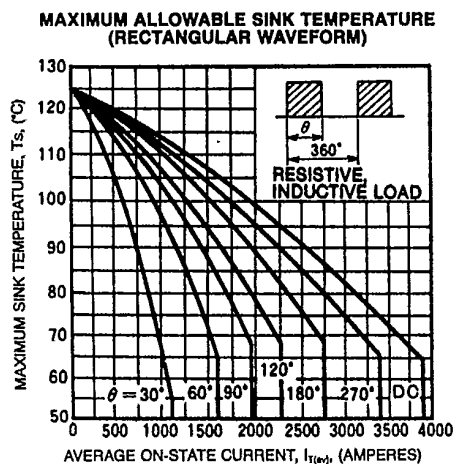
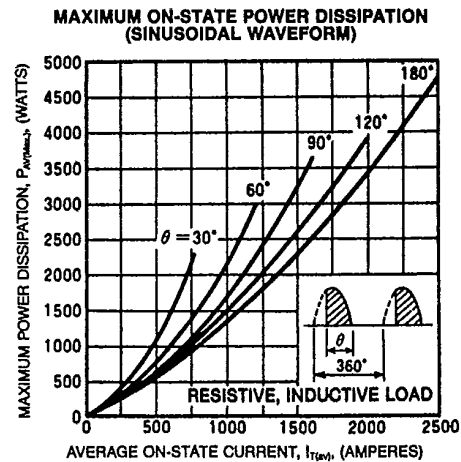
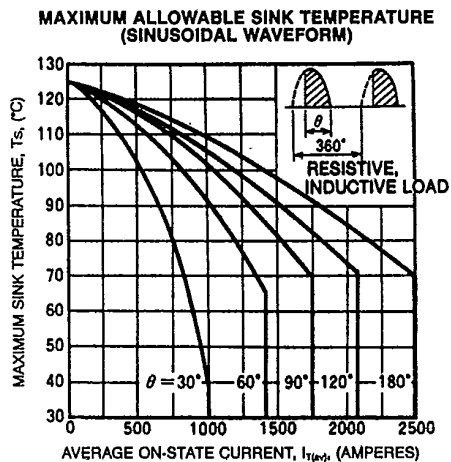
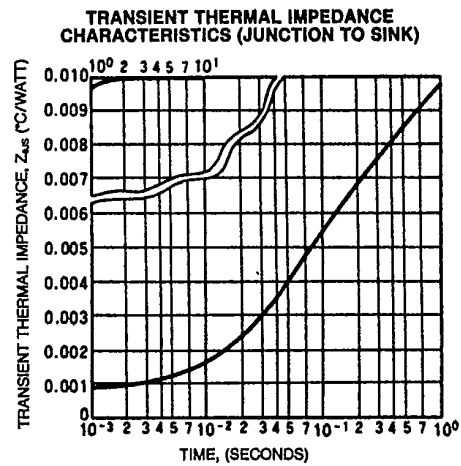
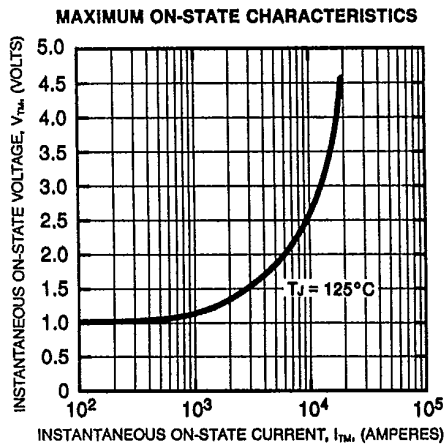
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