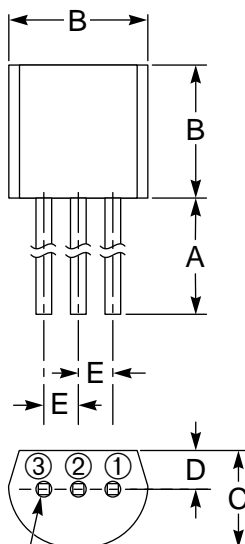


### Lead-Mount, Phase Control SCR 0.4 Amperes/400-600 Volts

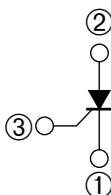
#### OUTLINE DRAWING



CIRCUMSCRIBE  
CIRCLE F - DIA.

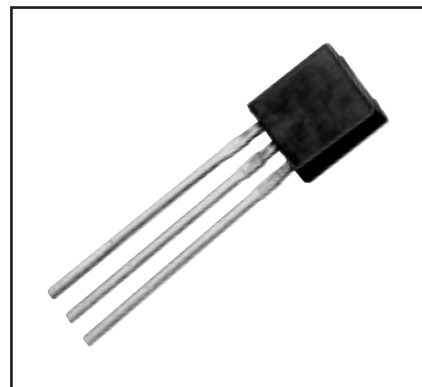
#### CONNECTION DIAGRAM

- ① CATHODE
- ② ANODE
- ③ GATE



Outline Drawing (Conforms to JEDEC TO-92)

Dimensions	Inches	Millimeters
A	0.5 Min.	12.5 Min.
B	0.20 Max.	5.0 Max.
C	0.15 Max.	3.9 Max.
D	0.05	1.3
E	0.05	1.25
F	0.028 Dia.	0.7 Dia.



#### Description:

The Powerex CR04AM Lead Mounted, Phase Control SCRs are glass-passivated thyristors for use in low power control and rectification. These devices are molded silicone plastic types.

#### Features:

- ☐ Glass Passivation
- ☐ Short Turn-on Time – Suitable to Pulse Use

#### Applications:

- ☐ Phase Control
- ☐ Triggering of High Power Thyristors, Pulse Generators and Counters
- ☐ Static Switch
- ☐ Motor Control
- ☐ Strobe Flasher

#### Ordering Information:

Example: Select the complete seven or eight digit part number you desire from the table - i.e. CR04AM-8 is a 400 Volt, 0.4 Ampere Phase Control SCR.

Type	V <sub>DRM</sub> /V <sub>RRM</sub> Volts	Code
CR04AM	400	-8
	600	-12



Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272

**CR04AM**

**Lead-Mount, Phase Control SCR**

0.4 Amperes/400-600 Volts

**Absolute Maximum Ratings,  $T_a = 25^\circ\text{C}$  unless otherwise specified**

Ratings	Symbol	CR04AM-8	CR04AM-12	Units
Repetitive Peak Off-state Voltage	$V_{\text{DRM}}$	400	600	Volts
Repetitive Peak Reverse Voltage	$V_{\text{RRM}}$	400	600	Volts
Non-repetitive Peak Reverse Voltage	$V_{\text{RSM}}$	500	720	Volts
DC Reverse Voltage	$V_{\text{R(DC)}}$	320	480	Volts
DC Forward Voltage	$V_{\text{D(DC)}}$	320	480	Volts
RMS On-state Current	$I_{\text{T(RMS)}}$	0.63	0.63	Amperes
Average On-state Current (Nominal, See Graphs) $T_a = 54^\circ\text{C}$	$I_{\text{T(avg)}}$	0.4	0.4	Amperes
Non-repetitive Peak Surge, On-state Current One Cycle (60 Hz)	$I_{\text{TSM}}$	10	10	Amperes
$I^2t$ for Fusing, $t = 8.3$ msec	$I^2t$	0.4	0.4	$\text{A}^2\text{sec}$
Peak Gate Power Dissipation	$P_{\text{GM}}$	0.5	0.5	Watts
Average Gate Power Dissipation	$P_{\text{G(avg)}}$	0.1	0.1	Watts
Peak Forward Gate Current	$I_{\text{FGM}}$	0.3	0.3	Amperes
Peak Forward Gate Voltage	$V_{\text{FGM}}$	6	6	Volts
Peak Reverse Gate Voltage	$V_{\text{RGM}}$	6	6	Volts
Storage Temperature	$T_{\text{stg}}$	-40 to 125	-40 to 125	$^\circ\text{C}$
Operating Temperature	$T_j$	-40 to 125	-40 to 125	$^\circ\text{C}$
Weight	—	0.23	0.23	Grams

## CR04AM

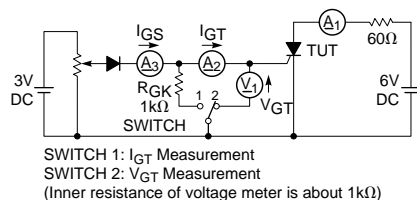
### Lead-Mount, Phase Control SCR

0.4 Amperes/400-600 Volts

#### Electrical and Thermal Characteristics, $T_j = 25^\circ\text{C}$ unless otherwise specified

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Voltage – Blocking State						
Peak Forward Leakage	$I_{\text{DRM}}$	$T_j = 125^\circ\text{C}$ , $V_D = V_{\text{DRM}}$	–	–	0.5	mA
Peak Reverse Leakage	$I_{\text{RRM}}$	$T_j = 125^\circ\text{C}$ , $V_R = V_{\text{RRM}}$	–	–	0.5	mA
Current – Conducting State						
Peak On-state Voltage	$V_{\text{TM}}$	$T_a = 25^\circ\text{C}$ , $I_{\text{TM}} = 1.2\text{A}$	–	–	1.2	Volts
DC Holding Current	$I_{\text{H}}$	$V_D = 12\text{V}$ , $R_{\text{GK}} = 1\text{k}\Omega$ , $T_j = 25^\circ\text{C}$	–	1.5	3.0	mA
Thermal Resistance, Junction-to-ambient	$R_{\text{th(j-a)}}$	–	–	–	150	$^\circ\text{C/W}$
Gate – Parameters						
Gate Current to Trigger†	$I_{\text{GT}}$	$V_D = 6\text{V}$ , $R_L = 60\Omega$ , $T_j = 25^\circ\text{C}$	1	–	100	$\mu\text{A}$
Gate Voltage to Trigger†	$V_{\text{GT}}$	$V_D = 6\text{V}$ , $R_L = 60\Omega$ , $T_j = 25^\circ\text{C}$	–	–	0.8	Volts
Non-triggering Gate Voltage	$V_{\text{GD}}$	$V_D = 1/2V_{\text{DRM}}$ , $R_{\text{GK}} = 1\text{k}\Omega$ , $T_j = 125^\circ\text{C}$	0.2	–	–	Volts

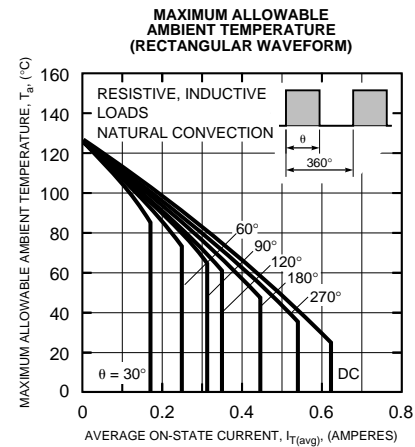
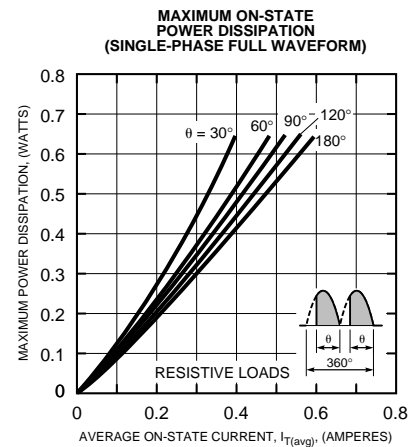
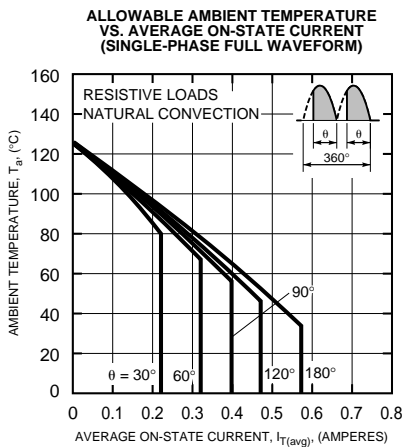
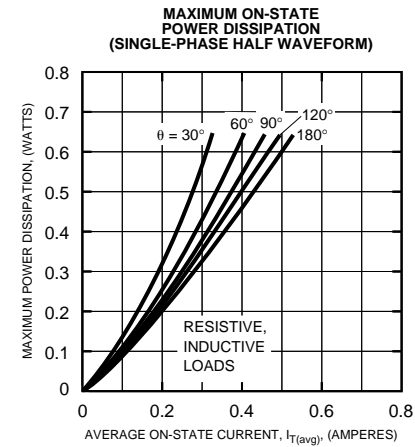
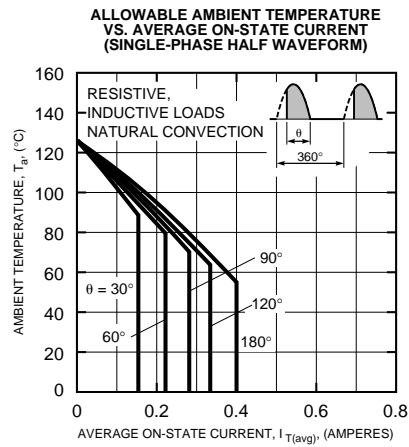
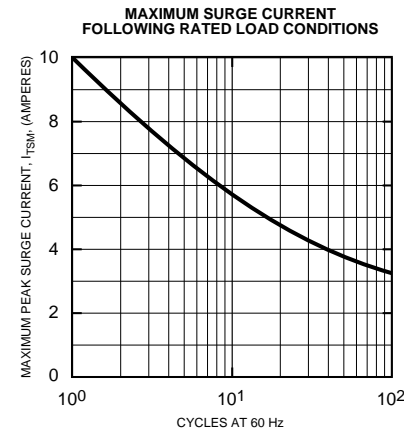
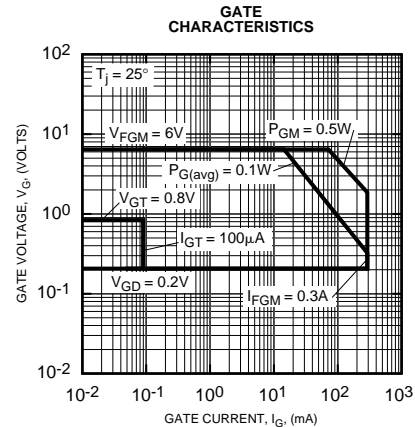
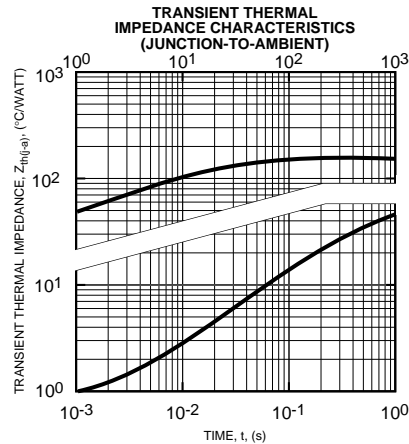
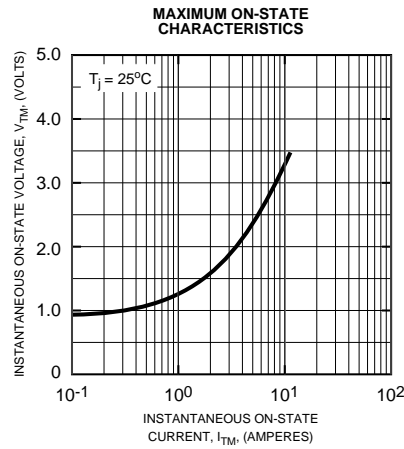
†  $I_{\text{GT}}$ ,  $V_{\text{GT}}$  Measurement Circuit



## CR04AM

### Lead-Mount, Phase Control SCR

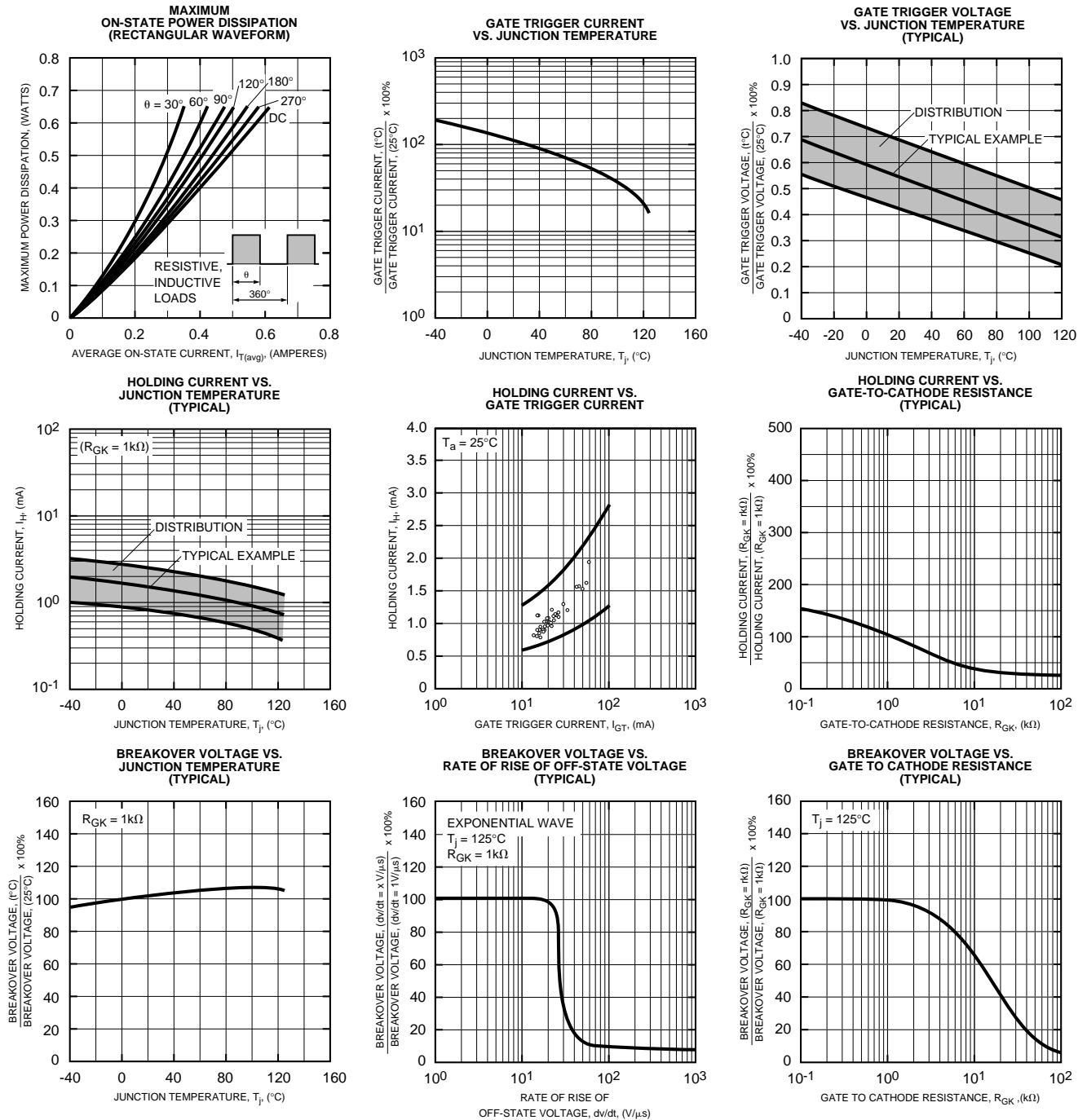
0.4 Amperes/400-600 Volts



## CR04AM

### Lead-Mount, Phase Control SCR

0.4 Amperes/400-600 Volts



## CR04AM

### Lead-Mount, Phase Control SCR

0.4 Amperes/400-600 Volts

