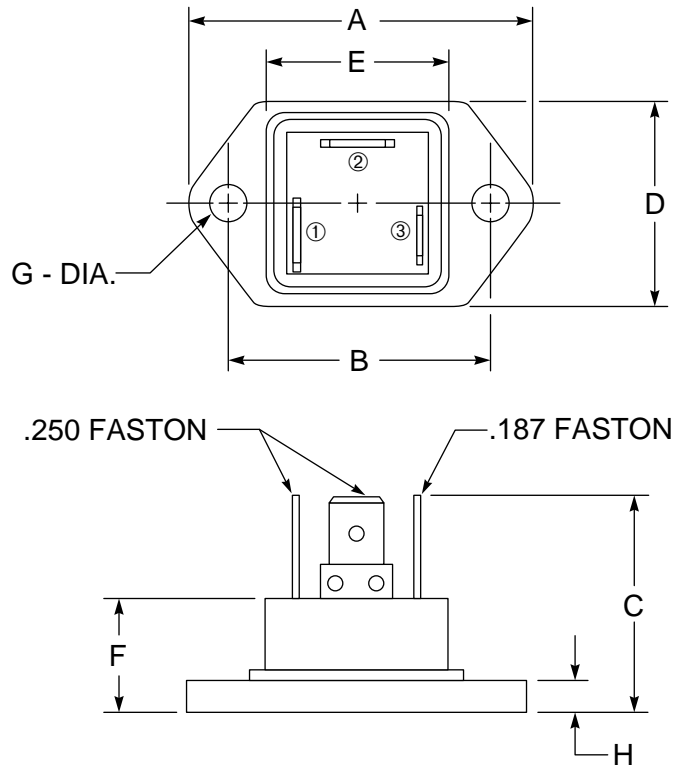


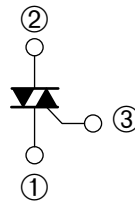
### Isolated Triac 16 Amperes/400-600 Volts

#### OUTLINE DRAWING



#### CONNECTION DIAGRAM

- ① T1 TERMINAL
- ② T2 TERMINAL
- ③ GATE TERMINAL



#### Description:

A triac is a solid state silicon AC switch which may be gate triggered from an off-state to an on-state for either polarity of applied voltage.

#### Features:

- Isolated TO-3 Mounting Flange
- Glass Passivation
- Quick Disconnect Terminals
- 2200 V<sub>RMS</sub> Isolation Voltage
- Selected for Inductive Loads

#### Applications:

- AC Switch
- Copiers
- Heating
- Motor Controls
- Lighting

#### Ordering Information:

Example: Select the complete eight, nine or ten digit part number you desire from the table - i.e. BCR16HM-8 is a 400 Volt, 16 Ampere Triac.

Type	V <sub>DRM</sub> Volts	Code	Inductive Load*
BCR16HM	400	-8	L
	600	-12	

\*For inductive load, add L.

#### Outline Drawing

Dimensions	Inches	Millimeters
A	1.54 Max.	39.2 Max.
B	1.181 ± 0.008	30.0 ± 0.2
C	0.89 Max.	22.5 Max.
D	0.91 Max.	23 Max.
E	0.80 Max.	20.2 Max.
F	0.43 Max.	11 Max.
G	0.165 Dia.	4.2 Dia.
H	0.10	2.6 Max.

## BCR16HM

### Isolated Triac

16 Amperes/400-600 Volts

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

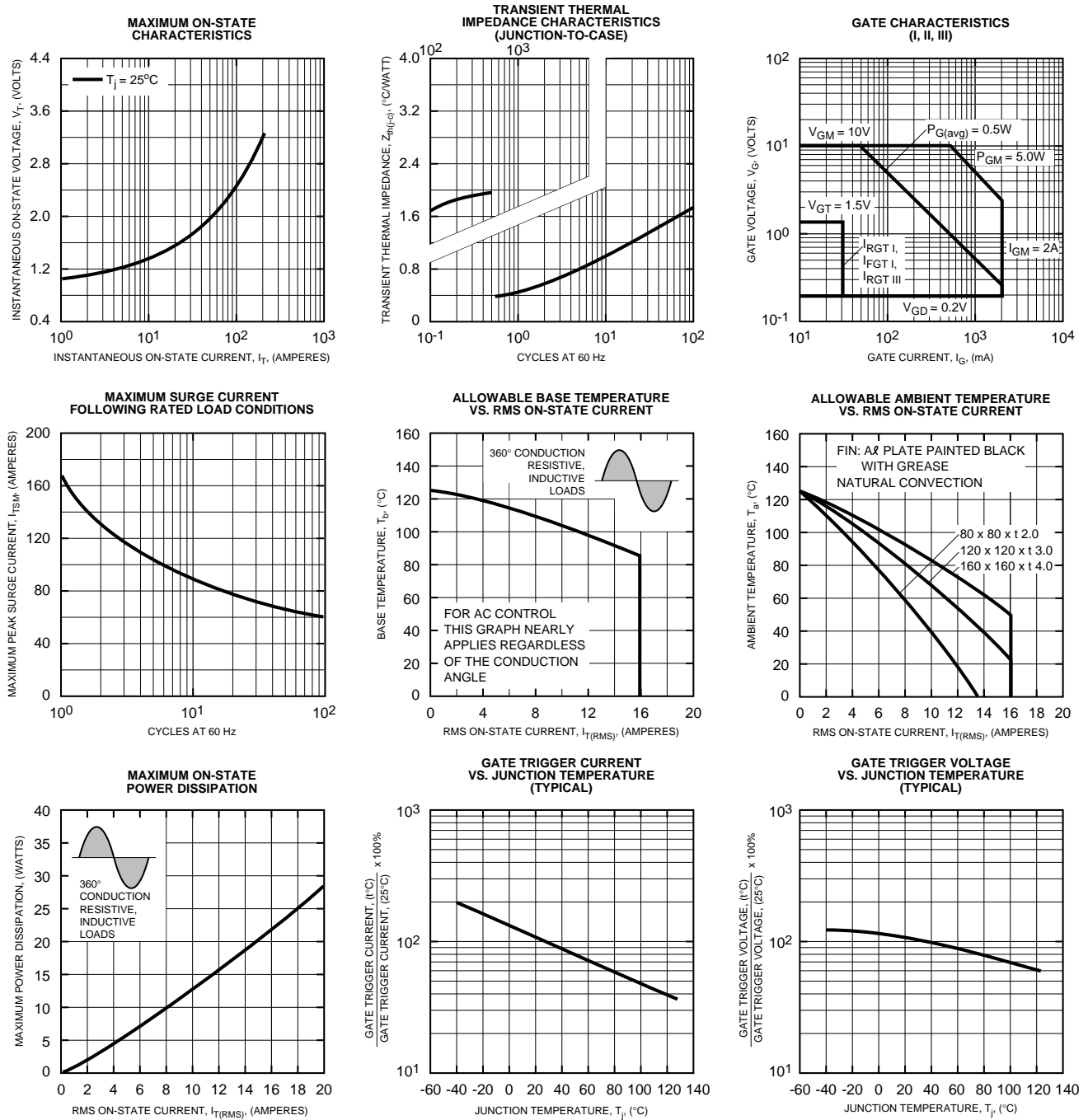
Ratings	Symbol	BCR16HM-8	BCR16HM-12	Units
Repetitive Peak Off-state Voltage	$V_{DRM}$	400	600	Volts
Non-repetitive Peak Off-state Voltage (Gate Open)	$V_{DSM}$	500	720	Volts
On-state Current, $T_a = 82^\circ\text{C}$	$I_T(\text{RMS})$	16	16	Amperes
Non-repetitive Peak Surge, One Cycle (60 Hz)	$I_{TSM}$	170	170	Amperes
$I^2t$ for Fusing, $t = 8.3\text{ msec}$	$I^2t$	121	121	$\text{A}^2\text{sec}$
Peak Gate Power Dissipation, $20\text{ }\mu\text{sec}$	$P_{GM}$	5	5	Watts
Average Gate Power Dissipation	$P_{G(\text{avg})}$	0.5	0.5	Watts
Peak Gate Current	$I_{GM}$	2	2	Amperes
Peak Gate Voltage	$V_{GM}$	10	10	Volts
Storage Temperature	$T_{stg}$	-40 to 125	-40 to 125	$^\circ\text{C}$
Operating Junction Temperature	$T_j$	-40 to 125	-40 to 125	$^\circ\text{C}$
Isolation Voltage	$V_{iso}$	2200	2200	Volts
Weight	-	26	26	Grams

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

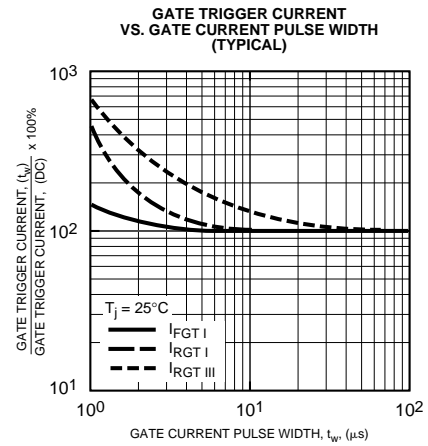
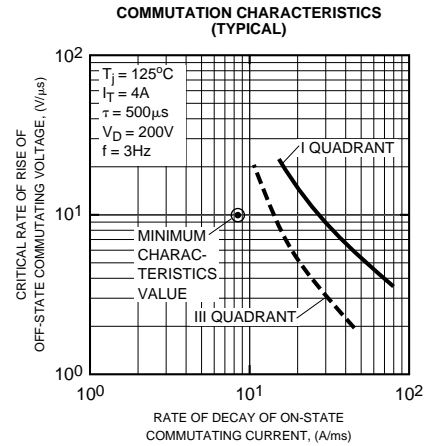
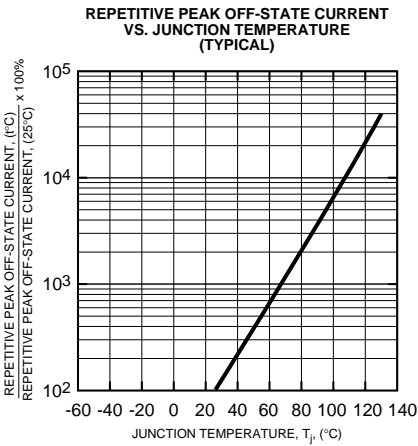
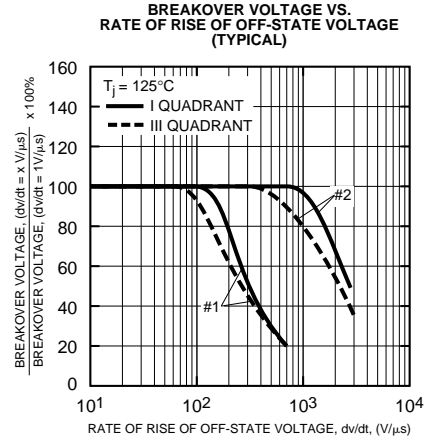
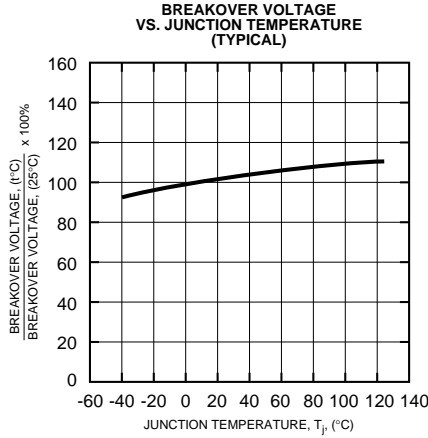
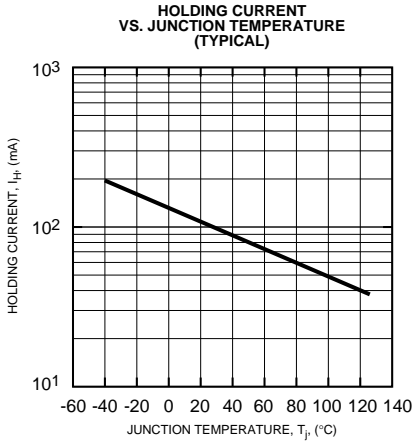
Characteristics	Symbol	Test Conditions (Trigger Mode)			BCR16HM			Units
		$V_D$	$R_L$	$T_j$	Min.	Typ.	Max.	
Gate Parameters								
DC Gate Trigger Current								
MT2+ Gate+	$I_{GT}$	6V	$6\Omega$	$25^\circ\text{C}$	-	-	30	mA
MT2+ Gate-		6V	$6\Omega$	$25^\circ\text{C}$	-	-	30	mA
MT2- Gate-		6V	$6\Omega$	$25^\circ\text{C}$	-	-	30	mA
DC Gate Trigger Voltage								
MT2+ Gate+	$V_{GT}$	6V	$6\Omega$	$25^\circ\text{C}$	-	-	1.5	Volts
MT2+ Gate-		6V	$6\Omega$	$25^\circ\text{C}$	-	-	1.5	Volts
MT2- Gate-		6V	$6\Omega$	$25^\circ\text{C}$	-	-	1.5	Volts
DC Gate Non-trigger Voltage								
All	$V_{GD}$	$1/2 V_{DRM}$	-	$125^\circ\text{C}$	2	-	-	Volts

Characteristics	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Thermal Resistance, Junction-to-base	$R_{th(j-b)}$	-	-	-	2	$^\circ\text{C}/\text{W}$
Voltage – Blocking State Repetitive Off-state Current	$I_{DRM}$	Gate Open Circuited, $V_D = V_{DRM}$ , $T_j = 125^\circ\text{C}$	-	-	3	mA
Current – Conducting State Peak On-state Voltage	$V_{TM}$	$T_c = 25^\circ\text{C}$ , $I_{TM} = 25\text{A Peak}$	-	-	1.6	Volts
Critical Rate-of-rise of Commutating Off-state Voltage (Commutating $dv/dt$ ) ▲ for inductive load (L) (Switching)	$(dv/dt)_c$	-	-	-	-	$\text{V}/\mu\text{s}$

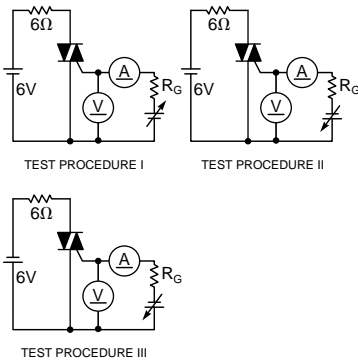
**BCR16HM**  
**Isolated Triac**  
 16 Amperes/400-600 Volts



**BCR16HM**  
**Isolated Triac**  
 16 Amperes/400-600 Volts



**GATE TRIGGER CHARACTERISTICS TEST CIRCUITS**



Δ Part Number	V <sub>DRM</sub> (Volts)	Commutating dv/dt, (dv/dt) <sub>c</sub> (V/μsec)		Test Condition	Commutating Voltage & Current Waveform (Inductive Load)
		Minimum	Maximum		
BCR16HM-8L	400	10		T <sub>J</sub> = 125°C,	
BCR16HM-12L	600	10		Rate of Decay On-state Commutating Current (di/dt) <sub>c</sub> = -8A/msec, Peak Off-state Voltage V <sub>D</sub> = 400V	