



**CE420860**  
**Three-Phase SCR/Diode**  
**Bridge Modules**  
**60 Amperes/800 Volts**  
**Features:**  
**Applications:**

**CE420860**  
**Three-Phase SCR/Diode**  
**Bridge Modules**  
**60 Amperes/800 Volts**

Type	Voltage Volts (x100)	Current Rating Amperes (60)
CE42	08	60

## Outline Drawing

Dimension	Inches	Millimeters
A	3.386	86
B	2.913±0.012	74±0.3
C	2.441	62
D	1.772±0.008	45±0.2
E	1.220	31
F	1.122	28.5
G	1.063	27
H	0.866	22
J	0.787	20
K	0.276	7
L	0.236	6
M	0.217±0.008 Dia.	5.5±0.2 Dia.
N	M5Metric	M5

## CE420860

### Three-Phase SCR/Diode Bridge Modules

#### 60 Amperes/800 Volts

#### Absolute Maximum Ratings

Characteristics	Symbol	CE420860	Units
Peak Forward Blocking Voltage	$V_{DRM}$	800	Volts
Transient Peak Forward Blocking Voltage (Non-Repetitive), $t < 5ms$	$V_{DSM}$	960	Volts
DC Forward Blocking Voltage	$V_{D(DC)}$	640	Volts
Peak Reverse Blocking Voltage	$V_{RRM}$	800	Volts
Transient Peak Reverse Blocking Voltage (Non-Repetitive), $t < 5ms$	$V_{RSM}$	960	Volts
DC Reverse Blocking Voltage	$V_{R(DC)}$	640	Volts
DC Output Current, $T_C = 80^\circ C$	$I_O$	60	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (60Hz)	$I_{TSM}, I_{FSM}$	500	Amperes
Peak One-Cycle Surge (Non-Repetitive) On-State Current (50Hz)	$I_{TSM}, I_{FSM}$	460	Amperes
$I^2t$ (for Fusing), 8.3 milliseconds	$I^2t$	1050	$A^2sec$
Critical Rate-of-Rise of On-State Current*	$di/dt$	100	Amperes/ $\mu s$
Peak Gate Power Dissipation	$P_{GM}$	5.0	Watts
Average Gate Power Dissipation	$P_{G(AV)}$	0.5	Watts
Peak Forward Gate Voltage	$V_{GFM}$	10	Volts
Peak Reverse Gate Voltage	$V_{GRM}$	5.0	Volts
Peak Forward Gate Current	$I_{GFM}$	2.0	Amperes
Storage Temperature	$T_{STG}$	-40 to 125	$^\circ C$
Operating Temperature	$T_j$	-40 to 125	$^\circ C$
Maximum Mounting Torque M5 Mounting Screw	—	17	in.-lb.
Maximum Mounting Torque M5 Terminal Screw	—	17	in.-lb.
Module Weight (Typical)	—	310	Grams
V Isolation	$V_{RMS}$	2000	Volts

\* $T_j = 125^\circ C$ ,  $I_G = 0.5A$ ,  $V_D = 1/2 V_{DRM}$

**CE420860**
**Three-Phase SCR/Diode Bridge Modules**

60 Amperes/800 Volts

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

Characteristics	Symbol	Test Conditions	CE420860	Units
<b>Blocking State Maximums</b>				
Forward Leakage Current, Peak	$I_{DRM}$	$T_j = 125^\circ\text{C}$ , $V_{DRM} = \text{Rated}$	4.0	mA
Reverse Leakage Current, Peak	$I_{RRM}$	$T_j = 125^\circ\text{C}$ , $V_{RRM} = \text{Rated}$	4.0	mA
<b>Conducting State Maximums</b>				
Peak On-State Voltage	$V_{FM}$	$I_{FM} = 75\text{A}$ , $I_{TM} = 75\text{A}$	1.4	Volts
<b>Switching Minimums</b>				
Critical Rate-of-Rise of Off-State Voltage	dv/dt	$T_j = 125^\circ\text{C}$ , $V_D = 2/3 V_{DRM}$	500	Volts/ $\mu\text{s}$
<b>Thermal Maximums</b>				
Thermal Resistance, Junction-to-Case	$R_{\theta(J-C)}$	Per Module	1.5	$^\circ\text{C/Watt}$
Thermal Resistance, Case-to-Sink (Lubricated)	$R_{\theta(C-S)}$	Per Module	0.06	$^\circ\text{C/Watt}$
<b>Gate Parameters Maximums</b>				
Gate Current-to-Trigger	$I_{GT}$	$V_D = 6\text{V}$ , $R_L = 2\Omega$	50	mA
Gate Voltage-to-Trigger	$V_{GT}$	$V_D = 6\text{V}$ , $R_L = 2\Omega$	2.0	Volts
Non-Trigginger Gate Voltage	$V_{GDM}$	$T_j = 125^\circ\text{C}$ , $V_D = 1/2 V_{DRM}$	0.25	Volts