

# FAST RECOVERY DIODE MODULES

## Fast Recovery Modules

### Applications Include:

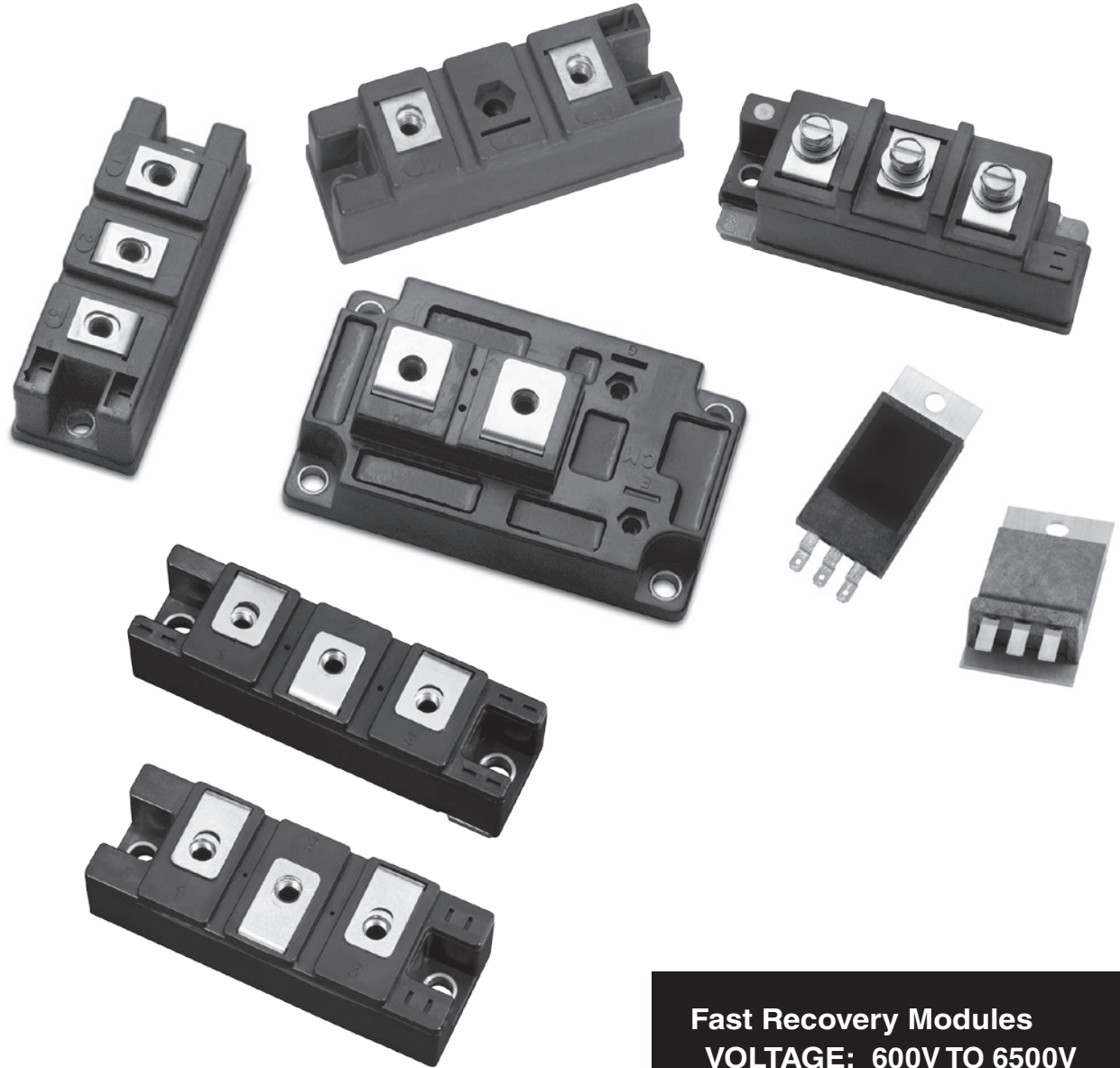
- Motor Controls
- Power Supplies
- Switching Power Supplies
- Transportation
- Welding

### Circuit Configurations:

- Single
- Dual
- Common Anode
- Common Cathode

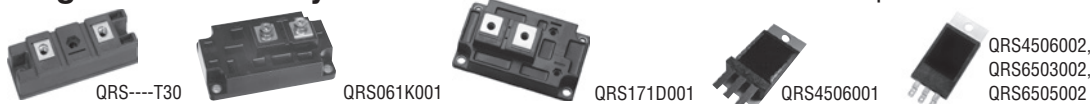
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Dual Fast Recovery Diodes .....	I-4
Common Anode Fast Recovery Diodes .....	I-6
Common Cathode Fast Recovery Diodes .....	I-6
Outline Drawings .....	I-7



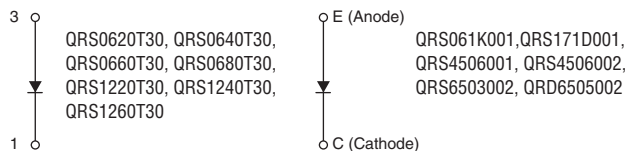
**Fast Recovery Modules**  
**VOLTAGE: 600V TO 6500V**  
**CURRENT: 33A TO 1800A**

**Single Fast Recovery Diodes** (Refer to device datasheets at [www.pwr.com](http://www.pwr.com) for test conditions.)



Type	V <sub>RRM</sub> Volts (V <sub>RSM</sub> = V <sub>RRM</sub> + 100V)	I <sub>F(av)</sub> /T <sub>C</sub> Amperes/°C (180° sin)	NORTH AMERICAN		V <sub>FM</sub> /I <sub>FM</sub> Volts/Amperes (T <sub>J</sub> = 25°C)	t <sub>rr</sub>			R <sub>th(j-c)</sub> °C/W	R <sub>th(c-s)</sub> °C/W	T <sub>J(max)</sub> °C	Weight	Outline Drawings	
			I <sub>FSM</sub> Amperes (8.3ms, T <sub>J(max)</sub> , 100% V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (8.3ms, T <sub>J(max)</sub> , 100% V <sub>RRM</sub> Reapplied)		t <sub>rr</sub> ns	at I <sub>F</sub> Amperes	di/dt Amperes/μs					Number	Page
<b>Single Fast Diodes</b>														
QRS0620T30	600	66 / 80	1670	11,620	2.8 / 200	110	200	-400	0.35	0.04	150	220	5	I-8
QRS0640T30	600	128 / 80	2400	24,000	2.8 / 400	110	400	-800	0.18	0.04	150	220	5	I-8
QRS0660T30	600	194 / 80	3600	54,000	2.8 / 600	110	600	-1200	0.12	0.04	150	220	5	I-8
QRS0680T30	600	267 / 80	4800	96,000	2.8 / 800	110	800	-1600	0.09	0.04	150	220	5	I-8
QRS061K001	600	420 / 80	8350	290,000	2.8 / 1000	150	1000	-2000	0.07	0.04	150	400	10	I-10
QRS1220T30	1200	88 / 80	1670	11,620	3.5 / 200	250	200	-400	0.18	0.04	150	220	5	I-8
QRS1240T30	1200	180 / 80	3350	46,760	3.5 / 400	250	400	-800	0.09	0.04	150	220	5	I-8
QRS1260T30	1200	276 / 80	5000	104,100	3.5 / 600	250	600	-1200	0.06	0.04	150	220	5	I-8
QRS171D001	1700	700 / 80	2400	24,000	2.5 / 700	2000	1200	-2400	0.04	0.04	150	400	14	I-11
QRS4506001	4500	60 / 100	120	1900	5.6 / 60	230	67	-800	0.15	0.10	150	21	16	I-12
QRS4506002	4500	60 / 100	120	1900	5.6 / 60	230	67	-800	0.15	0.10	150	20	17	I-12
QRS6503002	6500	33 / 100	TBD	TBD	4.0 / 33	1000	33	-110	0.15	0.10	150	20	17	I-12
QRS6505002	6500	50 / 100	TBD	TBD	3.2 / 50	1700	50	-230	0.14	0.10	150	20	17	I-12

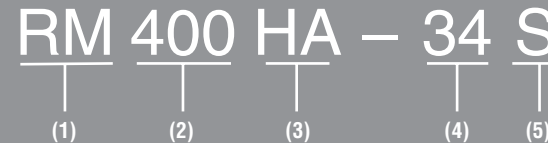
**Single Fast Diodes**



**Numbering System**

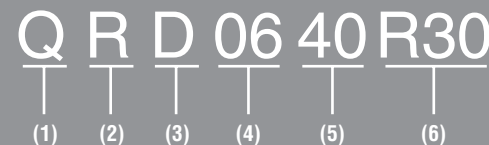
**FAST RECOVERY DIODE MODULES**

RM400HA-34S is a 400A, 1700V Single Switch Fast Recovery Diode Module



- (1) Type Number:  
RM = Rectifier Module
- (2) Current Rating
- (3) Package Style:  
DB = Dual, Standard Package  
DG = Dual, High Isolation  
DY = Dual Switch  
HA = Single Switch  
HC = Single, AISiC Baseplate  
HE = Single, Small Package
- (4) Voltage Rating (x 50):  
12 = 600V  
24 = 1200V  
34 = 1700V  
66 = 3300V  
90 = 4500V  
130 = 6500V
- (5) Factory Designation

QRD0640R30 is a 600V, 400A Dual Switch RoHs Compliant Fast Recovery Module



- (1) Product Line
- (2) Type Number:  
R = Rectifier
- (3) Package Style:  
S = Single Switch  
D = Dual Switch  
C = Common Cathode  
F = Common Anode  
J = Inverse Configuration
- (4) Voltage Rating (x 100)
- (5) Current (x 10)
- (6) Serial Designation  
R30 = 30mm Terminal Height, RoHS Compliant  
T30 = 30mm Terminal Height, Not RoHS Compliant  
001 = Special Designation

**Single Fast Recovery Diodes** (Refer to device datasheets at [www.pwr.x.com](http://www.pwr.x.com) for test conditions.)

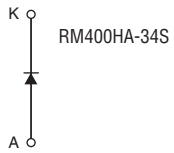


RM400HA-34S

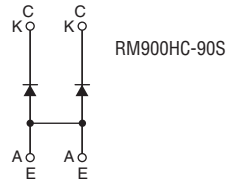
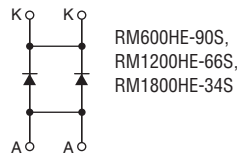
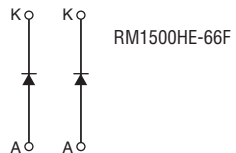
Type	V <sub>RRM</sub> Volts (V <sub>RSM</sub> = V <sub>RRM</sub> + 100V)	I <sub>F(av)</sub> /T <sub>c</sub> Amperes/°C (180° sin)	EUROPEAN		NORTH AMERICAN		V <sub>FM</sub> /I <sub>FM</sub> Volts/Amperes (25°C)	R <sub>th(j-c)</sub> °C/W	R <sub>th(c-s)</sub> °C/W	T <sub>j(max)</sub> °C	T <sub>rr</sub> 150°C ns	T <sub>rr</sub> 25°C ns	Outline Drawings		
			I <sub>FSM</sub> Amperes (10ms, T <sub>j(max)</sub> , No V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (10ms, T <sub>j(max)</sub> , No V <sub>RRM</sub> Reapplied)	I <sub>FSM</sub> Amperes (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)							Number	Page	
<b>Single Fast Diode</b>															
RM400HA-34S	1700	400 / 90	—	—	8000	260,000	2.5 / 400	0.08	0.04	150	500	—	2	I-7	

Type	V <sub>RRM</sub> Volts (V <sub>RSM</sub> = V <sub>RRM</sub> + 100V)	I <sub>F(av)</sub> Amperes (180° sin)	NORTH AMERICAN		V <sub>FM</sub> /I <sub>FM</sub> Volts/Amperes (25°C)	R <sub>th(j-c)</sub> °C/W	R <sub>th(c-s)</sub> °C/W	T <sub>j(max)</sub> °C	T <sub>rr</sub> 150°C ns	T <sub>rr</sub> 25°C ns	Outline Drawings		
			I <sub>FSM</sub> Amperes (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)							Number	Page	
<b>Single High Voltage Fast Diodes</b>													
RM1800HE-34S	1700	1800	9600	384,000	2.9 / 1800	0.022	0.017	150	1800	—	3	I-7	
RM1200HE-66S	3300	1200	9600	384,000	3.2 / 1200	0.02	0.015	150	1400 (at 125°C)	—	3	I-7	
RM1500HE-66F	3300	1500	12000	598,000	2.6 / 1500	0.0145	0.015	150	900	—	18	I-12	
RM600HE-90S	4500	600	4800	95,600	4.8 / 600	0.039	0.015	150	900 (at 125°C)	—	3	I-7	
RM900HC-90S	4500	900	7200	216,000	4.8 / 900	0.021	0.016	150	1000 (at 125°C)	—	4	I-8	

**Single Fast Diodes**



**Single High Voltage Fast Diodes**



**Dual Fast Recovery Diodes** (Refer to device datasheets at [www.pwr.com](http://www.pwr.com) for test conditions.)



RM400DY-24S



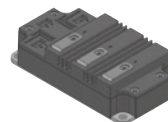
QRD0620R30,  
QRD1220R30



QRD0630R30,  
QRD0640R30,  
QRD1230R30,  
QRD1240R30



QRD3310001,  
QRD3310002,  
QRD3310003,  
QRD3310005



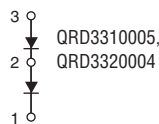
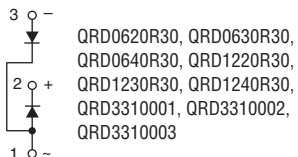
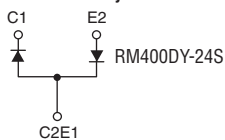
QRD3320004

Type	V <sub>RRM</sub> Volts (V <sub>RSM</sub> = V <sub>RRM</sub> + 100V)	I <sub>F(av)</sub> /T <sub>c</sub> Amperes/°C (180° sin)	EUROPEAN		NORTH AMERICAN		V <sub>FM</sub> /I <sub>FM</sub> Volts/Amperes (25°C)	R <sub>th(j-c)</sub> °C/W	R <sub>th(c-s)</sub> °C/W	T <sub>j(max)</sub> °C	T <sub>rr</sub> 150°C ns	T <sub>rr</sub> 25°C ns	Outline Drawings Number	Page
			I <sub>FSM</sub> Amperes (10ms, T <sub>j(max)</sub> , No V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (10ms, T <sub>j(max)</sub> , No V <sub>RRM</sub> Reapplied)	I <sub>FSM</sub> Amperes (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)								
<b>Dual Fast Recovery Diodes</b>														
RM400DY-24S	1200	400	—	—	2000	16,600	2.6 / 400	—	0.018	150	290 (@125°C)	250	12	I-10
<b>Dual High Voltage Fast Recovery Diodes</b>														
RM1200DB-34S	1700	1200	—	42,700	—	180,300	2.1 / 1200	0.02	0.024	150	850 (@125°C)	—	13	I-11
RM400DY-66S	3300	400	3200	96,000	—	42,700	4.29 / 400	0.072	0.036	150	—	1200	6	I-8
RM600DY-66S	3300	600	4800	—	6400	96,000	4.55 / 600	0.048	0.024 Typ.	150	—	1200	6	I-8
RM1000DC-66F	3300	1000	—	—	20,800	440	2.2 / 1000	0.024	—	150	850	550	11	I-10
RM1200DB-66S	3300	1200	—	—	9600	384,000	2.8 / 1200	0.018	0.016	150	—	750	4	I-8
RM1500DC-66F	3300	1500	—	—	14,000	980,000	2.2 / 3000	0.016	0.0175	150	850	550	11	I-10
RM900DB-90S	4500	900	—	—	9.4	170,000	4.0 / 900	0.02	0.016	150	—	900	4	I-8

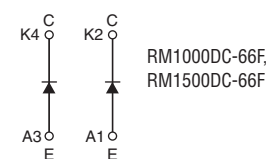
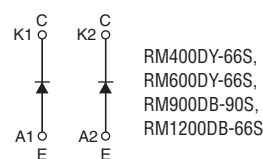
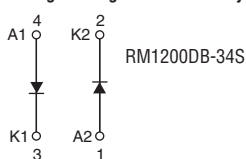
Type	V <sub>RRM</sub> Volts (V <sub>RSM</sub> = V <sub>RRM</sub> + 100V)	I <sub>dc</sub> /T <sub>c</sub> Amperes/°C (180° sin)	NORTH AMERICAN		V <sub>FM</sub> /I <sub>FM</sub> Volts/Amperes (T <sub>j</sub> = 25°C)	t <sub>rr</sub>			R <sub>th(j-c)</sub> °C/W	R <sub>th(c-s)</sub> °C/W	T <sub>j(max)</sub> °C	Weight	Outline Drawings Number	Page
			I <sub>FSM</sub> Amperes (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)		t <sub>rr</sub> ns	at I <sub>f</sub> Amperes	di/dt Amperes/μs						
<b>Dual Fast Recovery Diodes</b>														
QRD0620R30	600	140 / 80	TBD	TBD	2.3 / 150	120	100	TBD	0.205	0.2	150	150	1	I-7
QRD0630R30	600	210 / 80	TBD	TBD	2.2 / 150	120	150	TBD	0.137	0.2	150	180	8	I-9
QRD0640R30	600	280 / 80	TBD	TBD	2.2 / 200	120	200	TBD	0.103	0.2	150	180	8	I-9
QRD1220R30	1200	140 / 80	1700	12,000	3.2 / 100	150	100	TBD	0.15	0.2	150	150	1	I-7
QRD1230R30	1200	210 / 80	2550	27,000	3.2 / 150	150	150	TBD	0.1	0.2	150	180	8	I-9
QRD1240R30	1200	280 / 80	3400	48,000	3.2 / 200	150	200	TBD	0.075	0.2	150	180	8	I-9
QRD3310001	3300	86 / 80	TBD	TBD	4.3 / 100	1200	100	-200	0.12	0.05	150	250	9	I-9
QRD3310002	3300	60 / 80	TBD	TBD	4.3 / 100	1200	100	-200	0.2	0.05	150	250	9	I-9
QRD3310003*	3300	86 / 80	TBD	TBD	4.3 / 100	1200	100	-200	0.12	0.005	150	250	9	I-9
QRD3310005	3300	86 / 80	TBD	TBD	4.3 / 100	1200	100	-200	0.12	0.05	150	250	9	I-9
QRD3320004	3300	260 / 80	1900	TBD	3.0 / 200	500	165	TBD	0.096	0.018	150	800	15	I-11

\*RoHS Compliant

**Dual Fast Recovery Diodes**



**Dual High Voltage Fast Recovery Diodes**



**Dual Fast Recovery Diodes** (Refer to device datasheets at [www.pwr.com](http://www.pwr.com) for test conditions.)



QRJ0620R30,  
QRJ1220R30



QRJ0630R30,  
QRJ0640R30,  
QRJ1230R30,  
QRJ1240R30

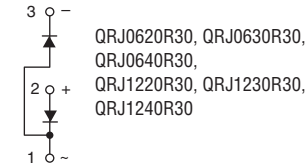
Type	V <sub>RRM</sub> Volts (V <sub>RSM</sub> = V <sub>RRM</sub> + 100V)	I <sub>DC</sub> /T <sub>C</sub> Amperes/°C (180° sin)	NORTH AMERICAN		V <sub>FM</sub> /I <sub>FM</sub> Volts/Amperes (T <sub>J</sub> = 25°C)	t <sub>rr</sub>			R <sub>th(j-c)</sub> °C/W	R <sub>th(c-s)</sub> °C/W	T <sub>j(max)</sub> °C	Weight	Outline Drawings	
			I <sub>FSM</sub> Amperes (8.3ms, T <sub>J(max)</sub> , 100% V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (8.3ms, T <sub>J(max)</sub> , 100% V <sub>RRM</sub> Reapplied)		t <sub>rr</sub> ns	at I <sub>F</sub> Amperes	di/dt Amperes/μs					Number	Page
QRJ0620R30	600	140 / 80	TBD	TBD	2.3 / 150	120	100	TBD	0.205	0.2	150	150	1	I-7
QRJ0630R30	600	210 / 80	TBD	TBD	2.2 / 150	120	150	TBD	0.137	0.2	150	180	8	I-9
QRJ0640R30	600	280 / 80	TBD	TBD	2.2 / 200	120	200	TBD	0.103	0.2	150	180	8	I-9
QRJ1220R30	1200	140 / 80	1700	12,000	3.2 / 100	150	100	TBD	0.15	0.2	150	150	1	I-7
QRJ1230R30	1200	210 / 80	2550	27,000	3.2 / 150	150	150	TBD	0.1	0.2	150	180	8	I-9
QRJ1240R30	1200	280 / 80	3400	48,000	3.2 / 200	150	200	TBD	0.075	0.2	150	180	8	I-9

**Dual Fast Recovery Diodes - Inverse Configuration**

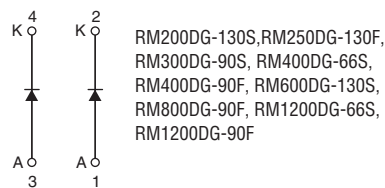
Type	V <sub>RRM</sub> Volts (V <sub>RSM</sub> = V <sub>RRM</sub> + 100V)	I <sub>F(av)</sub> Amperes (180° sin)	NORTH AMERICAN		V <sub>FM</sub> /I <sub>FM</sub> Volts/Amperes (25°C)	R <sub>th(j-c)</sub> °C/W	R <sub>th(c-s)</sub> °C/W	T <sub>j(max)</sub> °C	T <sub>rr</sub> 125°C ns	T <sub>rr</sub> 25°C ns	Outline Drawings	
			I <sub>FSM</sub> Amperes (8.3ms, T <sub>J(max)</sub> , 100% V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (8.3ms, T <sub>J(max)</sub> , 100% V <sub>RRM</sub> Reapplied)							Number	Page
RM400DG-66S	3300	400	3200	42,700	2.8 / 400	0.054	0.048	150	1,000	—	7	I-9
RM1200DG-66S	3300	1200	9600	384,000	2.8 / 1200	0.018	0.016	150	1,000	—	7	I-9
RM300DG-90S	4500	300	2400	24,000	4.8 / 300	0.066	0.048	150	1,000	700	7	I-9
RM400DG-90F	4500	400	3400	58,000	2.55 / 400	0.0585	0.048	150	900	700	7	I-9
RM800DG-90F	4500	800	6500	211,000	2.55 / 800	0.030	0.024	150	900	700	7	I-9
RM1200DG-90F	4500	1200	9800	480,000	2.55 / 1200	0.020	0.016	150	900	700	7	I-9
RM200DG-130S	6500	200	1600	11,000	4.0 / 200	0.066	0.048	150	1,000	—	7	I-9
RM250DG-130F	6500	250	2350	28,000	3.3 / 500	0.075	0.048	150	600	500	7	I-9
RM600DG-130S	6500	600	4800	96,000	4.0 / 600	0.022	0.016	150	1,000	1,000	7	I-9

**Dual High Isolation High Voltage Fast Recovery Diodes**

**Dual Fast Recovery Diodes - Inverse Configuration**



**Dual High Isolation High Voltage Fast Recovery Diodes**



**Common Anode Fast Recovery Diodes** (Refer to device datasheets at [www.pwr.com](http://www.pwr.com) for test conditions.)



QRC0620R30, QRC1220R30,  
QRF0620R30, QRF1220R30



QRC0630R30, QRF0630R30,  
QRC0640R30, QRF0640R30,  
QRC1230R30, QRF1230R30,  
QRC1240R30, QRF1240R30



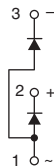
QRC3310001,  
QRC3310002

Type	V <sub>RRM</sub> Volts (V <sub>RSM</sub> = V <sub>RRM</sub> + 100V)	I <sub>DC</sub> /T <sub>C</sub> Amperes/°C (180° sin)	NORTH AMERICAN		V <sub>FM</sub> /I <sub>FM</sub> Volts/Amperes (T <sub>J</sub> = 25°C)	t <sub>rr</sub>			R <sub>th(j-c)</sub> °C/W	R <sub>th(c-s)</sub> °C/W	T <sub>j(max)</sub> °C	Weight	Outline Drawings	
			I <sub>FSM</sub> Amperes (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)		t <sub>rr</sub> ns	at I <sub>f</sub> Amperes	di/dt Amperes/μs					Number	Page
QRF0620R30	600	140 / 80	TBD	TBD	2.3 / 150	120	100	TBD	0.205	0.2	150	150	1	I-7
QRF0630R30	600	210 / 80	TBD	TBD	2.2 / 150	120	150	TBD	0.137	0.2	150	180	8	I-9
QRF0640R30	600	280 / 80	TBD	TBD	2.2 / 200	120	200	TBD	0.103	0.2	150	180	8	I-9
QRF1220R30	1200	140 / 80	1700	12,000	3.2 / 100	150	100	TBD	0.15	0.2	150	150	1	I-7
QRF1230R30	1200	210 / 80	2550	27,000	3.2 / 150	150	150	TBD	0.1	0.2	150	180	8	I-9
QRF1240R40	1200	280 / 80	3400	48,000	3.2 / 200	150	200	TBD	0.075	0.02	150	180	8	I-9

**Common Cathode Fast Recovery Diodes** (Refer to device datasheets at [www.pwr.com](http://www.pwr.com) for test conditions.)

Type	V <sub>RRM</sub> Volts (V <sub>RSM</sub> = V <sub>RRM</sub> + 100V)	I <sub>DC</sub> /T <sub>C</sub> Amperes/°C (180° sin)	NORTH AMERICAN		V <sub>FM</sub> /I <sub>FM</sub> Volts/Amperes (T <sub>J</sub> = 25°C)	t <sub>rr</sub>			R <sub>th(j-c)</sub> °C/W	R <sub>th(c-s)</sub> °C/W	T <sub>j(max)</sub> °C	Weight	Outline Drawings	
			I <sub>FSM</sub> Amperes (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)	i <sup>2</sup> t A <sup>2</sup> sec (8.3ms, T <sub>j(max)</sub> , 100% V <sub>RRM</sub> Reapplied)		t <sub>rr</sub> ns	at I <sub>f</sub> Amperes	di/dt Amperes/μs					Number	Page
QRC0620R30	600	140 / 80	TBD	TBD	2.3 / 150	120	100	TBD	0.205	0.2	150	150	1	I-7
QRC0630R30	600	210 / 80	TBD	TBD	2.2 / 150	120	150	TBD	0.137	0.2	150	180	8	I-9
QRC0640R30	600	280 / 80	TBD	TBD	2.2 / 200	120	200	TBD	0.103	0.2	150	180	8	I-9
QRC1220R30	1200	140 / 80	1700	12,000	3.2 / 100	150	100	TBD	0.15	0.2	150	150	1	I-7
QRC1230R30	1200	210 / 80	2550	27,000	3.2 / 150	150	150	TBD	0.1	0.2	150	180	8	I-9
QRC1240R30	1200	280 / 80	3400	48,000	3.2 / 200	150	200	TBD	0.075	0.2	150	180	8	I-9
QRC3310001	3300	86 / 80	TBD	TBD	4.3 / 100	1200	100	-200	0.12	0.05	150	250	9	I-9
QRC3310002	3300	86 / 80	TBD	TBD	4.3 / 100	1200	100	-200	0.2	0.05	150	250	9	I-9

**Common Anode Fast Recovery Diodes**



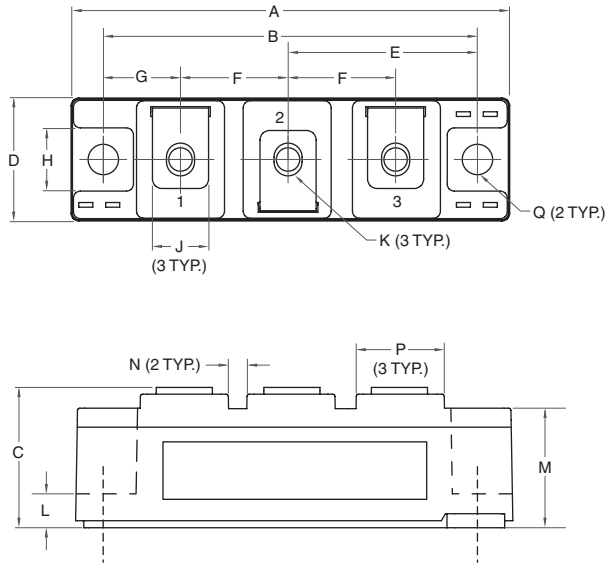
QRF0620R30, QRF0630R30,  
QRF0640R30,  
QRF1220R30, QRF1230R30,  
QRF1240R40

**Common Cathode Fast Recovery Diodes**



QRC0620R30, QRC0630R30,  
QRC0640R30,  
QRC1220R30, QRC1230R30,  
QRC1240R30  
QRC3310001, QRC3310002

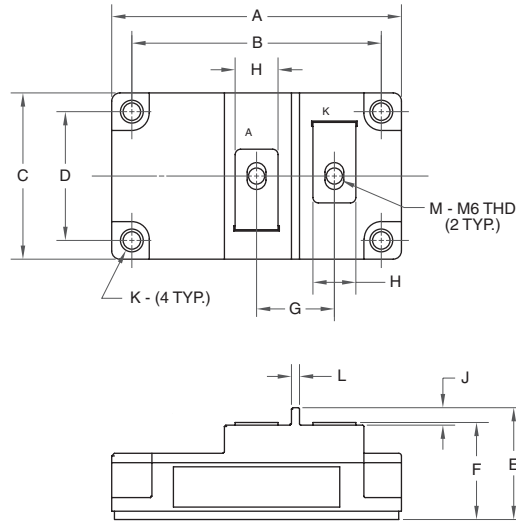
**1** QR\_0620R30, QR\_1220R30



Dim.	Inches	Millimeters
A	3.68	93.5
B	3.150±0.01	80.0±0.25
C	1.18	30.0
D	1.02	26.0
E	1.59	40.5
F	0.90	23.0
G	0.65	16.5
H	0.51	13.0

Dim.	Inches	Millimeters
J	0.47	12.0
K	M5 Metric	M5
L	0.30	7.5
M	1.0	25.4
N	0.16	4.0
P	0.75	19.0
Q	0.256 Dia.	6.5 Dia.

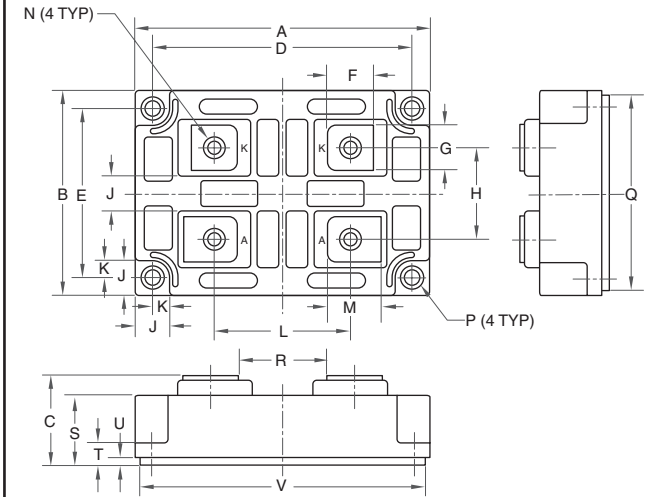
**2** RM400HA-34S



Dim.	Inches	Millimeters
A	4.25 Max.	108.0 Max.
B	3.661±0.012	93.0±0.3
C	2.44 Max.	62.0 Max.
D	1.89±0.012	48.0±0.3
E	1.63 Max.	41.5 Max.
F	1.42 Max.	36.0 Max.

Dim.	Inches	Millimeters
G	1.14	29.0
H	0.63	16.0
J	0.26	6.5
K	0.256 Dia.	6.5 Dia.
L	0.12	3.0
M	M6 Metric	M6

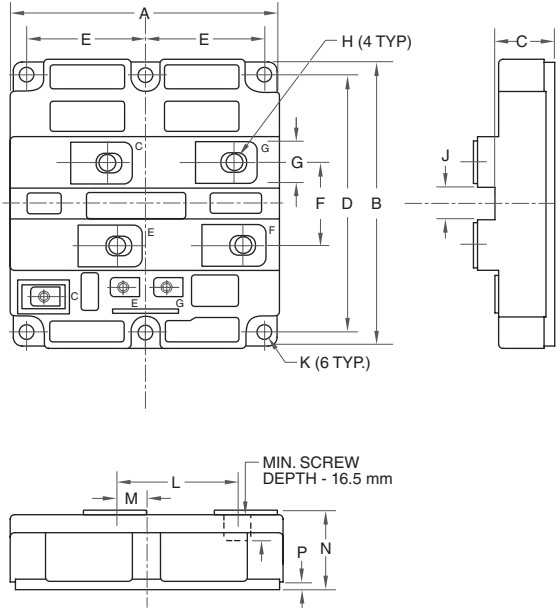
**3** RM600HE-90S, RM1200HE-66S, RM1800HE-34S



Dim.	Inches	Millimeters
A	5.12+0.04/-0.0	130.0+1.0/-0.0
B	3.54±0.04	90.0±1.0
C	1.50+0.04/-0.0	38.0+1.0/-0.0
D	4.49±0.012	114.0±0.3
E	2.91±0.012	74.0±0.3
F	0.81	20.5
G	0.79	20.0
H	1.57±0.2	40.0±0.5
J	0.59	15.0
K	0.28	7.0

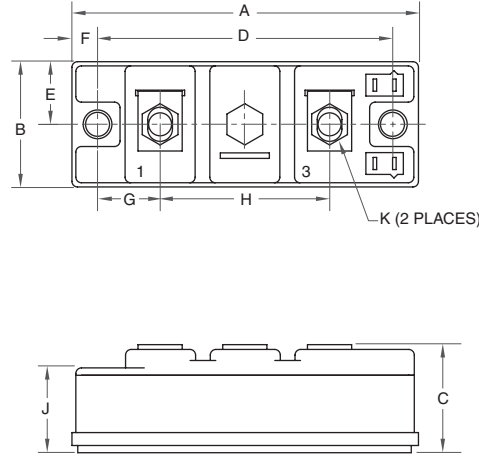
Dim.	Inches	Millimeters
L	2.4±0.2	61.5±0.5
M	0.94	24.0
N	M8 Metric	M8
P	0.26 Dia.	6.5 Dia.
Q	3.37	85.5
R	1.56	39.5
S	1.17	29.7
T	0.37	9.3
U	0.12	3.0
V	4.94	125.5

**4** RM900DB-90S, RM900HC-90S, RM1200DB-66S



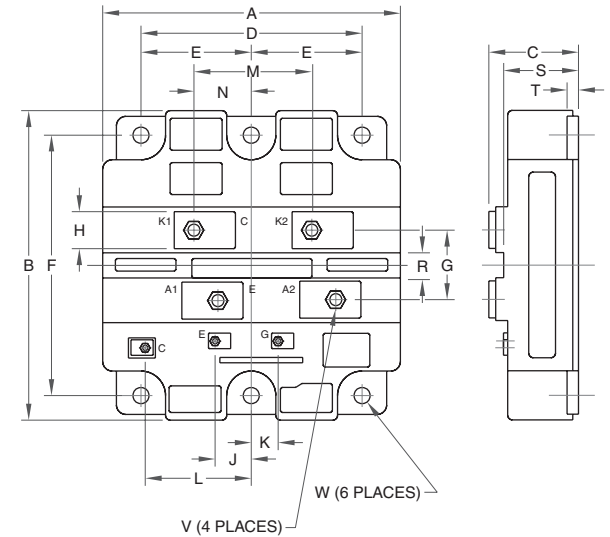
Dim.	Inches	Millimeters	Dim.	Inches	Millimeters
A	5.12	130.0	J	0.59	15.0
B	5.51	140.0	K	0.28 Dia.	7.0 Dia.
C	1.16	29.5	L	2.4	61.5
D	4.88±0.01	124.0±0.25	M	0.71	18.0
E	2.24±0.01	57.0±0.25	N	1.5+0.04/-0.0	38.0+1/0/-0.0
F	1.57	40.0	P	0.2	5.0
G	0.79	20.0			
H	M8 Metric	M8			

**5** QRS0620T30, QRS0640T30, QRS0660T30, QRS0680T30, QRS1220T30, QRS1240T30, QRS1260T30



Dim.	Inches	Millimeters	Dim.	Inches	Millimeters
A	3.70	94.0	F	0.28	6.99
B	1.34	34.0	G	0.67	17.1
C	1.18	30.0	H	1.81	46.0
D	3.15	80.0	J	0.91	23.0
E	0.67	17.0	K	M6 x 1.0 Metric	M6 x 1.0

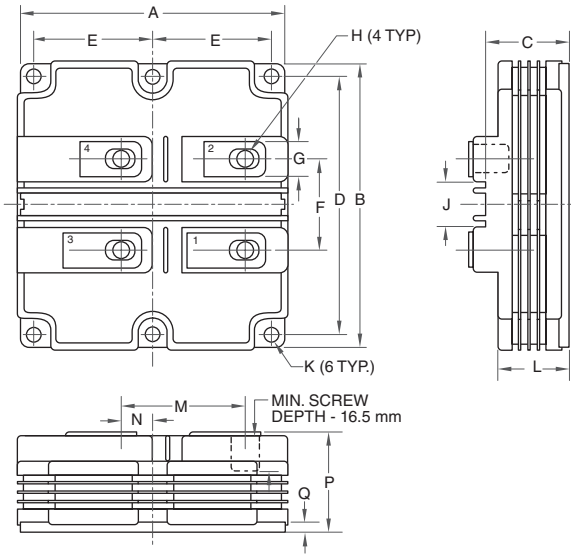
**6** RM400DY-66S, RM600DY-66S



Dim.	Inches	Millimeters	Dim.	Inches	Millimeters
A	5.12	130.0	M	2.42	61.5
B	5.51	140.0	N	0.71	18.0
C	1.50+0.8/-0.0	38.0+2.0/-0.0	R	0.59	15.0
D	4.49	114.0	S	1.18	30.0
E	2.24±0.01	57.0±0.25	T	0.20	5.0
F	4.88±0.01	124.0±0.25	V	M8 Metric	M8
G	1.58	40.0	W	0.28 Dia.	7.0 Dia.
H	0.79	20.0			



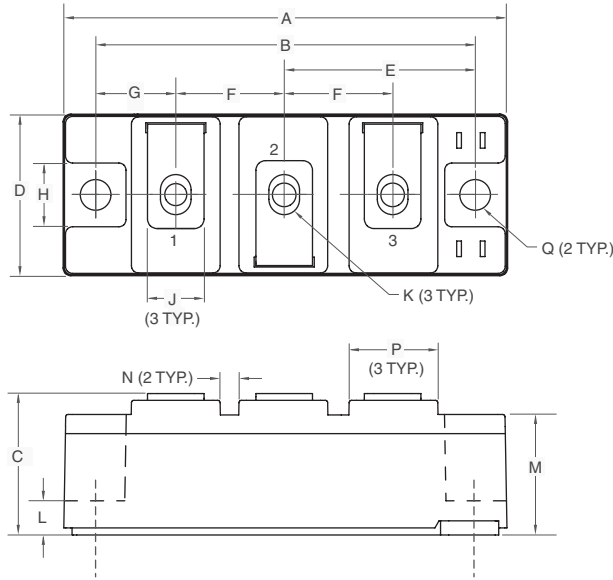
**7** RM200DG-130S, RM250DG-130F, RM300DG-90S,  
RM400DG-66S, RM400DG-90F, RM600DG-130S,  
RM800DG-90F, RM1200DG-66S, RM1200DG-90F



Dim.	Inches	Millimeters
A	5.12±0.2	130.0±0.5
B	5.51±0.2	140.0±0.5
C	1.59±0.2	40.4±0.5
D	4.88±0.01	124.0±0.25
E	2.24±0.01	57.0±0.25
F	1.73±0.2	44.0±0.5
G	0.67±0.004	17.0±0.1
H	M8 Metric	M8

Dim.	Inches	Millimeters
J	0.87±0.012	22.0±0.3
K	0.28 Dia.	7.0 Dia.
L	1.35±0.2	34.4±0.5
M	2.41±0.2	61.2±0.5
N	0.65±0.2	16.5±0.5
P	1.89+0.04/-0.0	48.0+1/0/-0.0
Q	0.2±0.006	5.0±0.15

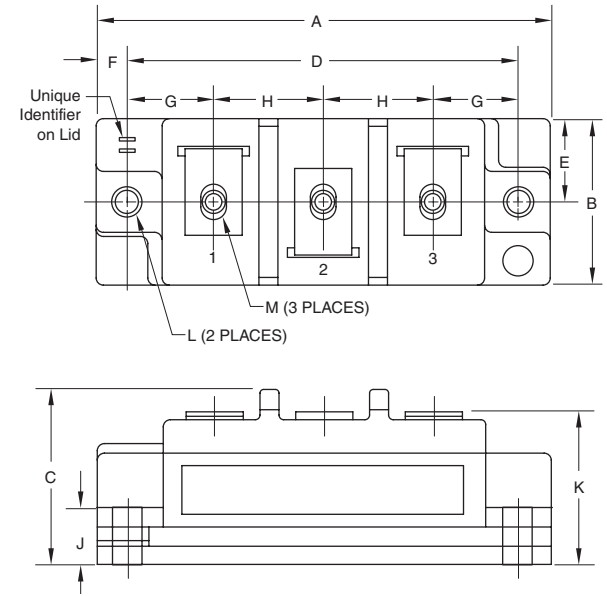
**8** QR\_0630R30, QR\_0640R30,  
QR\_1230R30, QR\_1240R30



Dim.	Inches	Millimeters
A	3.70	94.0
B	3.150±0.01	80.0±0.25
C	1.18	30.0
D	1.34	34.0
E	1.57	40.0
F	0.90	23.0
G	0.67	17.0
H	0.51	13.0

Dim.	Inches	Millimeters
J	0.47	12.0
K	M6 Metric	M6
L	0.30	7.5
M	1.0	25.4
N	0.16	4.0
P	0.75	19.0
Q	0.256 Dia.	6.5 Dia.

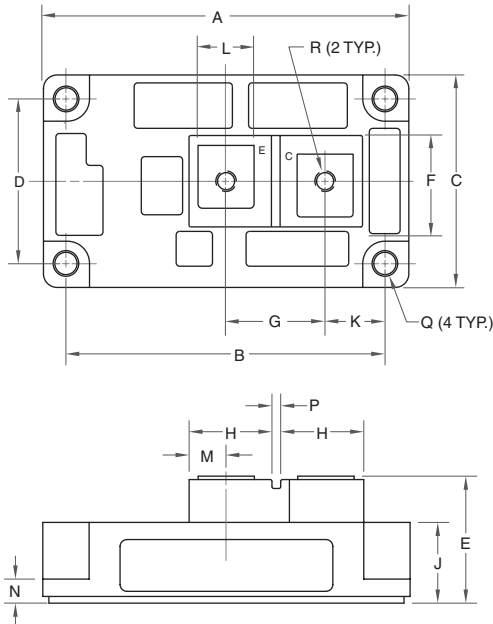
**9** QRC3310001, QRC3310002,  
QRD3310001, QRD3310002,  
QRD3310003, QRD3310005



Dim.	Inches	Millimeters
A	3.70	94.0
B	1.34	34.0
C	1.40	35.6
D	3.15	80.0
E	0.67	17.0
F	0.28	6.99

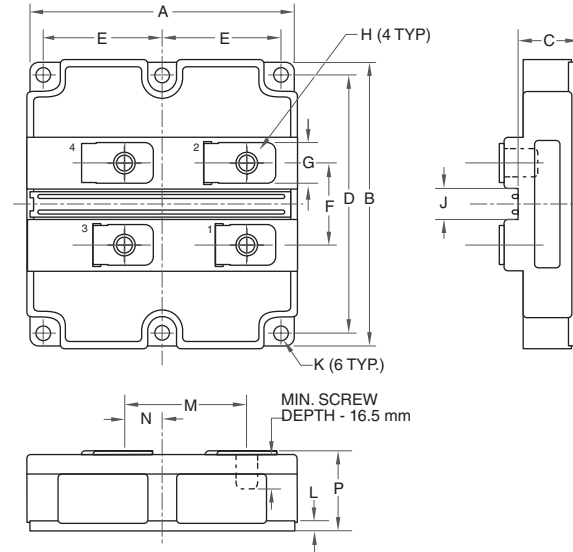
Dim.	Inches	Millimeters
G	0.67	17.1
H	0.91	23.0
J	0.36	9.0
K	1.18	30.0
L	0.216	5.5
M	#10-32	#10-32

# 10 QRS061K001



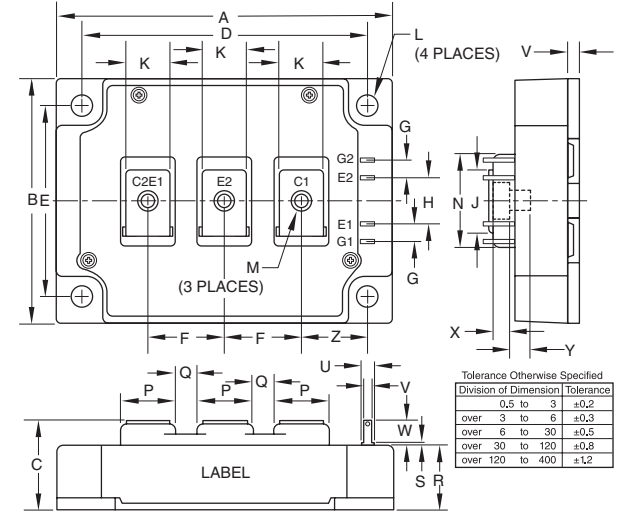
Dim.	Inches	Millimeters	Dim.	Inches	Millimeters
A	4.21	107.0	J	0.93	23.5
B	3.661±0.01	93.0±0.25	K	0.69	17.5
C	2.44	62.0	L	0.63	16.0
D	1.89±0.01	48.0±0.25	M	0.43	11.0
E	1.42 Max.	36.0 Max.	N	0.28	7.0
F	1.18	30.0	P	0.12	3.0
G	1.14	29.0	Q	0.26 Dia.	6.5 Dia.
H	0.94	24.0	R	M6 Metric	M6

# 11 RM1000DC-66F, RM1500DC-66F



Dim.	Inches	Millimeters	Dim.	Inches	Millimeters
A	5.12±0.02	130.0±0.5	H	M8 Metric	M8
B	5.51±0.02	140.0±0.5	J	0.59±0.012	15.0±0.3
C	1.16±0.02	29.5±0.5	K	0.28 Dia.	7.0 Dia.
D	4.88±0.009	124.0±0.25	L	0.2±0.008	5.0±0.2
E	2.24±0.009	57.0±0.25	M	2.42±0.012	61.5±0.3
F	1.57±0.012	40.0±0.3	N	0.71±0.012	18.0±0.3
G	0.79+0.039/-0.008	20.0+1.0/-0.2	P	1.5+0.04/-0.0	38.0+1.0/-0.0

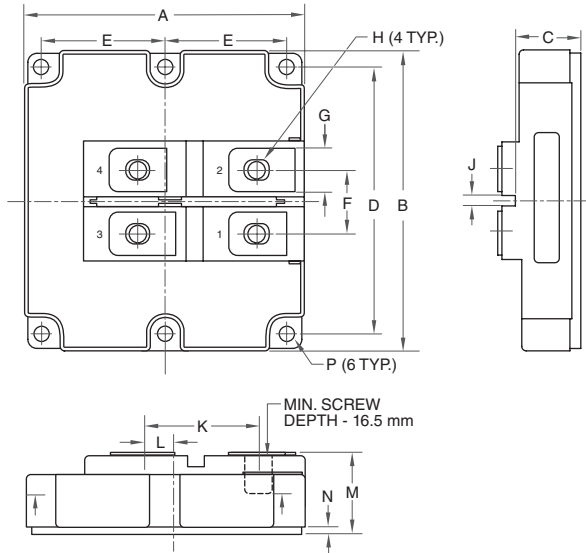
# 12 RM400DY-24S



Dim.	Inches	Millimeters	Dim.	Inches	Millimeters
A	4.33	110.0	N	1.18	30.0
B	3.15	80.0	P	0.71	18.0
C	1.14+0.04/-0.02	29.0+1.0/-0.5	Q	0.28	7.0
D	3.66±0.01	93.0±0.25	R	0.83	21.2
E	2.44±0.01	62.0±0.25	S	0.33	8.5
F	0.98	25.0	T	0.0157	0.4
G	0.24	6.0	U	0.110	2.8
H	0.59	15.0	V	0.16	4.0
J	0.81	20.5	W	0.30	7.5
K	0.55	14.0	X	0.21	5.3
L	0.26 Dia.	Dia. 6.5	Y	0.47	12.0
M	M6 Metric	M6	Z	0.85	21.5

Division of Dimension	Tolerance
0.5 to 3	±0.2
over 3 to 6	±0.3
over 6 to 30	±0.5
over 30 to 120	±0.8
over 120 to 400	±1.2

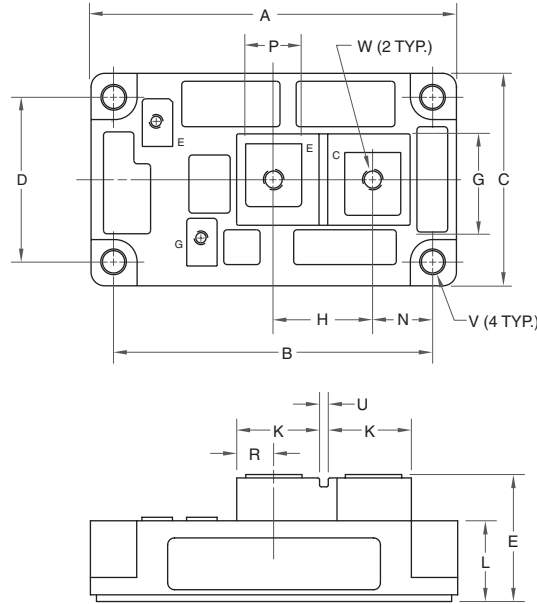
### 13 RM1200DB-34S



Dim.	Inches	Millimeters
A	5.12±0.02	130.0±0.5
B	5.51±0.02	140.0±0.5
C	1.16±0.02	29.5±0.5
D	4.88±0.009	124.0±0.25
E	2.24±0.009	57.0±0.25
F	1.18±0.008	30.0±0.2
G	0.79±0.004	20.0±0.1

Dim.	Inches	Millimeters
H	M8 Metric	M8
J	0.20±0.008	5.0±0.2
K	2.17±0.012	55.2±0.3
L	0.467±0.008	11.85±0.2
M	1.50+0.039/-0.0	38.0+1.0/-0.0
N	0.2±0.008	5.0±0.2
P	0.28 Dia.	7.0 Dia.

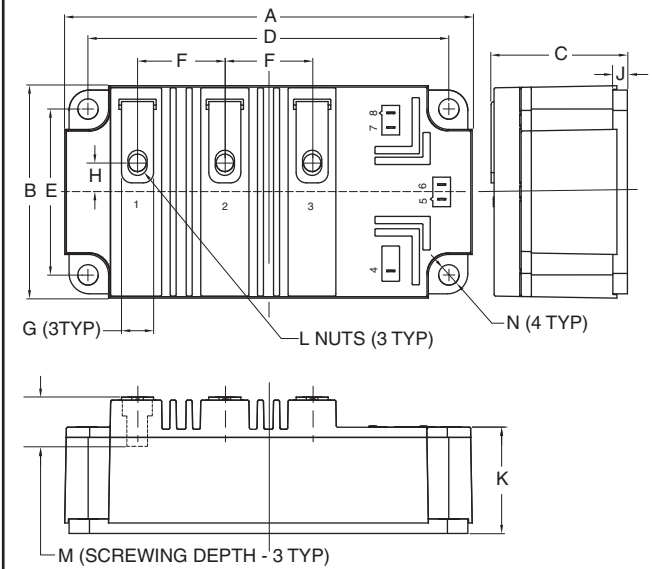
### 14 QRS1450001, QRS171D001



Dim.	Inches	Millimeters
A	4.21	107.0
B	3.661±0.01	93.0±0.25
C	2.44	62.0
D	1.89±0.01	48.0±0.25
E	1.42 Max.	36.0 Max.
G	1.18	30.0
H	1.14	29.0
K	0.94	24.0

Dim.	Inches	Millimeters
L	0.93	23.5
N	0.69	17.5
P	0.63	16.0
R	0.43	11.0
T	0.28	7.0
U	0.12	3.0
V	0.26 Dia.	6.6 Dia.
W	M6 Metric	M6

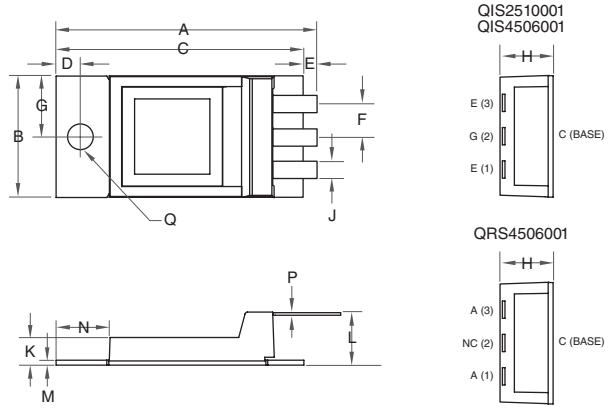
### 15 QRD3320004



Dim.	Inches	Millimeters
A	5.51	140.0
B	2.87	73.0
C	1.50	38.0
D	4.88±0.01	124.0±0.25
E	2.24±0.01	57.0±0.25
F	1.18	30.0
G	0.43	11.0

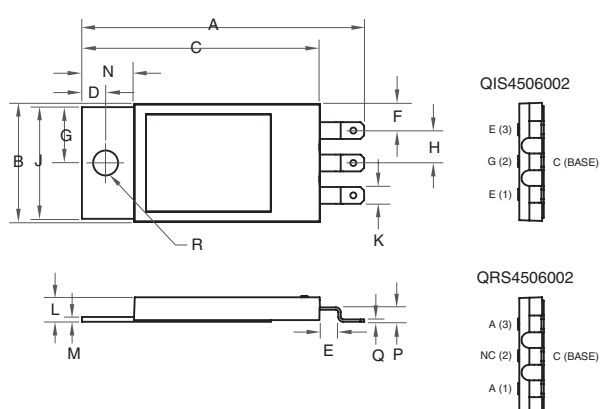
Dim.	Inches	Millimeters
H	0.38	9.75
J	0.20	5.0
K	1.04	26.5
L	M5 Metric	M5
M	0.63 Min.	16.0 Min.
N	0.28 Dia.	7.0 Dia.

# 16 QRS4506001



Dim.	Inches	Millimeters
A	2.31	53.6
B	0.98	25.0
C	2.01	51.0
D	0.2	5.0
E	0.1	2.5
F	0.27	6.9
G	0.49	12.5
H	0.46 Max.	11.8 Max.

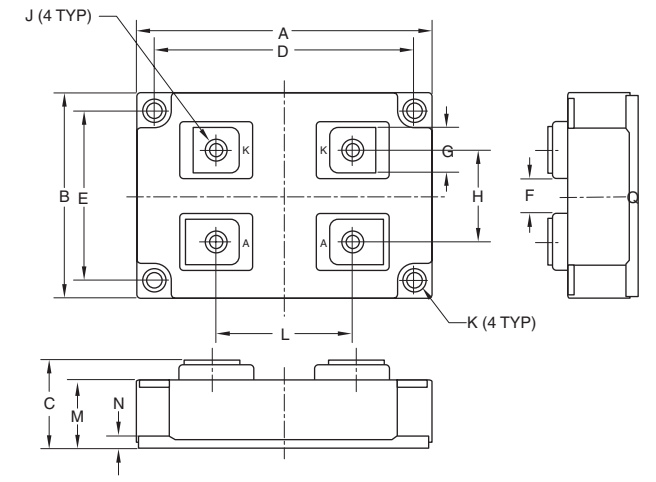
# 17 QRS4506002, QRS6503002, QRS6505002



Dim.	Inches	Millimeters
A	2.35	59.7
B	0.98	25.0
C	1.98	50.3
D	0.197	5.0
E	0.22	5.5
F	0.22	5.6
G	0.465	11.8
H	0.27	6.9

Dim.	Inches	Millimeters
J	0.93	23.6
K	0.14	3.6
L	0.20	5.2
M	0.40	1.0
N	0.43	11.0
P	0.20	0.5
Q	0.12	3.0
R	0.208 Dia.	5.3 Dia.

# 18 RM1500HE-66F



Dim.	Inches	Millimeters
A	5.12±0.02	130.0±0.5
B	3.54±0.02	90.0±0.5
C	1.50+0.04/-0.0	38.0+1.0/-0.0
D	4.49±0.01	114.0±0.25
E	2.91±0.01	74.0±0.25
F	0.59±0.012	15.0±0.3
G	0.79+0.04/-0.008	20.0+1.0/-0.2

Dim.	Inches	Millimeters
H	1.57±0.2	40.0±0.5
J	M8 Metric	M8
K	0.28 Dia.	7.0 Dia.
L	2.4±0.2	61.5±0.5
M	1.17±0.02	29.7±0.5
N	0.2±0.008	5.0±0.2