FAST RECOVERY & THREE-PHASE DIODE MODULES

Fast Recovery Modules
Applications Include:
- Motor Controls
- Power Supplies
- Switching Power Supplies
- Transportation
- Welding

Circuit Configurations:
- Single
- Dual
- Common Anode
- Common Cathode

Three-Phase Diode Modules
Applications Include:
- AC Motor Drive, Front End
- AC-DC Rectifiers
- DC Power Supplies

Circuit Configurations:
- Three-Phase Circuit

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Fast Recovery Modules
VOLTAGE: 300V TO 6500V
CURRENT: 20A TO 1800A

Three-Phase Diode Modules
VOLTAGE: 800V TO 1600V
CURRENT: 20A TO 150A

Numbering System

FAST RECOVERY DIODE MODULES

CD241290B is a 900A, 1200V Dual Switch Fast Recovery Module

CD 24 12 90 B

(1) (2) (3) (4) (5)

(1) Type Number:
- CD = Dual Switch
- CS = Single Switch
- CN = Common Anode
- CC = Common Cathode

(2) Package Style

(3) Voltage Rating (x 100):
- 03 = 300V
- 05 = 500V
- 06 = 600V
- 12 = 1200V

(4) Current Rating (x 10) on All Except:
- 50 = 50A on CC24 & CN24

(5) Revision Level

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

RM 400 HA – 34 S

(1) (2) (3) (4) (5)

(1) Type Number:
- RM = Rectifier Module

(2) Current Rating

(3) Package Style:
- CA = Common Cathode
- DB = Dual, Standard Package
- DG = Dual, High Isolation
- DY = Dual Switch
- HA = Single Switch
- HC = Single, AlSiC Baseplate
- HE = Single, Small Package
- HG = Single Switch

(4) Voltage Rating (x 50):
- 12 = 600V
- 24 = 1200V
- 34 = 1700V
- 66 = 3300V
- 90 = 4500V
- 130 = 6600V

(5) Factory Designation

QRS0660T30 is a 600A, 600V Single Switch Fast Recovery Module

Q R S 06 60 R30

(1) (2) (3) (4) (5) (6)

(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

THREE-PHASE DIODE BRIDGE MODULES

ME501206 is a 600A, 1200V Three-Phase Diode Bridge Module

ME 50 12 06

(1) (2) (3) (4)

(1) Type Number:
- ME = Three-phase Bridge

(2) Package Style:
- 50, 60, 70

(3) Voltage Rating (x 10)

(4) Current Rating (x 10)

RM75TPM-24 is a 150A, 1600V Three-Phase Diode Bridge Module

RM 75 TPM – 2H

(1) (2) (3) (4)

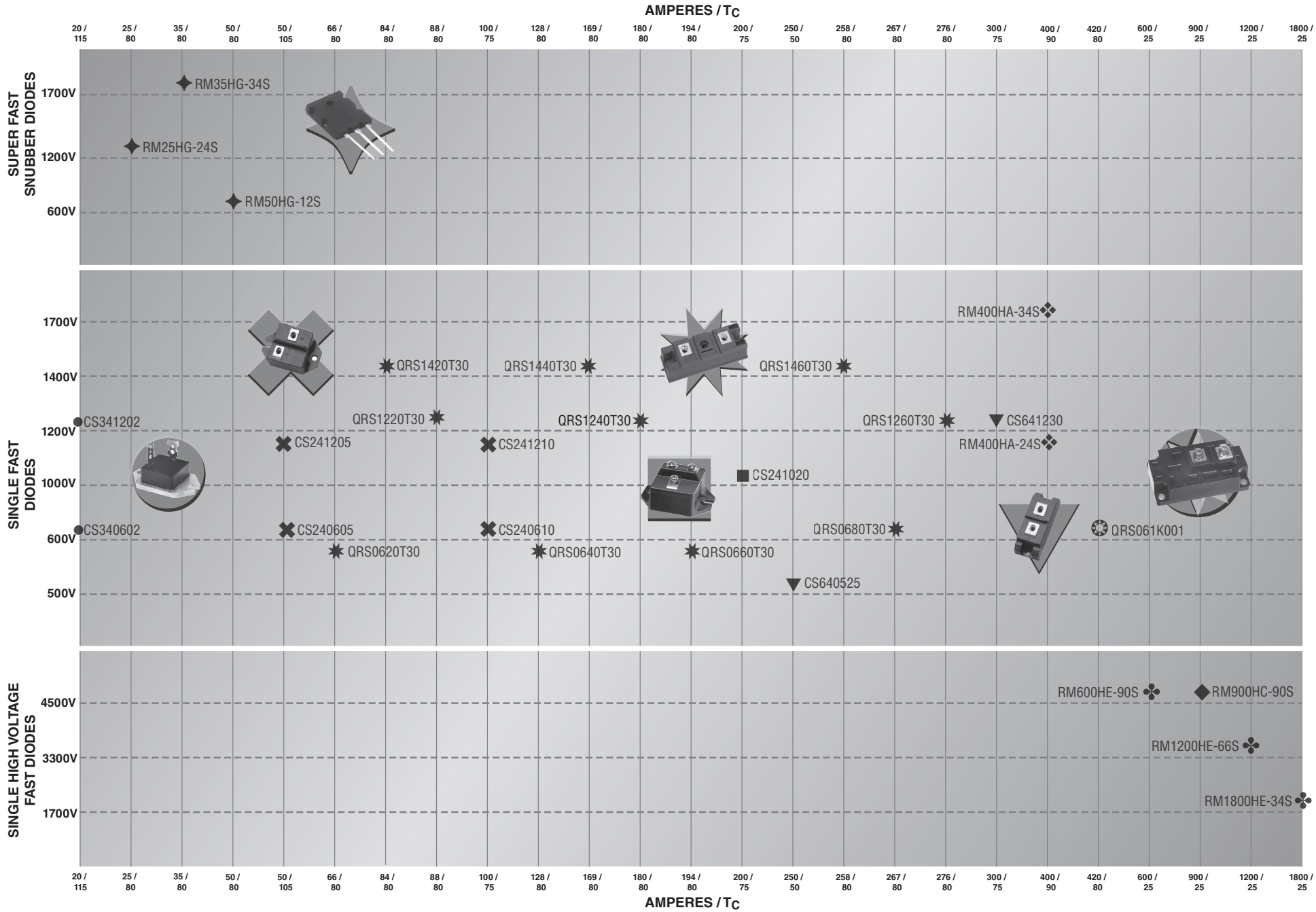
(1) Type Number:
- RM = Three-phase Bridge

(2) Current Rating (x 2)

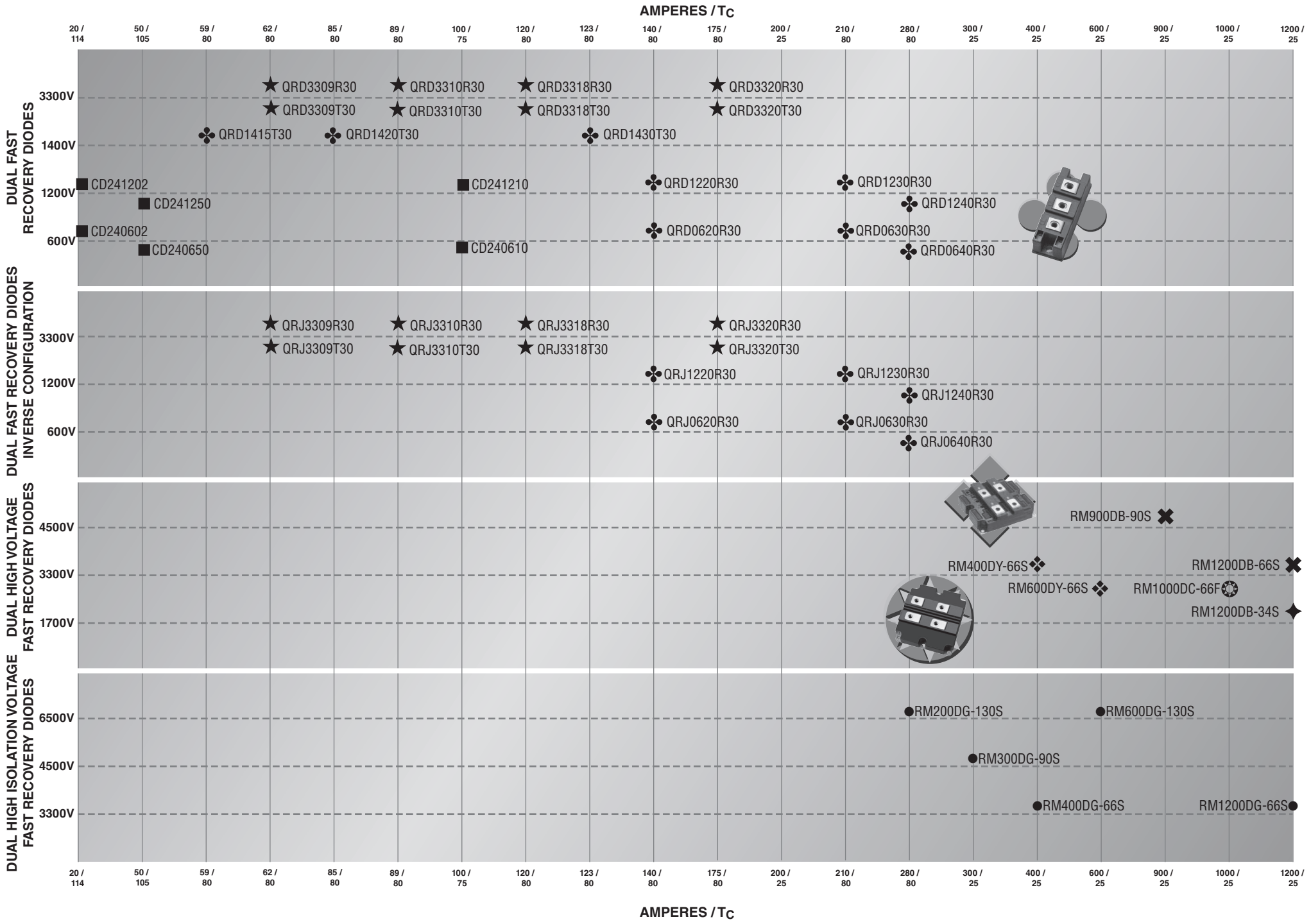
(3) Package Style:
- TPM

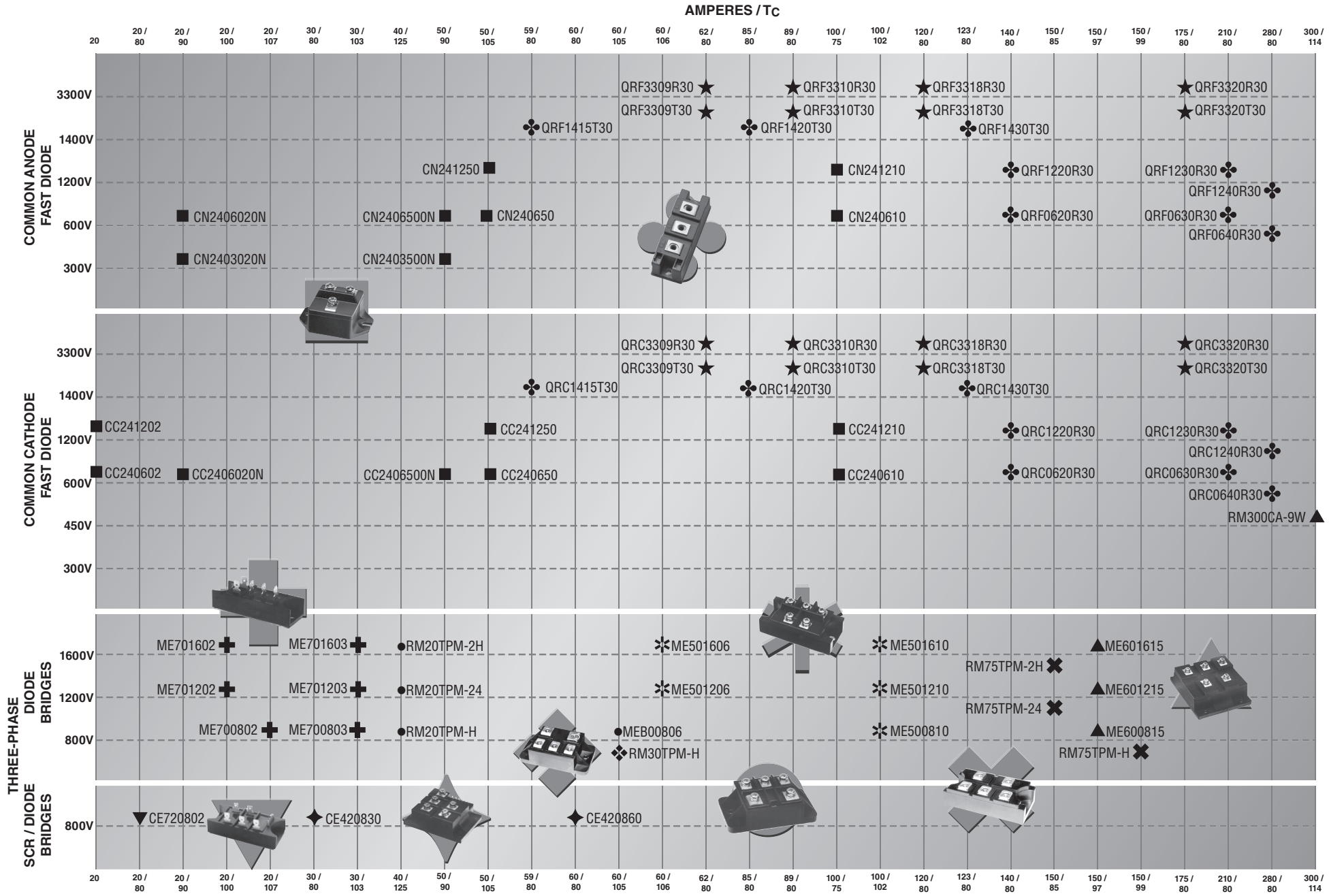
(4) Voltage Rating:
- H = 800V
- 2H = 1600V

Product Overview



Product Overview

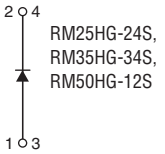



AMPERES / TC
20
20 / 80
20 / 90
20 / 100
20 / 107
30 / 80
30 / 103
40 / 125
50 / 90
50 / 105
59 / 80
60 / 80
60 / 105
60 / 106
62 / 80
85 / 80
89 / 80
100 / 75
100 / 102
120 / 80
123 / 80
140 / 80
150 / 85
150 / 97
150 / 99
175 / 80
210 / 80
280 / 80
300 / 114
COMMON ANODE FAST DIODE
3300V
1400V
1200V
600V
300V
QRF3309R30
QRF3309T30
QRF3310R30
QRF3310T30
QRF3318R30
QRF3318T30
QRF3320R30
QRF3320T30
QRF1415T30
QRF1420T30
QRF1430T30
CN241250
CN241210
QRF1220R30
QRF1230R30
QRF1240R30
CN2406020N
CN2406500N
CN240650
CN240610
QRF0620R30
QRF0630R30
QRF0640R30
CN2403020N
CN2403500N
COMMON CATHODE FAST DIODE
3300V
1400V
1200V
600V
450V
300V
QRC3309R30
QRC3309T30
QRC3310R30
QRC3310T30
QRC3318R30
QRC3318T30
QRC3320R30
QRC3320T30
QRC1415T30
QRC1420T30
QRC1430T30
CC241202
CC241250
CC241210
QRC1220R30
QRC1230R30
QRC1240R30
CC240602
CC2406020N
CC2406500N
CC240650
CC240610
QRC0620R30
QRC0630R30
QRC0640R30
RM300CA-9W
THREE-PHASE DIODE BRIDGES
1600V
1200V
800V
ME701602
ME701603
RM20TPM-2H
ME501606
ME501610
ME601615
RM75TPM-2H
ME701202
ME701203
RM20TPM-24
ME501206
ME501210
ME601215
RM75TPM-24
ME700802
ME700803
RM20TPM-H
MEB00806
RM30TPM-H
ME500810
ME600815
RM75TPM-H
SCR / DIODE BRIDGES
800V
CE720802
CE420830
CE420860

Single Fast Recovery Diodes

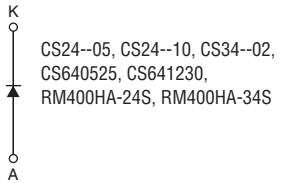
Type	V_{RRM} Volts (V_{RSM} = V_{RRM} + 100V)	$I_{F(av)}/T_C$ Amperes/°C (180° sin)	$I_{F(RMS)}$ Amperes (180° sin)	EUROPEAN I_{FSM} Amperes (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	EUROPEAN i^2t A^2 sec (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (25°C)	V_{TO} Volts ($T_{j(max)}$)	R_T mΩ ($T_{j(max)}$)	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	T_{rr} 150°C ns	T_{rr} 25°C ns	Outline Drawings Number	Page
Super Fast Snubber Diodes																	
RM25HG-24S	1200	25 / 80	—	—	—	500	—	4.0 / 100	—	—	0.5	0.5	150	—	300	1	J-14
RM35HG-34S	1700	35 / 80	—	—	—	400	—	5.0 / 100	—	—	0.5	0.5	150	—	300	1	J-14
RM50HG-12S	600	50 / 80	—	—	—	1000	—	4.0 / 200	—	—	0.5	0.5	150	—	200	1	J-14
Single Fast Diodes																	
CS34--02	600 & 1200	20 / 115	—	365	667	400	667	1.5 / 20	—	—	1.2	0.8	150	800	—	2	J-14
CS24--05	600 & 1200	50 / 105	—	910	4,165	1000	4,165	1.5 / 50	—	—	0.6	0.4	150	800	—	3	J-14
CS24--10	600 & 1200	100 / 75	—	1825	16,500	2000	16,500	1.5 / 100	—	—	0.5	0.15	150	800	—	3	J-14
CS241020	1000	200 / 75	—	1825	16,500	2000	16,500	1.5 / 200	—	—	0.25	0.15	150	800	—	4	J-15
CS640525	500	250 / 50	—	—	—	4500	85,000	1.2 / 250	—	—	0.2	0.08	150	—	650	5	J-15
CS641230	1200	300 / 75	—	—	—	3000	37,500	1.5 / 300	—	—	2.0	0.15	150	—	—	5	J-15
RM400HA-24S	1200	400 / 90	—	—	—	8000	260,000	2.0 / 400	—	—	0.1	0.04	150	400	—	6	J-15
RM400HA-34S	1700	400 / 90	—	—	—	8000	260,000	2.5 / 400	—	—	0.08	0.04	150	500	—	6	J-15

Super Fast Snubber Diodes

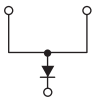


RM25HG-24S,
RM35HG-34S,
RM50HG-12S

Single Fast Diodes



CS24--05, CS24--10, CS34--02,
CS640525, CS641230,
RM400HA-24S, RM400HA-34S



CS241020

Single Fast Recovery Diodes

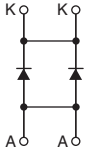
Type	V_{RRM} Volts ($V_{RSM} = V_{RRM} + 100V$)	$I_{F(av)}/T_C$ Amperes/°C (180° sin)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (T_j = 25°C)	t_{rr} ns	t_{rr} at If Amperes	t_{rr} di/dt Amperes/μs	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	Weight	Outline Drawings Number	Outline Drawings Page
Single Fast Diodes														
QRS0620T30	600	66 / 80	1670	11,620	2.8 / 200	110	200	-400	0.35	0.04	150	220	9	J-16
QRS0640T30	600	128 / 80	2400	24,000	2.8 / 400	110	400	-800	0.18	0.04	150	220	9	J-16
QRS0660T30	600	194 / 80	3600	54,000	2.8 / 600	110	600	-1200	0.12	0.04	150	220	9	J-16
QRS0680T30	600	267 / 80	4800	96,000	2.8 / 800	110	800	-1600	0.09	0.04	150	220	9	J-16
QRS061K001	600	420 / 80	8350	290,000	2.8 / 1000	150	1000	-2000	0.07	0.04	150	400	24	J-21
QRS1220T30	1200	88 / 80	1670	11,620	3.5 / 200	250	200	-400	0.18	0.04	150	220	9	J-16
QRS1240T30	1200	180 / 80	3350	46,760	3.5 / 400	250	400	-800	0.09	0.04	150	220	9	J-16
QRS1260T30	1200	276 / 80	5000	104,100	3.5 / 600	250	600	-1200	0.06	0.04	150	220	9	J-16
QRS1420T30	1400	84 / 80	1330	7,400	3.8 / 200	300	200	-400	0.18	0.04	150	220	9	J-16
QRS1440T30	1400	169 / 80	2670	29,700	3.8 / 400	300	400	-800	0.09	0.04	150	220	9	J-16
QRS1460T30	1400	258 / 80	4000	66,670	3.8 / 600	300	600	-1200	0.06	0.04	150	220	9	J-16

Type	V_{RRM} Volts ($V_{RSM} = V_{RRM} + 100V$)	$I_{F(av)}/T_C$ Amperes/°C (180° sin)	$I_{F(RMS)}$ Amperes (180° sin)	EUROPEAN I_{FSM} Amperes (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	EUROPEAN i^2t A^2 sec (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (25°C)	V_{TO} Volts ($T_{j(max)}$)	R_T mΩ ($T_{j(max)}$)	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	T_{rr} 150°C ns	T_{rr} 25°C ns	Outline Drawings Number	Outline Drawings Page
Single High Voltage Fast Diodes																	
RM600HE-90S	4500	600 / 25	—	—	—	4800	95,600	4.8 / 600	—	—	0.039	0.015	150	900	—	7	J-16
RM900HC-90S	4500	900 / 25	—	—	—	7200	216,000	4.8 / 900	—	—	0.021	0.016	150	1000	—	8	J-16
RM1200HE-66S	3300	1200 / 25	—	—	—	9600	384,000	3.2 / 1200	—	—	0.02	0.015	150	1400	—	7	J-16
RM1800HE-34S	1700	1800 / 25	—	—	—	9600	384,000	2.9 / 1800	—	—	0.022	0.017	150	1800	—	7	J-16

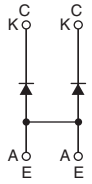
Single Fast Diodes

QRS0620T30, QRS0640T30, QRS0660T30, QRS0680T30, QRS061K001, QRS1220T30, QRS1240T30, QRS1260T30, QRS1420T30, QRS1440T30, QRS1460T30

Single High Voltage Fast Diodes



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

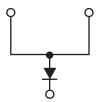


RM900HC-90S

Dual Fast Recovery Diodes

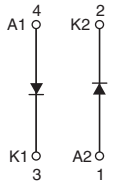
Type	V_{RRM} Volts (V_{RSM} = V_{RRM} + 100V)	$I_{F(av)}/T_C$ Amperes/°C (180° sin)	$I_{F(RMS)}$ Amperes (180° sin)	EUROPEAN I_{FSM} Amperes (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	EUROPEAN i^2t A^2 sec (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (25°C)	V_{TO} Volts ($T_{j(max)}$)	R_T mΩ ($T_{j(max)}$)	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	T_{rr} 150°C ns	T_{rr} 25°C ns	Outline Drawings Number	Outline Drawings Page
Dual Fast Recovery Diodes																	
CD24--02	600 & 1200	20 / 114	—	365	667	400	667	1.5 / 20	—	—	1.2	0.4	150	800	—	4	J-15
CD24--05	600 & 1200	50 / 105	—	910	4,165	1000	4,165	1.5 / 50	—	—	0.6	0.4	150	800	—	4	J-15
CD24--10	600 & 1200	100 / 75	—	1825	16,500	2000	16,600	1.5 / 100	—	—	0.5	0.4	150	800	—	4	J-15
Dual High Voltage Fast Recovery Diodes																	
RM400DY-66S	3300	400 / 25	—	3200	42,700	—	42,700	4.29 / 400	—	—	0.072	0.036	150	—	1,200	10	J-17
RM600DY-66S	3300	600 / 25	—	4800	96,000	—	96,000	4.55 / 600	—	—	0.048	0.024 Typ.	150	—	1,200	10	J-17
RM900DB-90S	4500	900 / 25	—	—	—	6400	170,000	4.0 / 900	—	—	0.02	0.016	150	—	900	8	J-16
RM1000DC-66F	3300	1000 / 25	—	—	—	9.4	440	2.2 / 1000	—	—	0.024	—	150	0.85	0.55	25	J-22
RM1200DB-34S	1700	1200 / 25	—	—	—	20,800	180,300	2.1 / 1200	—	—	0.02	0.024	150	—	850	23	J-21
RM1200DB-66S	3300	1200 / 25	—	—	—	9600	384,000	2.8 / 1200	—	—	0.018	0.016	150	—	750	8	J-16

Dual Fast Recovery Diodes

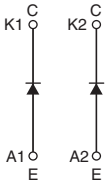


CD24--02, CD24--05, CD24--10

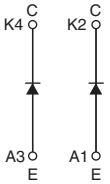
Dual High Voltage Fast Recovery Diodes



RM1200DB-34S



RM400DY-66S,
RM600DY-66S,
RM900DB-90S,
RM1200DB-66S

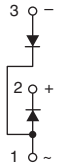


RM1000DC-66F

Dual Fast Recovery Diodes

Type	V_{RRM} Volts ($V_{RSM} = V_{RRM} + 100V$)	I_{DC}/T_C Amperes/°C (180° sin)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (T_j = 25°C)	t_{rr} ns	t_{rr} at If Amperes	t_{rr} di/dt Amperes/µs	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	Weight	Outline Drawings Number	Outline Drawings Page
Dual Fast Recovery Diodes														
QRD0620R30	600	140 / 80	TBD	TBD	2.3 / 150	120	100	TBD	0.205	0.2	150	150	26	J-22
QRD0630R30	600	210 / 80	TBD	TBD	2.2 / 150	120	150	TBD	0.137	0.2	150	180	27	J-22
QRD0640R30	600	280 / 80	TBD	TBD	2.2 / 200	120	200	TBD	0.103	0.2	150	180	27	J-22
QRD1220R30	1200	140 / 80	TBD	TBD	3.2 / 100	150	100	TBD	0.15	0.2	150	150	26	J-22
QRD1230R30	1200	210 / 80	TBD	TBD	3.2 / 150	150	150	TBD	0.1	0.2	150	180	27	J-22
QRD1240R30	1200	280 / 80	TBD	TBD	3.2 / 200	150	200	TBD	0.075	0.2	150	180	27	J-22
QRD1415T30	1200	84 / 80	1330	4,160	3.8 / 200	300	200	-400	0.12	0.04	150	220	12	J-17
QRD1420T30	1400	169 / 80	2670	7,400	3.8 / 400	300	400	-600	0.09	0.05	150	250	12	J-17
QRD1430T30	1400	258 / 80	4000	16,670	3.8 / 600	300	600	-200	0.15	0.05	150	250	12	J-17
QRD3309R30	1400	62 / 80	TBD	TBD	3.6 / 60	1200	100	-200	0.324	0.05	150	180	13	J-18
QRD3309T30	3300	62 / 80	TBD	TBD	3.6 / 60	1200	100	-200	0.324	0.05	150	180	13	J-18
QRD3310R30	3300	89 / 80	TBD	TBD	4.1 / 86	1200	100	-200	0.203	0.05	150	180	13	J-18
QRD3310T30	3300	89 / 80	TBD	TBD	4.1 / 86	1200	100	-200	0.203	0.05	150	180	13	J-18
QRD3318R30	3300	120 / 80	TBD	TBD	3.6 / 120	1200	200	-400	0.166	0.05	150	180	13	J-18
QRD3318T30	3300	120 / 80	TBD	TBD	3.6 / 120	1200	200	-400	0.166	0.05	150	180	13	J-18
QRD3320R30	3300	175 / 80	TBD	TBD	4.1 / 172	1200	200	-400	0.103	0.05	150	180	13	J-18
QRD3320T30	3300	175 / 80	TBD	TBD	4.1 / 172	1200	200	-400	0.103	0.05	150	180	13	J-18

Dual Fast Recovery Diodes



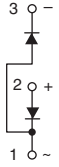
QRD0620R30, QRD0630R30, QRD0640R30,
QRD1220R30, QRD1230R30, QRD1240R30,
QRD1415T30, QRD1420T30, QRD1430T30,
QRD3309R30, QRD3309T30, QRD3310R30, QRD3310T30,
QRD3318R30, QRD3318T30, QRD3320R30, QRD3320T30

Dual Fast Recovery Diodes

Type	V_{RRM} Volts ($V_{RSM} = V_{RRM} + 100V$)	I_{DC}/T_C Amperes/°C (180° sin)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (T_j = 25°C)	t_{rr} ns	t_{rr} at If Amperes	t_{rr} di/dt Amperes/µs	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	Weight	Outline Drawings Number	Outline Drawings Page
Dual Fast Recovery Diodes - Inverse Configuration														
QRJ0620R30	600	140 / 80	TBD	TBD	2.3 / 150	120	100	TBD	0.205	0.2	150	150	26	J-22
QRJ0630R30	600	210 / 80	TBD	TBD	2.2 / 150	120	150	TBD	0.137	0.2	150	180	27	J-22
QRJ0640R30	600	280 / 80	TBD	TBD	2.2 / 200	120	200	TBD	0.103	0.2	150	180	27	J-22
QRJ1220R30	1200	140 / 80	TBD	TBD	3.2 / 100	150	100	TBD	0.15	0.2	150	150	26	J-22
QRJ1230R30	1200	210 / 80	TBD	TBD	3.2 / 150	150	150	TBD	0.1	0.2	150	180	27	J-22
QRJ1240R30	1200	280 / 80	TBD	TBD	3.2 / 200	150	200	TBD	0.075	0.2	150	180	27	J-22
QRJ3309R30	1200	62 / 80	TBD	TBD	3.6 / 60	1200	100	-200	0.324	0.05	150	180	13	J-18
QRJ3309T30	3300	62 / 80	TBD	TBD	3.6 / 60	1200	100	-200	0.324	0.05	150	180	13	J-18
QRJ3310R30	3300	89 / 80	TBD	TBD	4.1 / 86	1200	100	-200	0.203	0.05	150	180	13	J-18
QRJ3310T30	3300	89 / 80	TBD	TBD	4.1 / 86	1200	100	-200	0.203	0.05	150	180	13	J-18
QRJ3318R30	3300	120 / 80	TBD	TBD	3.6 / 120	1200	200	-400	0.166	0.05	150	180	13	J-18
QRJ3318T30	3300	120 / 80	TBD	TBD	3.6 / 120	1200	200	-400	0.166	0.05	150	180	13	J-18
QRJ3320R30	3300	175 / 80	TBD	TBD	4.1 / 172	1200	200	-400	0.103	0.05	150	180	13	J-18
QRJ3320T30	3300	175 / 80	TBD	TBD	4.1 / 172	1200	200	-400	0.103	0.05	150	180	13	J-18

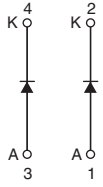
Type	V_{RRM} Volts ($V_{RSM} = V_{RRM} + 100V$)	$I_{F(av)}/T_C$ Amperes/°C (180° sin)	$I_{F(RMS)}$ Amperes (180° sin)	EUROPEAN I_{FSM} Amperes (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	EUROPEAN i^2t A^2 sec (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (25°C)	V_{TO} Volts ($T_{j(max)}$)	R_T mΩ ($T_{j(max)}$)	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	T_{rr} 150°C ns	T_{rr} 25°C ns	Outline Drawings Number	Outline Drawings Page
Dual High Isolation High Voltage Fast Recovery Diodes																	
RM200DG-130S	6500	200 / 25	—	—	—	1600	11,000	4.0 / 200	—	—	0.066	0.048	150	—	1,000	11	J-17
RM300DG-90S	4500	300 / 25	—	—	—	2400	24,000	4.8 / 300	—	—	0.066	0.048	150	—	1,000	11	J-17
RM400DG-66S	3300	400 / 25	—	—	—	3200	42,700	2.8 / 400	—	—	0.054	0.048	150	—	1,000	11	J-17
RM600DG-130S	6500	600 / 25	—	—	—	4800	96,000	4.0 / 600	—	—	0.022	0.016	150	—	1,000	11	J-17
RM1200DG-66S	3300	1200 / 25	—	—	—	9600	384,000	2.8 / 1200	—	—	0.018	0.016	150	—	1,000	11	J-17

Dual Fast Recovery Diodes - Inverse Configuration



QRJ0620R30, QRJ0630R30, QRJ0640R30, QRJ1220R30, QRJ1230R30, QRJ1240R30, QRJ3309R30, QRJ3309T30, QRJ3310R30, QRJ3310T30, QRJ3318R30, QRJ3318T30, QRJ3320R30, QRJ3320T30

Dual High Isolation High Voltage Fast Recovery Diodes



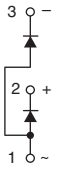
RM200DG-130S, RM300DG-90S, RM400DG-66S, RM600DG-130S, RM1200DG-66S

Common Anode Fast Recovery Diodes

Type	V_{RRM} Volts ($V_{RSM} = V_{RRM} + 100V$)	$I_{F(av)}/T_C$ Amperes/°C (180° sin)	$I_{F(RMS)}$ Amperes (180° sin)	EUROPEAN I_{FSM} Amperes (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	EUROPEAN i^2t A^2 sec (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (25°C)	V_{TO} Volts ($T_{j(max)}$)	R_T mΩ ($T_{j(max)}$)	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	T_{rr} 150°C ns	T_{rr} 25°C ns	Outline Drawings Number	Outline Drawings Page
CN24--50	600 & 1200	50 / 105	—	910	4,165	1000	4,165	1.5 / 50	—	—	0.6	0.4	150	800	—	4	J-15
CN24--10	600 & 1200	100 / 75	—	1825	16,600	2000	16,600	1.5 / 100	—	—	0.5	0.4	150	—	—	4	J-15
CN2403020N	300	20 / 90	—	365	667	400	667	2.5 / 20	—	—	1.2	0.3	150	—	200	4	J-15
CN2406020N	600	20 / 90	—	365	667	400	667	2.5 / 20	—	—	1.2	0.3	150	—	200	4	J-15
CN2403500N	300	50 / 90	—	910	4,165	1000	4,200	2.5 / 50	—	—	0.6	0.3	150	—	200	4	J-15
CN2406500N	600	50 / 90	—	910	4,165	1000	4,200	2.5 / 50	—	—	0.6	0.3	150	—	200	4	J-15

Type	V_{RRM} Volts ($V_{RSM} = V_{RRM} + 100V$)	I_{DC}/T_C Amperes/°C (180° sin)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (T_j = 25°C)	t_{rr} t_{rr} ns	t_{rr} at If Amperes	t_{rr} di/dt Amperes/μs	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	Weight	Outline Drawings Number	Outline Drawings Page
QRF0620R30	600	140 / 80	TBD	TBD	2.3 / 150	120	100	TBD	0.205	0.2	150	150	26	J-22
QRF0630R30	600	210 / 80	TBD	TBD	2.2 / 150	120	150	TBD	0.137	0.2	150	180	27	J-22
QRF0640R30	600	280 / 80	TBD	TBD	2.2 / 200	120	200	TBD	0.103	0.2	150	180	27	J-22
QRF1220R30	1200	140 / 80	TBD	TBD	3.2 / 100	150	100	TBD	0.15	0.2	150	150	26	J-22
QRF1230R30	1200	210 / 80	TBD	TBD	3.2 / 150	150	150	TBD	0.1	0.2	150	180	27	J-22
QRF1240R40	1200	280 / 80	TBD	TBD	3.2 / 200	150	200	TBD	0.075	0.2	150	180	27	J-22
QRF1415T30	1400	59 / 80	1000	4,160	3.8 / 150	300	150	-300	0.24	0.04	150	220	12	J-17
QRF1420T30	1400	85 / 80	1330	7,400	3.8 / 200	300	200	-400	0.18	0.04	150	220	12	J-17
QRF1430T30	1400	123 / 80	2000	16,670	3.8 / 300	300	300	-600	0.12	0.04	150	220	12	J-17
QRF3309R30	3300	62 / 80	TBD	TBD	3.6 / 60	1200	100	-200	0.324	0.05	150	180	13	J-18
QRF3309T30	3300	62 / 80	TBD	TBD	3.6 / 60	1200	100	-200	0.324	0.05	150	180	13	J-18
QRF3310R30	3300	89 / 80	TBD	TBD	4.1 / 86	1200	100	-200	0.203	0.05	150	180	13	J-18
QRF3310T30	3300	89 / 80	TBD	TBD	4.1 / 86	1200	100	-200	0.203	0.05	150	180	13	J-18
QRF3318R30	3300	120 / 80	TBD	TBD	3.6 / 120	1200	200	-400	0.166	0.05	150	180	13	J-18
QRF3318T30	3300	120 / 80	TBD	TBD	3.6 / 120	1200	200	-400	0.166	0.05	150	180	13	J-18
QRF3320R30	3300	175 / 80	TBD	TBD	4.1 / 172	1200	200	-400	0.103	0.05	150	180	13	J-18
QRF3320T30	3300	175 / 80	TBD	TBD	4.1 / 172	1200	200	-400	0.103	0.05	150	180	13	J-18

Common Anode Fast Recovery Diodes



CN24--50, CN24--10, CN2403020N, CN2406020N, CN2403500N, CN2406500N

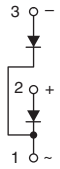
QRF0620R30, QRF0630R30, QRF0640R30, QRF1220R30, QRF1230R30, QRF1240R30, QRF1415T30, QRF1420T30, QRF1430T30, QRF3309R30, QRF3309T30, QRF3310R30, QRF3310T30, QRF3318R30, QRF3318T30, QRF3320R30, QRF3320T30

Common Cathode Fast Recovery Diodes

Type	V_{RRM} Volts (V_{RSM} = V_{RRM} + 100V)	$I_{F(av)}/T_C$ Amperes/°C (180° sin)	$I_{F(RMS)}$ Amperes (180° sin)	EUROPEAN I_{FSM} Amperes (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	EUROPEAN i^2t A^2 sec (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (25°C)	V_{TO} Volts ($T_{j(max)}$)	R_T mΩ ($T_{j(max)}$)	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	T_{rr} 150°C ns	T_{rr} 25°C ns	Outline Drawings Number	Outline Drawings Page
CC24--02	600 & 1200	20	—					ASK FOR DATASHEET						800		4	J-15
CC24--50	600 & 1200	50 / 105	—	910	4,165	1000	4,165	1.5 / 50	—	—	0.6	0.4	150	—	—	4	J-15
CC24--10	600 & 1200	100 / 75	—	1825	16,600	2000	16,600	1.5 / 100	—	—	0.5	0.4	150	—	—	4	J-15
CC2403020N	300	20 / 90	—	365	667	400	667	2.5 / 20	—	—	1.2	0.3	150	—	200	4	J-15
CC2406020N	600	20 / 90	—	365	667	400	667	2.5 / 20	—	—	1.2	0.3	150	—	200	4	J-15
CC2403500N	300	50 / 90	—	910	4,200	1000	4,200	2.5 / 50	—	—	0.6	0.3	150	—	200	4	J-15
CC2406500N	600	50 / 90	—	910	4,200	1000	4,200	2.5 / 50	—	—	0.6	0.3	150	—	200	4	J-15
RM300CA-9W	450	300 / 114	—	—	—	6000	37,500	1.2 / 300	—	—	0.068	0.08	150		500	14	J-18

Type	V_{RRM} Volts (V_{RSM} = V_{RRM} + 100V)	I_{DC}/T_C Amperes/°C (180° sin)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes (T_j = 25°C)	t_{rr} ns	t_{rr} at If Amperes	t_{rr} di/dt Amperes/μs	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	Weight	Outline Drawings Number	Outline Drawings Page
QRC0620R30	600	140 / 80	TBD	TBD	2.3 / 150	120	100	TBD	0.205	0.2	150	150	26	J-22
QRC0630R30	600	210 / 80	TBD	TBD	2.2 / 150	120	150	TBD	0.137	0.2	150	180	27	J-22
QRC0640R30	600	280 / 80	TBD	TBD	2.2 / 200	120	200	TBD	0.103	0.2	150	180	27	J-22
QRC1220R30	1200	140 / 80	TBD	TBD	3.2 / 100	150	100	TBD	0.15	0.2	150	150	26	J-22
QRC1230R30	1200	210 / 80	TBD	TBD	3.2 / 150	150	150	TBD	0.1	0.2	150	180	27	J-22
QRC1240R30	1200	280 / 80	TBD	TBD	3.2 / 200	150	200	TBD	0.075	0.2	150	180	27	J-22
QRC1415T30	1400	59 / 80	1000	4,160	3.8 / 150	300	150	-300	0.24	0.04	150	220	12	J-17
QRC1420T30	1400	85 / 80	1330	7,400	3.8 / 200	300	200	-400	0.18	0.04	150	220	12	J-17
QRC1430T30	1400	123 / 80	2000	16,670	3.8 / 300	300	300	-600	0.12	0.04	150	220	12	J-17
QRC3309R30	3300	62 / 80	TBD	TBD	3.6 / 60	1200	100	-200	0.324	0.05	150	180	13	J-18
QRC3309T30	3300	62 / 80	TBD	TBD	3.6 / 60	1200	100	-200	0.324	0.05	150	180	13	J-18
QRC3310R30	3300	89 / 80	TBD	TBD	4.1 / 86	1200	100	-200	0.203	0.05	150	180	13	J-18
QRC3310T30	3300	89 / 80	TBD	TBD	4.1 / 86	1200	100	-200	0.203	0.05	150	180	13	J-18
QRC3318R30	3300	120 / 80	TBD	TBD	3.6 / 60	1200	200	-400	0.166	0.05	150	180	13	J-18
QRC3318T30	3300	120 / 80	TBD	TBD	3.6 / 60	1200	200	-400	0.166	0.05	150	180	13	J-18
QRC3320R30	3300	175 / 80	TBD	TBD	4.1 / 172	1200	200	-400	0.103	0.05	150	180	13	J-18
QRC3320T30	3300	175 / 80	TBD	TBD	4.1 / 172	1200	200	-400	0.103	0.05	150	180	13	J-18

Common Cathode Fast Recovery Diodes



CC24--02, CC24--50, CC24--10
CC2403020N, CC2406020N,
CC2403500N, CC2406500N,
RM300CA-9W

QRC0620R30, QRC0630R30, QRC0640R30, QRC1220R30, QRC1230R30,
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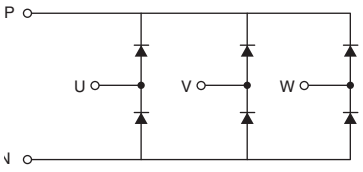
QRC3309T30, QRC3310R30, QRC3310T30, QRC3318R30, QRC3318T30,
QRC3320R30, QRC3320T30

Three-Phase Bridges

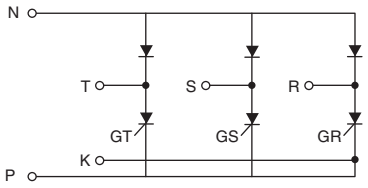
Type	V_{RRM} Volts (V_{RSM} = V_{RRM} + 100V)	$I_{F(av)}/T_C$ Amperes/°C (180° sin)	$I_{F(RMS)}$ Amperes (180° sin)	EUROPEAN I_{FSM} Amperes (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	EUROPEAN i^2t A^2 sec (10ms, $T_{j(max)}$, No V_{RRM} Reapplied)	NORTH AMERICAN I_{FSM} Amperes (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	NORTH AMERICAN i^2t A^2 sec (8.3ms, $T_{j(max)}$, 100% V_{RRM} Reapplied)	V_{FM}/I_{FM} Volts/Amperes ($T_{j(max)}$ = 25°C)	V_{TO} Volts ($T_{j(max)}$)	R_T mΩ ($T_{j(max)}$)	$R_{th(j-c)}$ °C/W	$R_{th(c-s)}$ °C/W	$T_{j(max)}$ °C	Outline Drawings Number	Page
Three-Phase Diode Bridges															
ME700802	800	20 / 107	—	320	—	350	510	1.07 / 20	—	—	1.00	0.1	150	15	J-18
ME70--02	1200/1600	20 / 100	—	180	—	200	167	1.25 / 50	—	—	1.00	0.1	150	15	J-18
ME700803	800	30 / 103	—	365	—	400	667	1.1 / 30	—	—	0.70	0.1	150	15	J-18
ME701203	1200	30 / 103	—	275	—	300	375	1.25 / 30	—	—	0.70	0.1	150	15	J-18
ME701603	1600	30 / 103	—	275	—	300	375	1.25 / 30	—	—	0.70	0.1	150	15	J-18
RM20TPM-H	800	40 / 125	—	—	—	400	4200	1.2 / 40	—	—	0.33	0.09	150	16	J-19
RM20TPM-2H	1200/1600	—	—	—	—	400	670	1.3 / 40	—	—	0.35	0.09	150	16	J-19
MEB00806	800	60 / 105	—	—	—	1000	—	1.3 / 100	—	—	0.31	0.09	150	16	J-19
RM30TPM-H	800	60 / 105	—	—	—	600	1500	1.2 / 60	—	—	0.31	0.09	150	17	J-19
ME50--06	1200/1800	60 / 106	—	545	—	600	1500	1.3 / 60	—	—	0.3	0.06	150	18	J-19
ME50--10	800/1200/1600	100 / 102	—	1000	—	910	4200	1.2 / 100	—	—	0.2	0.06	150	18	J-19
ME60--15	800/1200/1600	150 / 97	—	1365	—	1500	9400	1.35 / 150	—	—	0.15	0.04	150	19	J-20
RM75TPM-H	800	150 / 99	—	—	—	1500	9400	1.3 / 150	—	—	0.2	0.06	150	20	J-20
RM75TPM-2H	1200/1600	150 / 85	—	—	—	1500	9400	1.3 / 150	—	—	0.2	0.06	150	20	J-20
Three-Phase SCR / Diode Bridges								25°C							
CE720802	800	20 / 80	—	180	180	200	180	1.4 / 20	—	—	4.5	0.1	125	21	J-20
CE420830	800	30 / 80	—	275	378	300	378	1.5 / 45	—	—	1.8	0.06	125	22	J-21
CE420860	800	60 / 80	—	460	1050	500	1050	1.4 / 75	—	—	1.5	0.06	125	22	J-21

Three-Phase Diode Bridges

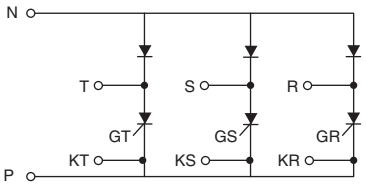


ME700802, ME70--02, ME700803
ME701203, ME701603, RM20TPM-H
RM20TPM-2H, MEB00806, RM30TPM-H
ME50--06, ME50--10, ME60--15
RM75TPM-H, RM75TPM-2H

Three-Phase SCR / Diode Bridges

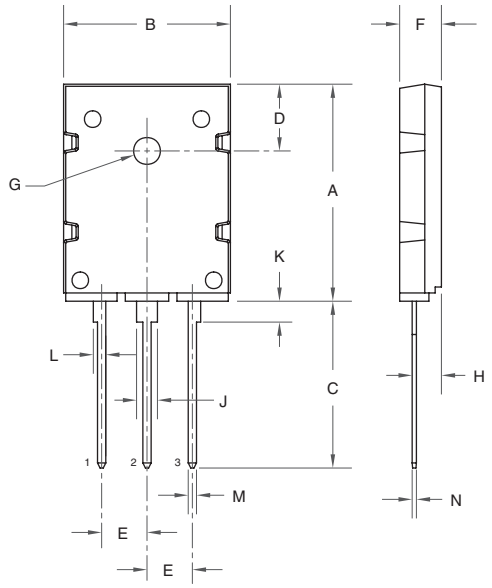


CE720802



CE420830, CE420860

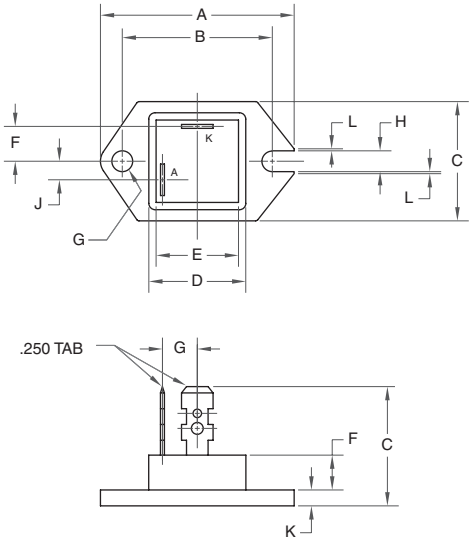
1 RM25HG-24S, RM35HG-34S, RM50HG-12S



Dim.	Inches	Millimeters
A	1.02±0.02	26.0±0.5
B	0.81 Max.	20.5 Max.
C	0.79 Min.	20.0 Min.
D	0.24±0.008	6.0±0.2
E	0.214±0.012	5.45±0.3
F	0.20±0.012	5.0±0.3
G	0.214±0.012 Dia.	3.2±0.2 Dia.

Dim.	Inches	Millimeters
H	0.12±0.012	3.0±0.3
J	0.10±0.012	2.5±0.3
K	0.10	2.5
L	0.08±0.012	2.0±0.3
M	0.04±0.008	1.0±0.2
N	0.02±0.008	0.6±0.2

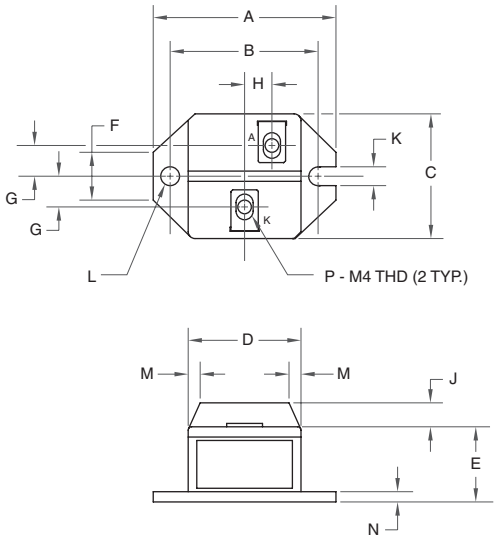
2 CS34--02



Dim.	Inches	Millimeters
A	1.54	39.0
B	1.89±0.008	32.2±0.2
C	0.94	24.0
D	0.77	19.5
E	0.65	16.6
F	0.28	7.0

Dim.	Inches	Millimeters
G	0.165±0.004 Dia.	4.20±0.1 Dia.
H	0.16	4.2
J	0.14	3.7
K	0.12	3.2
L	0.02	0.4

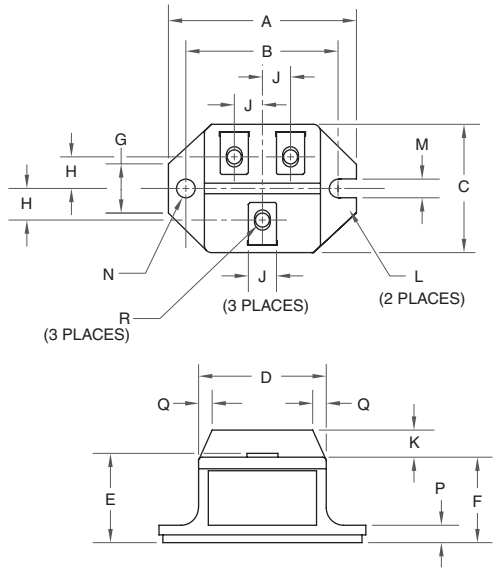
3 CS24--05, CS24--10



Dim.	Inches	Millimeters
A	2.07	53.0
B	1.705±0.008	43.3±0.2
C	1.42	36.0
D	1.3	33.0
E	0.87	22.0
F	0.55	14.0
G	0.35	9.0

Dim.	Inches	Millimeters
H	0.31	8.0
J	0.28	7.0
K	0.22	5.5
L	0.217 Dia.	5.5
M	0.14	3.5
N	0.12	3.0
P	M4 Metric	M4

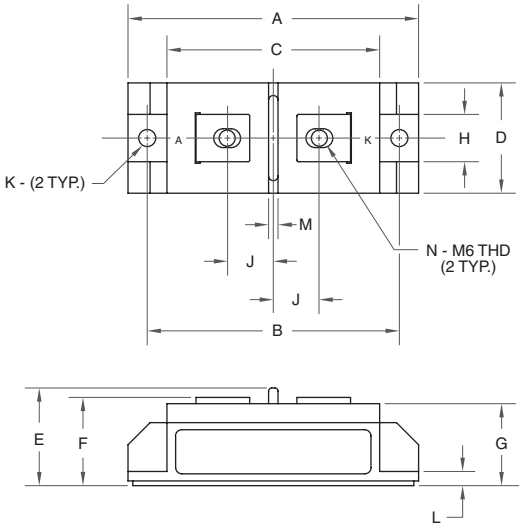
4 CC24--02, CC24--10, CC24--50, CC2403020N, CC2403500N, CC2406020N, CC2406500N, CD24--02, CD24--05, CD24--10, CN24--10, CN24--50, CN2403020N, CN2403500N, CN2406020N, CN2406500N, CS241020



Dim.	Inches	Millimeters
A	2.11	53.5
B	1.705±0.008	43.3±0.2
C	1.44	36.5
D	1.3	33.0
E	0.92	23.5
F	0.87	22.0
G	0.55	14.0
H	0.35	9.0

Dim.	Inches	Millimeters
J	0.31	8.0
K	0.28	7.0
L	0.24 Rad.	6.0 Rad.
M	0.21	5.3
N	0.209 Dia.	5.3 Dia.
P	0.18	4.5
Q	0.14	3.5
R	M4	M4

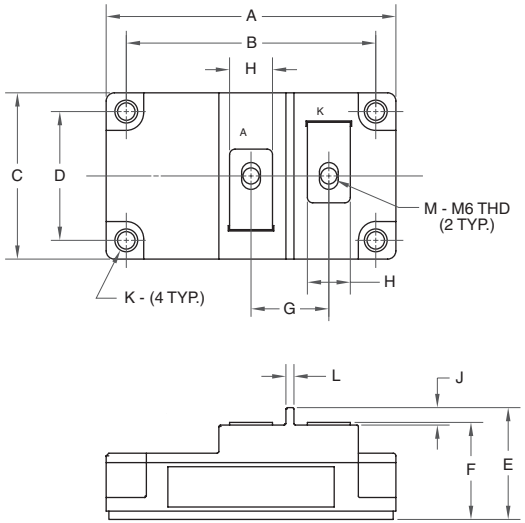
5 CS640525, CS641230



Dim.	Inches	Millimeters
A	3.63±0.01	92.2±0.25
B	3.15±0.008	80.0±0.2
C	2.657±0.01	67.5±0.25
D	1.378+0.012/-0.0	35.0+0.3/-0.0
E	1.22	31.0
F	1.1	28.0
G	1.02	265.0

Dim.	Inches	Millimeters
H	0.59	15.0
J	0.57	14.5
K	0.213±0.004 Dia.	5.4±0.1 Dia.
L	0.18	4.5
M	0.12	3.0
N	M6Metric	M6

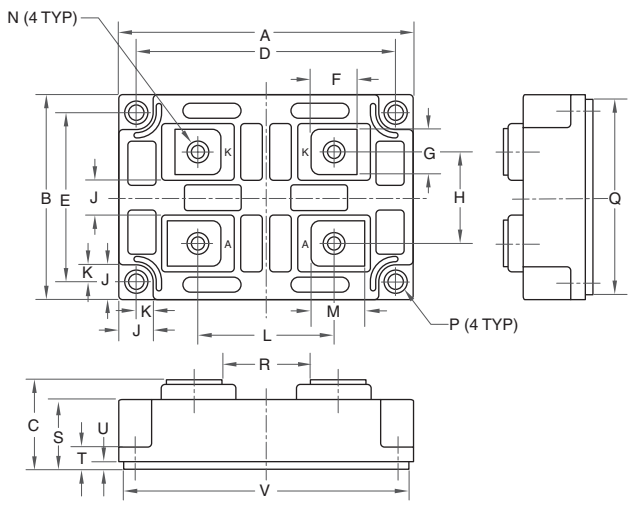
6 RM400HA-24S, RM400HA-34S



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

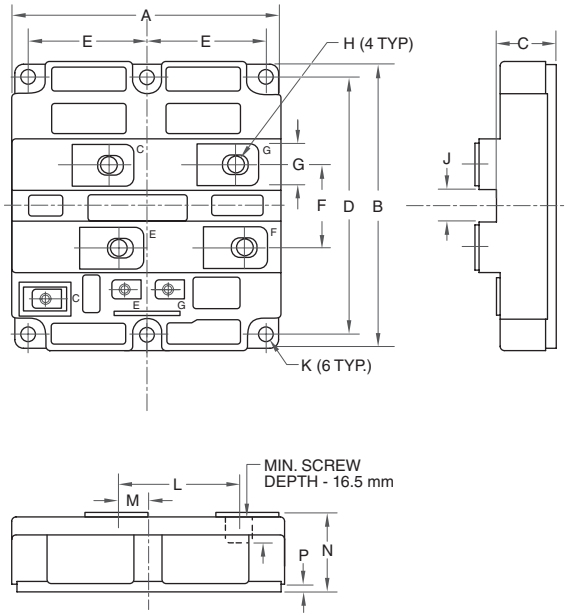
7 RM600HE-90S, RM1200HE-66S, RM1800HE-34S



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

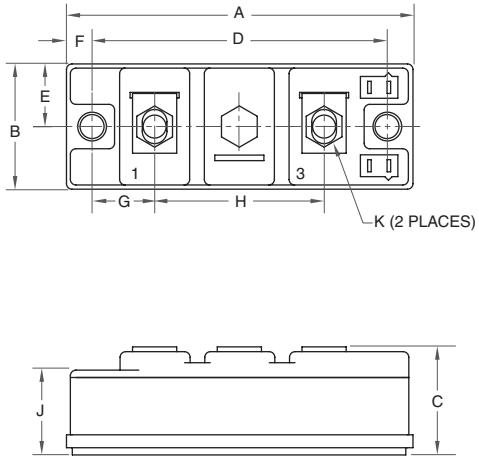
8 RM900DB-90S, RM900HC-90S, RM1200DB-66S



Dim.	Inches	Millimeters
A	5.12	130.0
B	5.51	140.0
C	1.16	29.5
D	4.88±0.01	124.0±0.25
E	2.24±0.01	57.0±0.25
F	1.57	40.0
G	0.79	20.0
H	M8 Metric	M8

Dim.	Inches	Millimeters
J	0.59	15.0
K	0.28 Dia.	7.0 Dia.
L	2.4	61.5
M	0.71	18.0
N	1.5+0.04/-0.0	38.0+1/0/-0.0
P	0.2	5.0

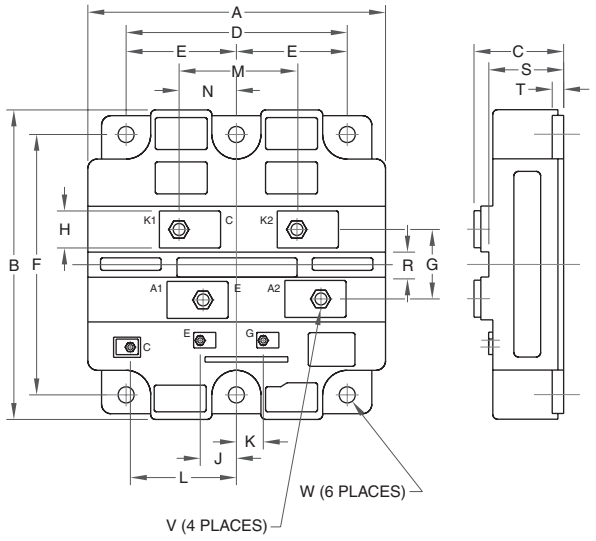
9 QRS0620T30, QRS0640T30, QRS0660T30, QRS0680T30, QRS1220T30, QRS1240T30, QRS1260T30, QRS1420T30, QRS1440T30, QRS1460T30



Dim.	Inches	Millimeters
A	3.70	94.0
B	1.34	34.0
C	1.18	30.0
D	3.15	80.0
E	0.67	17.0

Dim.	Inches	Millimeters
F	0.28	6.99
G	0.67	17.1
H	1.81	46.0
J	0.91	23.0
K	M6 x 1.0 Metric	M6 x 1.0

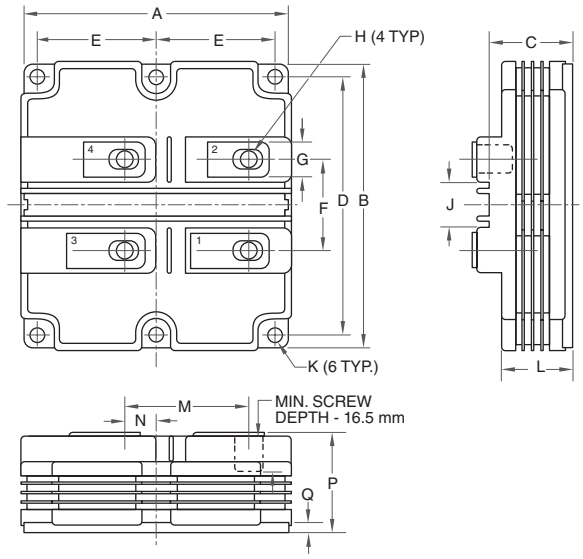
10 RM400DY-66S, RM600DY-66S



Dim.	Inches	Millimeters
A	5.12	130.0
B	5.51	140.0
C	1.50+0.8/-0.0	38.0+2.0/-0.0
D	4.49	114.0
E	2.24±0.01	57.0±0.25
F	4.88±0.01	124.0±0.25
G	1.58	40.0
H	0.79	20.0

Dim.	Inches	Millimeters
M	2.42	61.5
N	0.71	18.0
R	0.59	15.0
S	1.18	30.0
T	0.20	5.0
V	M8 Metric	M8
W	0.28 Dia.	7.0 Dia.

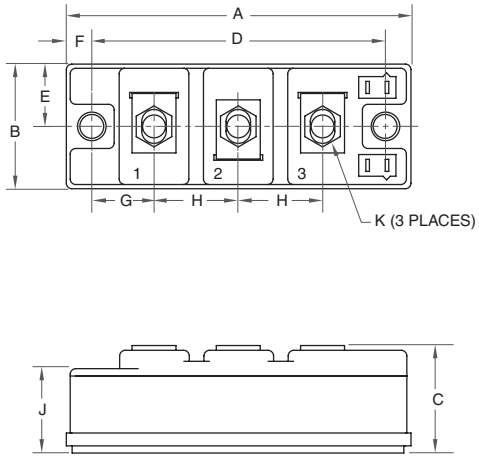
11 RM200DG-130S, RM300DG-90S, RM400DG-66S, RM600DG-130S, RM1200DG-66S



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

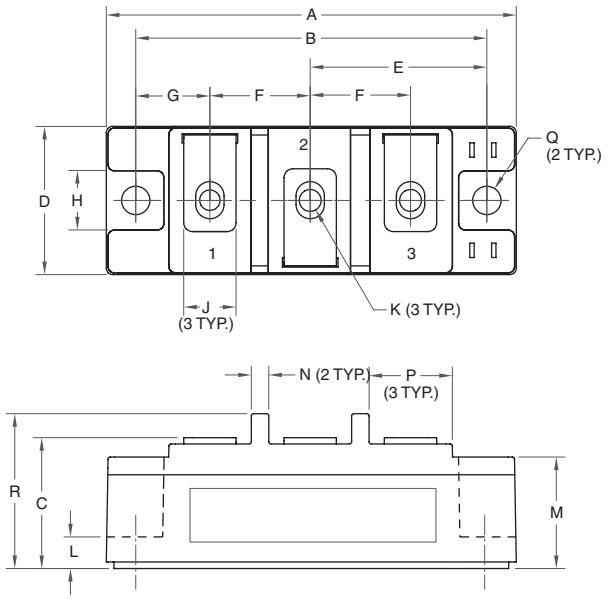
12 QR_1415T30, QR_1420T30, QR_1430T30



Dim.	Inches	Millimeters
A	3.70	94.0
B	1.34	34.0
C	1.18	30.0
D	3.15	80.0
E	0.67	17.0

Dim.	Inches	Millimeters
F	0.28	6.99
G	0.67	17.1
H	0.91	23.0
J	0.91	23.0
K	M6 x 1.0 Metric	M6 x 1.0

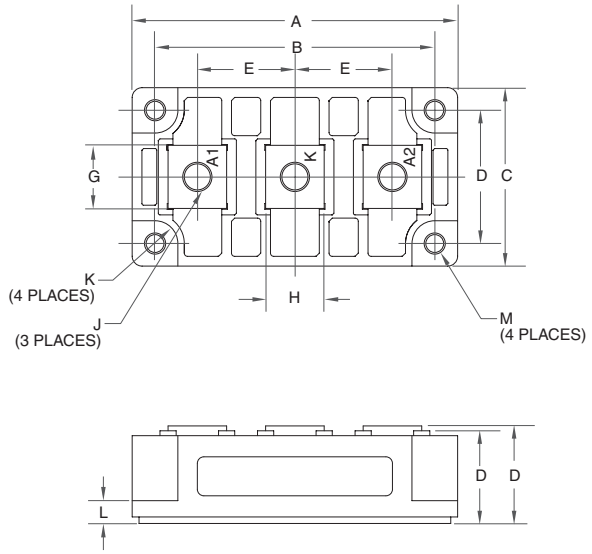
13 QR_3309R30, QR_3309T30, QR_3310R30, QR_3310T30, QR_3318R30, QR_3318T30, QR_3320R30, QR_3320T30



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.
R	1.40	35.6

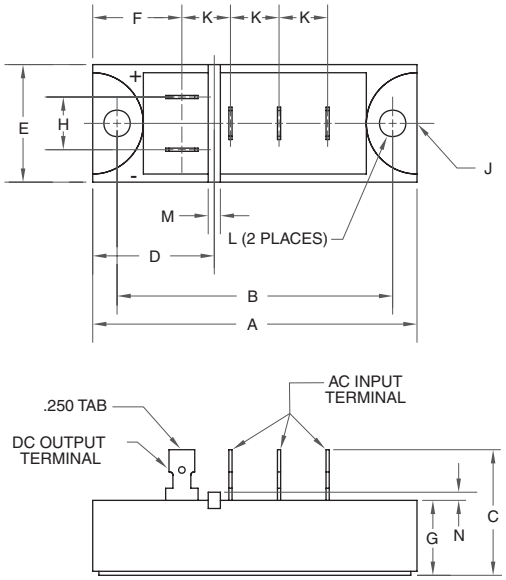
14 RM300CA-9W



Dim.	Inches	Millimeters
A	3.94	100.0
B	3.38±0.01	86.0±0.25
C	2.16	55.0
D	1.61±0.01	41.0±0.25
E	1.18	30.0
F	1.12	28.5

Dim.	Inches	Millimeters
G	0.76	19.4
H	0.71	18.0
J	M8 Metric	M8
K	0.28 Rad.	7.0 Rad.
L	0.28	7.0
M	0.22 Dia.	5.5 Dia.

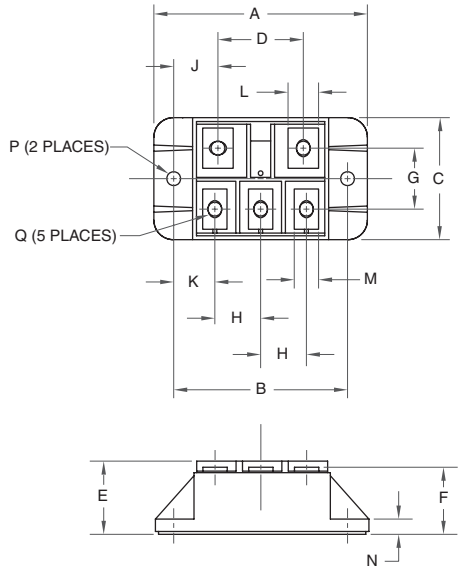
15 ME70--02, ME700802, ME700803, ME701203, ME701603



Dim.	Inches	Millimeters
A	3.15	80.0
B	2.677±0.012	68.0±0.3
C	1.22	31.0
D	1.181	30.0
E	1.142	29.0
F	0.866	22.0
G	0.728	18.5

Dim.	Inches	Millimeters
H	0.512	13.0
J	0.492 Rad.	12.5 Rad.
K	0.472	12.0
L	0.256±0.008 Dia.	6.5±0.2 Dia.
M	0.118	3.0
N	0.079	2.0

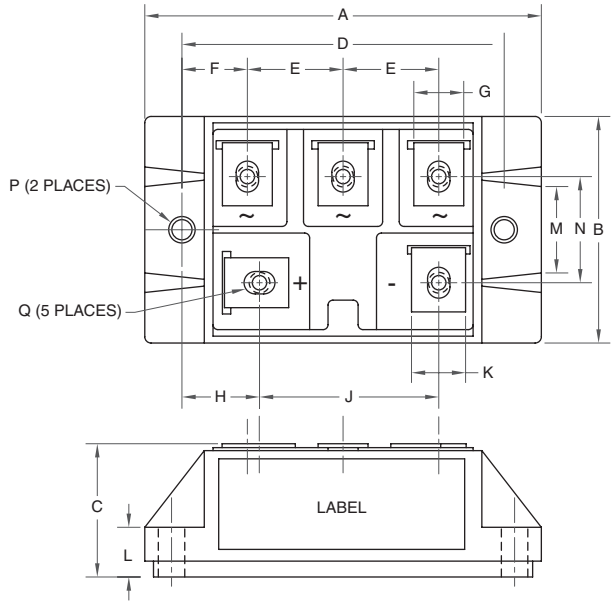
16 MEB00806, RM20TPM-H, RM20TPM-2H



Dim.	Inches	Millimeters
A	2.76	70.0
B	2.44±0.01	57.0±0.25
C	1.57	40.0
D	1.10	28.0
E	0.94	24.0
F	0.87	22.0
G	0.79	20.0
H	0.59	15.0

Dim.	Inches	Millimeters
J	0.57	14.5
K	0.53	13.5
L	0.39	10.0
M	0.31	8.0
N	0.20	5.0
P	0.18 Dia.	4.5 Dia.
Q	M4 Metric	M4

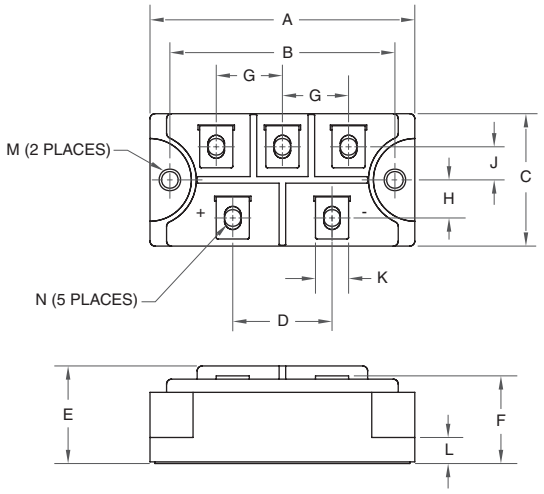
17 RM30TPM-H



Dim.	Inches	Millimeters
A	2.76	70.0
B	1.57	40.0
C	0.87	22.0
D	2.24	57.0
E	0.59	15.0
F	0.53	13.5
G	0.31	8.0
H	0.57	14.5

Dim.	Inches	Millimeters
J	1.10	28.0
K	0.39	10.0
L	0.24	6.0
M	0.71	18.0
N	0.79	20.0
P	0.18	4.5
Q	M4 Metric	M4

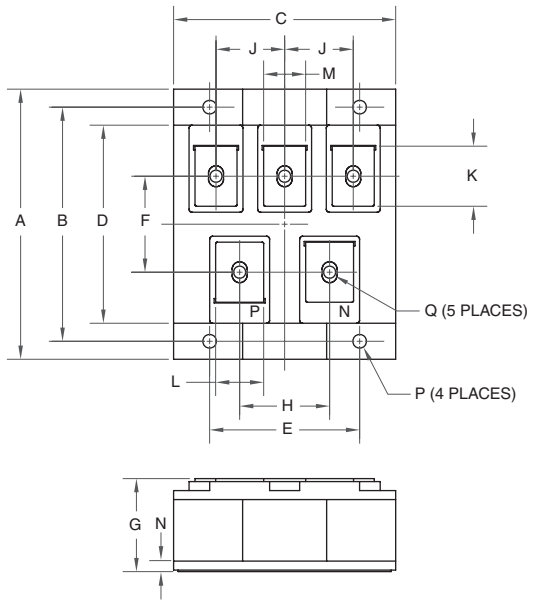
18 ME50--06, ME50--10



Dim.	Inches	Millimeters
A	3.15	80.0
B	2.677±0.01	68.0±0.25
C	1.57	40.0
D	1.18	30.0
E	1.16	29.5
F	1.04	26.5
G	0.79	20.0

Dim.	Inches	Millimeters
H	0.45	11.5
J	0.41	10.5
K	0.39	10.0
L	0.31	8.0
M	0.216 Dia.	5.5 Dia.
N	M5 Metric	M5

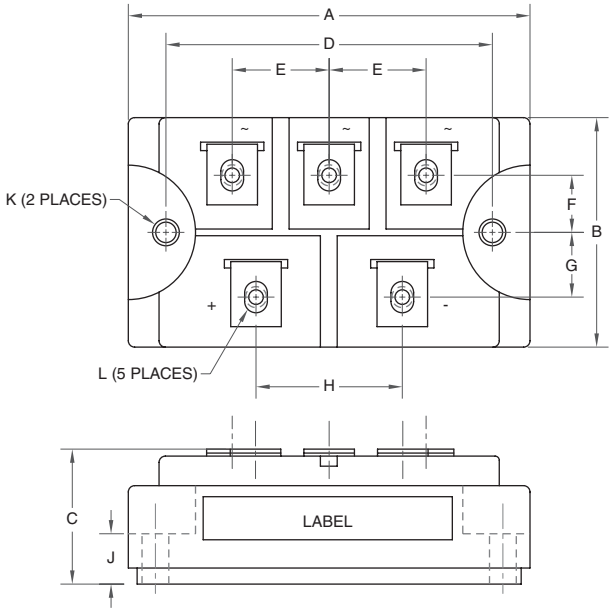
19 ME60--15



Dim.	Inches	Millimeters
A	3.543	90.0
B	3.071	78.0
C	2.913	74.0
D	2.598	66.0
E	1.968	50.0
F	1.26	32.0
G	1.220	31.0

Dim.	Inches	Millimeters
H	1.18	30.0
J	0.90	23.0
K	0.79	20.0
L	0.63	16.0
M	0.55	14.0
N	0.26	6.5
Q	M6 Metric	M6
P	0.18 Dia.	4.5 Dia.

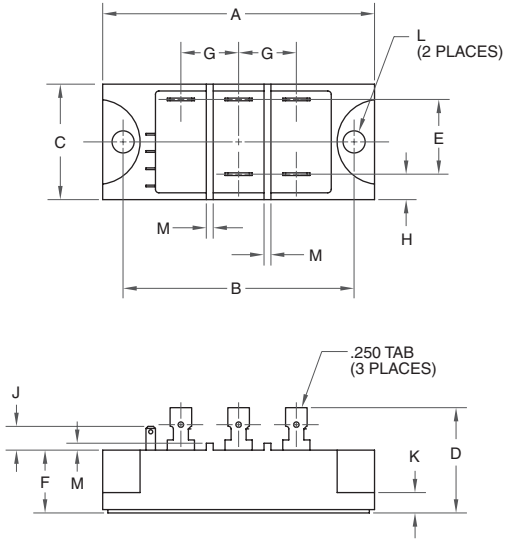
20 RM75TPM-H, RM75TPM-2H



Dim.	Inches	Millimeters
A	3.15	80.0
B	1.58	40.0
C	0.95+0.06/-0.02	24.1+1.5/-0.5
D	2.68±0.01	68.0±0.25
E	0.79	20.0
F	0.41	10.5

Dim.	Inches	Millimeters
G	0.45	11.5
H	1.18	30.0
J	0.32	8.0
K	0.217	5.5
L	M5 Metric	M5

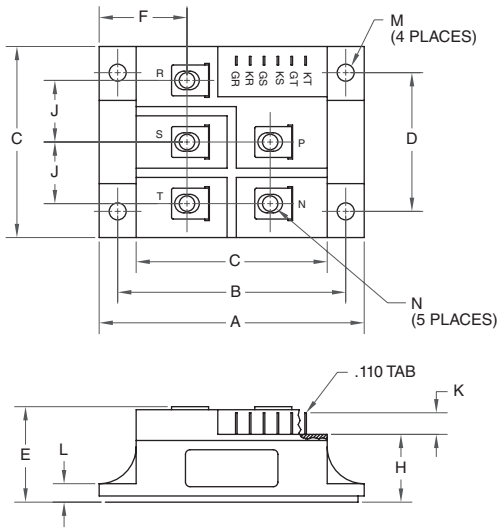
21 CE720802



Dim.	Inches	Millimeters
A	3.15	80.0
B	2.667±0.012	68.0±0.03
C	1.34	34.0
D	1.22	31.0
E	0.87	22.0
F	0.73	18.5

Dim.	Inches	Millimeters
G	0.67	17.0
H	0.3	7.5
J	0.28	7.0
K	0.24	6.0
L	0.777 Dia.	4.5 Dia.
M	0.08	2.0

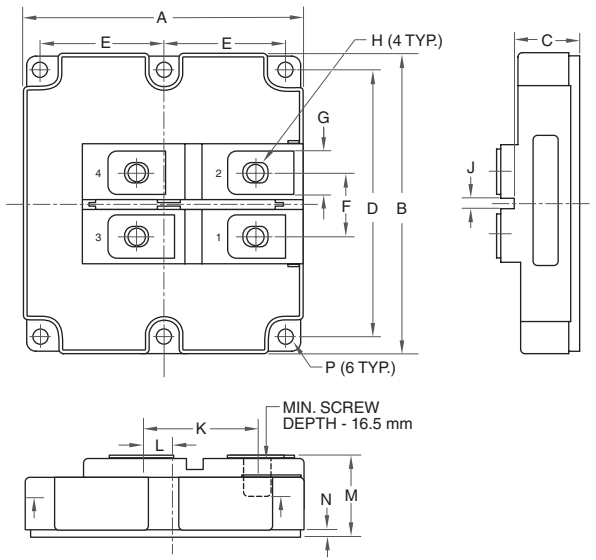
22 CE420830, CE420860



Dim.	Inches	Millimeters
A	3.38	86.0
B	2.913±0.012	74.0±0.3
C	2.44	62.0
D	1.772±0.008	45.0±0.2
E	1.22	31.0
F	1.12	28.5
G	1.06	27.0

Dim.	Inches	Millimeters
H	0.87	22.0
J	0.79	20.0
K	0.26	7.0
L	0.24	6.0
M	0.217±0.008 Dia.	5.5±0.2 Dia.
N	M5 Metric	M5

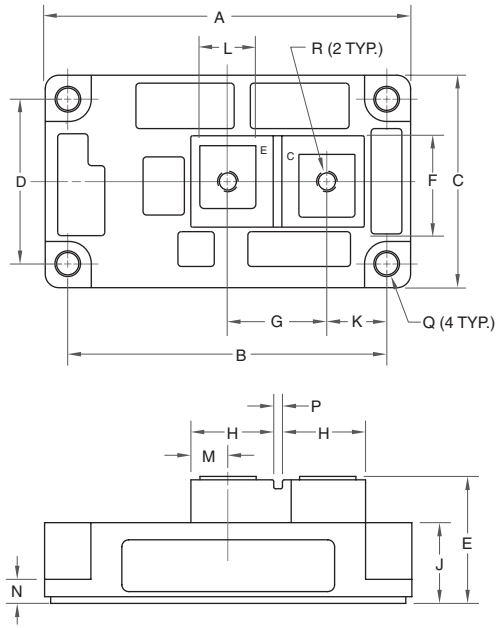
23 RM1200DB-34S



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.

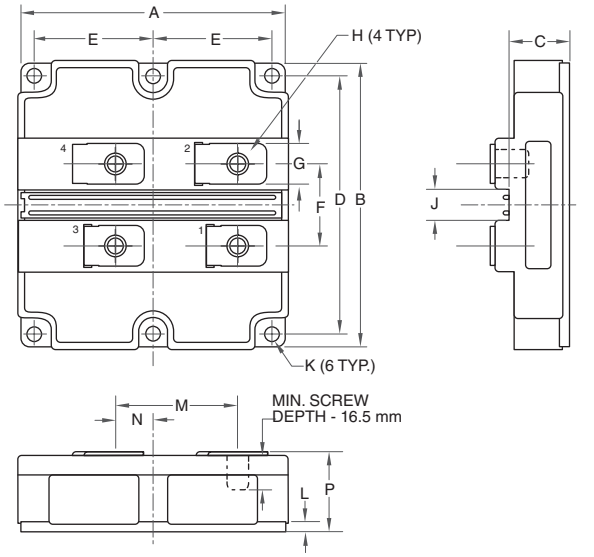
24 QRS061K001



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.
F	1.18	30.0
G	1.14	29.0
H	0.94	24.0

Dim.	Inches	Millimeters
J	0.93	23.5
K	0.69	17.5
L	0.63	16.0
M	0.43	11.0
N	0.28	7.0
P	0.12	3.0
Q	0.26 Dia.	6.5 Dia.
R	M6 Metric	M6

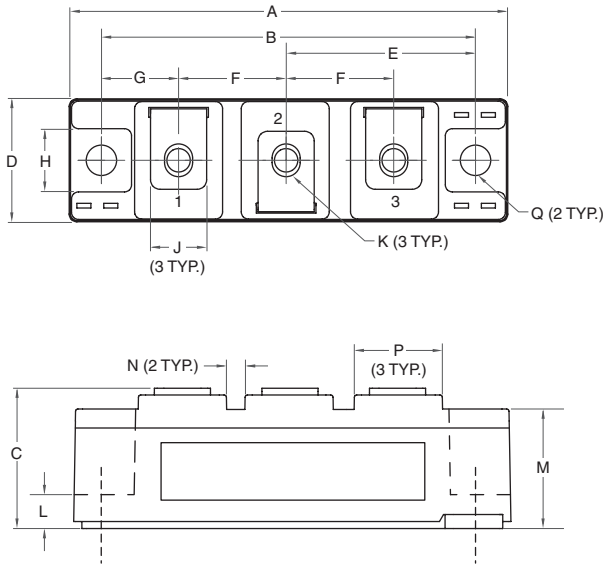
25 RM1000DC-66F



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	1.57±0.012	40.0±0.3
G	0.79+0.039/-0.008	20.0+1.0/-0.2

Dim.	Inches	Millimeters
H	M8 Metric	M8
J	0.59±0.012	15.0±0.3
K	0.28 Dia.	7.0 Dia.
L	0.2±0.008	5.0±0.2
M	2.42±0.012	61.5±0.3
N	0.71±0.012	18.0±0.3
P	0.28 Dia.	7.0 Dia.

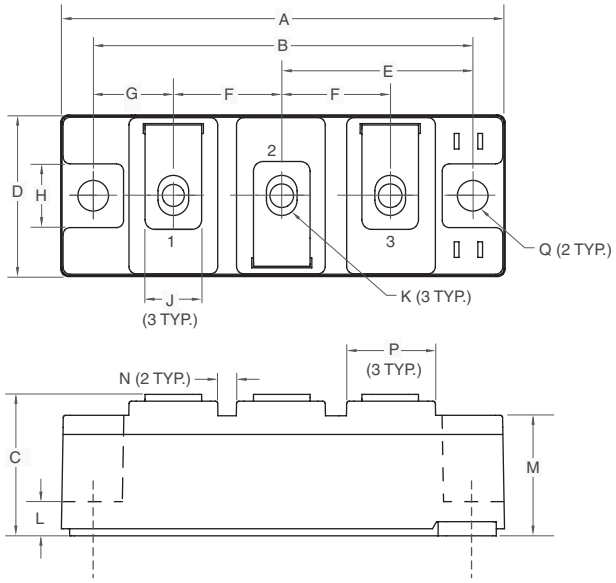
26 QR_0620R30, QR_1220R30



Dim.	Inches	Millimeters
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.

27 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.