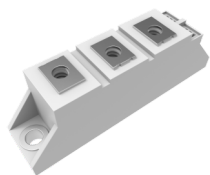


# INDEX

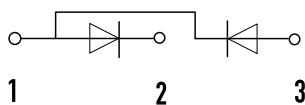
<b>FRED Modules .....</b>	<b>01~01</b>
<b>Standard Recovery Power Modules.....</b>	<b>02~06</b>
<b>Thyristor Modules.....</b>	<b>07~08</b>
<b>Three Phases Bridge Rectifier With Thyristor Modules .....</b>	<b>09~09</b>

# ▶ FRED Modules

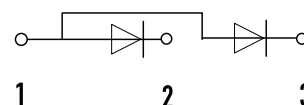
Part No.	Electrical Characteristics(Rating at 25°C Ambient Temperature)						Package Types
	Working Peak Reverse Voltage-VRWM(V)	Average Forward Current-IO(A)	Peak Forward Surge Current@IFSM(A)	Max. Forward Voltage Per Element-VF(V)	At Rated Forward Current-IF(A)	Maximum Reverse Recovery Time-Trr(ns)	
MF100C06F1	600	100	1500	1.40	100	105	F1
MF150C06F2	600	150	1400	1.60	150	130	F2
MF200K06F2	600	200	2000	1.60	200	140	F2
MF300C12F2	1200	300	2700	3.00	300	135	F2
MF300U12F2	1200	300	2500	2.70	300	150	F2
MF200K04F3	400	200	1500	1.35	200	95	F3
MF200K06F3	600	200	2100	1.15	200	105	F3
MF300K04F3	400	300	2700	1.05	300	90	F3
MF300K06F3	600	300	3500	1.40	300	130	F3
MF400K04F3	400	400	4000	1.35	400	135	F3
MF400K06F3	600	400	3500	1.25	400	130	F3
MF200K04F4	400	200	1500	1.35	200	95	F4
MF200K06F4	600	200	2100	1.15	200	105	F4
MF200DU06FJ	600	200	1500	1.40	100	105	FJ



F1

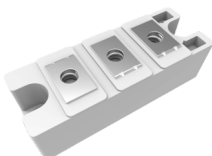


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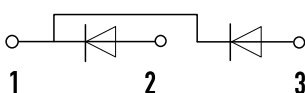


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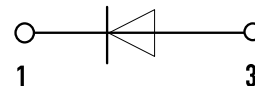
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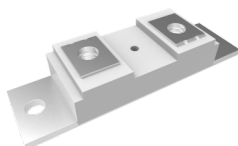
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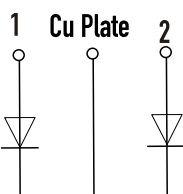
MF200K06F2



MF300U12F2



F3



MF200K04F3

MF300K04F3

MF200K06F3

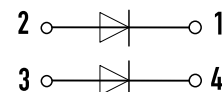
MF300K06F3

MF400K04F3

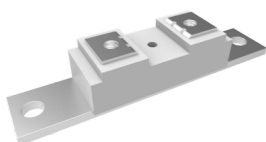
MF200K04F4

MF400K06F3

MF200K06F4



MF200DU06FJ



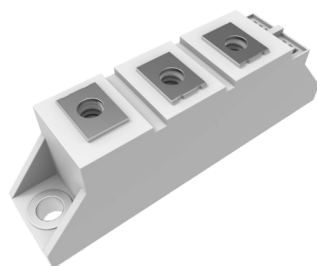
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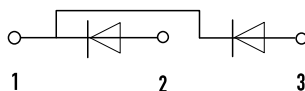
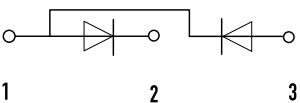
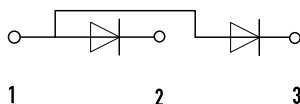
FJ

## ▶ Standard Recovery Power Modules

Part No.	Electrical Characteristics(Rating at 25°C Ambient Temperature)						Package Types
	Working Peak Reverse Voltage-VRWM(V)	Average Forward Current-IO(A)	Peak Forward Surge Current@IFSM(A)	Max. Forward Voltage Per Element-VF(V)	At Rated Forward Current-IF(A)	Max.DC Reverse Current at Rated DC Blocking Voltage-IRMAX(mA)	
MD100A08D1	800	100	2500	1.4	300	5	D1
MD100A12D1	1200	100	2500	1.4	300	5	D1
MD100A16D1	1600	100	2500	1.4	300	5	D1
MD100A18D1	1800	100	2500	1.4	300	5	D1
MD100C08D1	800	100	2500	1.4	300	5	D1
MD100C12D1	1200	100	2500	1.4	300	5	D1
MD100C16D1	1600	100	2500	1.4	300	5	D1
MD100C18D1	1800	100	2500	1.4	300	5	D1
MD100K08D1	800	100	2500	1.4	300	5	D1
MD100K12D1	1200	100	2500	1.4	300	5	D1
MD100K16D1	1600	100	2500	1.4	300	5	D1
MD100K18D1	1800	100	2500	1.4	300	5	D1
MD120A08D1	800	120	2800	1.35	300	6	D1
MD120A12D1	1200	120	2800	1.35	300	6	D1
MD120A16D1	1600	120	2800	1.35	300	6	D1
MD120A18D1	1800	120	2800	1.35	300	6	D1
MD120C08D1	800	120	2800	1.35	300	6	D1
MD120C12D1	1200	120	2800	1.35	300	6	D1
MD120C16D1	1600	120	2800	1.35	300	6	D1
MD120C18D1	1800	120	2800	1.35	300	6	D1
MD120K08D1	800	120	2800	1.35	300	6	D1
MD120K12D1	1200	120	2800	1.35	300	6	D1
MD120K16D1	1600	120	2800	1.35	300	6	D1
MD120K18D1	1800	120	2800	1.35	300	6	D1
MD36A08D1	800	36	650	1.4	100	5	D1
MD36A12D1	1200	36	650	1.4	100	5	D1
MD36A16D1	1600	36	650	1.4	100	5	D1
MD36A18D1	1800	36	650	1.4	100	5	D1
MD36C08D1	800	36	650	1.4	100	5	D1
MD36C12D1	1200	36	650	1.4	100	5	D1
MD36C16D1	1600	36	650	1.4	100	5	D1



D1



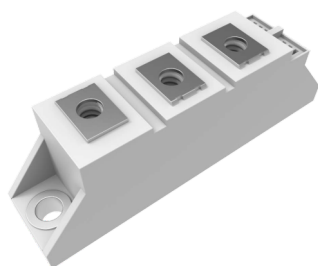
MD100A08D1 ~ MD100A18D1  
MD120A08D1 ~ MD120A18D1  
MD36A08D1 ~ MD36A18D1

MD100C08D1 ~ MD100C18D1  
MD120C08D1 ~ MD120C18D1  
MD36C08D1 ~ MD36C18D1

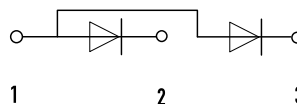
MD100K08D1 ~ MD100K18D1  
MD120K08D1 ~ MD120K18D1

# ▶ Standard Recovery Power Modules

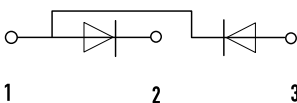
Part No.	Electrical Characteristics(Rating at 25°C Ambient Temperature)						Package Types
	Working Peak Reverse Voltage-VRWM(V)	Average Forward Current-IO(A)	Peak Forward Surge Current@IFSM(A)	Max. Forward Voltage Per Element-VF(V)	At Rated Forward Current-IF(A)	Max.DC Reverse Current at Rated DC Blocking Voltage -IRMAX(mA)	
MD36C18D1	1800	36	650	1.4	100	5	D1
MD36K08D1	800	36	650	1.4	100	5	D1
MD36K12D1	1200	36	650	1.4	100	5	D1
MD36K16D1	1600	36	650	1.4	100	5	D1
MD36K18D1	1800	36	650	1.4	100	5	D1
MD60A08D1	800	60	1150	1.45	200	5	D1
MD60A12D1	1200	60	1150	1.45	200	5	D1
MD60A16D1	1600	60	1150	1.45	200	5	D1
MD60A18D1	1800	60	1150	1.45	200	5	D1
MD60C08D1	800	60	1150	1.45	200	5	D1
MD60C12D1	1200	60	1150	1.45	200	5	D1
MD60C16D1	1600	60	1150	1.45	200	5	D1
MD60C18D1	1800	60	1150	1.45	200	5	D1
MD60K08D1	800	60	1150	1.45	200	5	D1
MD60K12D1	1200	60	1150	1.45	200	5	D1
MD60K16D1	1600	60	1150	1.45	200	5	D1
MD60K18D1	1800	60	1150	1.45	200	5	D1
MD70A08D1	800	70	1400	1.3	200	5	D1
MD70A12D1	1200	70	1400	1.3	200	5	D1
MD70A16D1	1600	70	1400	1.3	200	5	D1
MD70A18D1	1800	70	1400	1.3	200	5	D1
MD70C08D1	800	70	1400	1.3	200	5	D1
MD70C12D1	1200	70	1400	1.3	200	5	D1
MD70C16D1	1600	70	1400	1.3	200	5	D1
MD70C18D1	1800	70	1400	1.3	200	5	D1
MD70K08D1	800	70	1400	1.3	200	5	D1
MD70K12D1	1200	70	1400	1.3	200	5	D1
MD70K16D1	1600	70	1400	1.3	200	5	D1
MD70K18D1	1800	70	1400	1.3	200	5	D1
MD165A08D2	800	165	6000	1.4	300	9	D2
MD165A12D2	1200	165	6000	1.4	300	9	D2



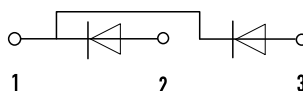
D1



MD60A08D1~MD60A18D1  
MD70A08D1~MD70A18D1



MD60C08D1~MD60C18D1  
MD70C08D1~MD70C18D1

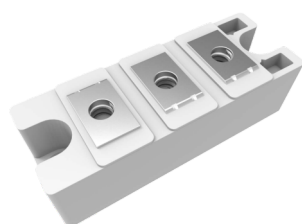


MD36K08D1~MD36K18D1  
MD60K08D1~MD60K18D1  
MD70K08D1~MD70K18D1

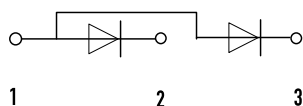


## ▶ Standard Recovery Power Modules

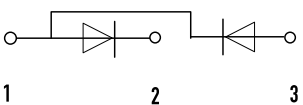
Part No.	Electrical Characteristics(Rating at 25°C Ambient Temperature)						Package Types
	Working Peak Reverse Voltage-VRWM(V)	Average Forward Current-IO(A)	Peak Forward Surge Current@IFSM(A)	Max. Forward Voltage Per Element-VF(V)	At Rated Forward Current-IF(A)	Max.DC Reverse Current at Rated DC Blocking Voltage-IRMAX(mA)	
MD165A16D2	1600	165	6000	1.4	300	9	D2
MD165A18D2	1800	165	6000	1.4	300	9	D2
MD165C08D2	800	165	6000	1.4	300	9	D2
MD165C12D2	1200	165	6000	1.4	300	9	D2
MD165C16D2	1600	165	6000	1.4	300	9	D2
MD165C18D2	1800	165	6000	1.4	300	9	D2
MD165K08D2	800	165	6000	1.4	300	9	D2
MD165K12D2	1200	165	6000	1.4	300	9	D2
MD165K16D2	1600	165	6000	1.4	300	9	D2
MD165K18D2	1800	165	6000	1.4	300	9	D2
MD200A08D2	800	200	6800	1.3	300	9	D2
MD200A12D2	1200	200	6800	1.3	300	9	D2
MD200A16D2	1600	200	6800	1.3	300	9	D2
MD200A18D2	1800	200	6800	1.3	300	9	D2
MD200C08D2	800	200	6800	1.3	300	9	D2
MD200C12D2	1200	200	6800	1.3	300	9	D2
MD200C16D2	1600	200	6800	1.3	300	9	D2
MD200C18D2	1800	200	6800	1.3	300	9	D2
MD200K08D2	800	200	6800	1.3	300	9	D2
MD200K12D2	1200	200	6800	1.3	300	9	D2
MD200K16D2	1600	200	6800	1.3	300	9	D2
MD200K18D2	1800	200	6800	1.3	300	9	D2
MD240C08D2	800	240	7550	1.25	300	9	D2
MD240C12D2	1200	240	7550	1.25	300	9	D2
MD240C16D2	1600	240	7550	1.25	300	9	D2
MD240C18D2	1800	240	7550	1.25	300	9	D2
MD100S08M2	800	100	920	1.9	150	0.3	M2
MD100S12M2	1200	100	920	1.9	150	0.3	M2
MD100S16M2	1600	100	920	1.9	150	0.3	M2
MD100S18M2	1800	100	920	1.9	150	0.3	M2
MD60S08M2	800	60	460	1.8	150	0.3	M2



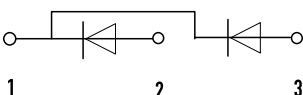
D2



MD165A08D2~MD165A18D2  
MD200A08D2~MD200A18D2



MD165C08D2~MD165C18D2  
MD200C08D2~MD200C18D2  
MD240C08D2~MD240C18D2



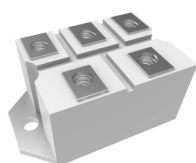
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MD200K08D2~MD200K18D2

## ▶ Standard Recovery Power Modules

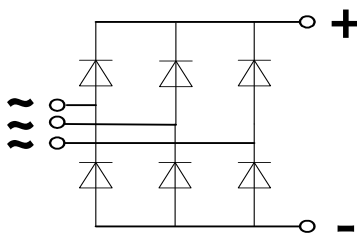
Part No.	Electrical Characteristics(Rating at 25°C Ambient Temperature)						Package Types
	Working Peak Reverse Voltage-VRWM(V)	Average Forward Current-IO(A)	Peak Forward Surge Current@IFSM(A)	Max. Forward Voltage Per Element-VF(V)	At Rated Forward Current-IF(A)	Max.DC Reverse Current at Rated DC Blocking Voltage -IRMAX(mA)	
MD60S12M2	1200	60	460	1.8	150	0.3	M2
MD60S16M2	1600	60	460	1.8	150	0.3	M2
MD60S18M2	1800	60	460	1.8	150	0.3	M2
MD75S08M2	800	75	750	1.6	150	0.3	M2
MD75S12M2	1200	75	750	1.6	150	0.3	M2
MD75S16M2	1600	75	750	1.6	150	0.3	M2
MD75S18M2	1800	75	750	1.6	150	0.3	M2
MD100S08M3	800	100	920	1.9	300	0.3	M3
MD100S12M3	1200	100	920	1.9	300	0.3	M3
MD100S16M3	1600	100	920	1.9	300	0.3	M3
MD100S18M3	1800	100	920	1.9	300	0.3	M3
MD130S08M3	800	130	1200	1.8	300	0.3	M3
MD130S12M3	1200	130	1200	1.8	300	0.3	M3
MD130S16M3	1600	130	1200	1.8	300	0.3	M3
MD130S18M3	1800	130	1200	1.8	300	0.3	M3
MD160S08M3	800	160	1800	1.75	300	0.5	M3
MD160S12M3	1200	160	1800	1.75	300	0.5	M3
MD160S16M3	1600	160	1800	1.75	300	0.5	M3
MD160S18M3	1800	160	1800	1.75	300	0.5	M3
MD200S08M3	800	200	2240	1.7	300	0.5	M3
MD200S12M3	1200	200	2240	1.7	300	0.5	M3
MD200S16M3	1600	200	2240	1.7	300	0.5	M3
MD200S18M3	1800	200	2240	1.7	300	0.5	M3
MD250S08M3	800	250	2500	1.6	300	0.5	M3
MD250S12M3	1200	250	2500	1.6	300	0.5	M3
MD250S16M3	1600	250	2500	1.6	300	0.5	M3
MD250S18M3	1800	250	2500	1.6	300	0.5	M3
MD100S08M4	800	100	920	1.9	300	0.3	M4
MD100S12M4	1200	100	920	1.9	300	0.3	M4
MD100S16M4	1600	100	920	1.9	300	0.3	M4
MD100S18M4	1800	100	920	1.9	300	0.3	M4



M2



M3

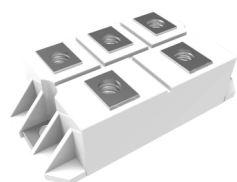


MD100S08M2~MD100S18M2  
MD60S08M2~MD60S18M2  
MD75S08M2~MD75S18M2

MD100S08M3~MD100S18M3  
MD130S08M3~MD130S18M3  
MD160S08M3~MD160S18M3  
MD200S08M3~MD200S18M3  
MD250S08M3~MD250S18M3

## ▶ Standard Recovery Power Modules

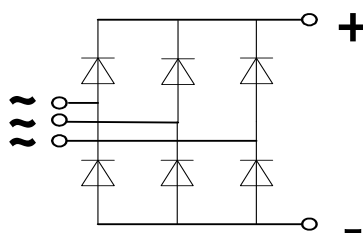
Part No.	Electrical Characteristics(Rating at 25°C Ambient Temperature)						Package Types
	Working Peak Reverse Voltage-VRWM(V)	Average Forward Current-IO(A)	Peak Forward Surge Current@IFSM(A)	Max. Forward Voltage Per Element-VF(V)	At Rated Forward Current-IF(A)	Max.DC Reverse Current at Rated DC Blocking Voltage-IRMAX(mA)	
MD50S08M4	800	50	460	1.7	150	0.3	M4
MD50S12M4	1200	50	460	1.7	150	0.3	M4
MD50S16M4	1600	50	460	1.7	150	0.3	M4
MD50S18M4	1800	50	460	1.7	150	0.3	M4
MD75S08M4	800	75	750	1.5	150	0.3	M4
MD75S12M4	1200	75	750	1.5	150	0.3	M4
MD75S16M4	1600	75	750	1.5	150	0.3	M4
MD75S18M4	1800	75	750	1.5	150	0.3	M4
MD100S08M5	800	100	920	1.9	300	0.3	M5
MD100S12M5	1200	100	920	1.9	300	0.3	M5
MD100S16M5	1600	100	920	1.9	300	0.3	M5
MD100S18M5	1800	100	920	1.9	300	0.3	M5
MD130S08M5	800	130	1200	1.8	300	0.3	M5
MD130S12M5	1200	130	1200	1.8	300	0.3	M5
MD130S16M5	1600	130	1200	1.8	300	0.3	M5
MD130S18M5	1800	130	1200	1.8	300	0.3	M5
MD160S08M5	800	160	1800	1.75	300	0.5	M5
MD160S12M5	1200	160	1800	1.75	300	0.5	M5
MD160S16M5	1600	160	1800	1.75	300	0.5	M5
MD160S18M5	1800	160	1800	1.75	300	0.5	M5
MD200S08M5	800	200	2240	1.7	300	0.5	M5
MD200S12M5	1200	200	2240	1.7	300	0.5	M5
MD200S16M5	1600	200	2240	1.7	300	0.5	M5
MD200S18M5	1800	200	2240	1.7	300	0.5	M5
MD250S08M5	800	250	2500	1.6	300	0.5	M5
MD250S12M5	1200	250	2500	1.6	300	0.5	M5
MD250S16M5	1600	250	2500	1.6	300	0.5	M5
MD250S18M5	1800	250	2500	1.6	300	0.5	M5



M4



M5



MD100S08M4~MD100S18M4  
MD50S08M4~MD50S18M4  
MD75S08M4~MD75S18M4

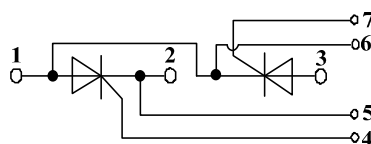
MD100S08M5~MD100S18M5  
MD130S08M5~MD130S18M5  
MD160S08M5~MD160S18M5  
MD200S08M5~MD200S18M5  
MD250S08M5~MD250S18M5

# ▶ Thyristor Modules

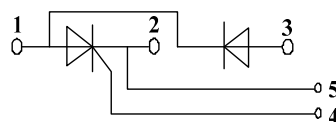
Part No.	Electrical Characteristics					Package Types
	VRRM(V)	IT(A)	VGT(V)	IGT(mA)	VTM(V)	
MT110C08T1	800	110	3.0	150	1.65	T1
MT110C12T1	1200	110	3.0	150	1.65	T1
MT110C16T1	1600	110	3.0	150	1.65	T1
MT110C18T1	1800	110	3.0	150	1.65	T1
MT110CB08T1	800	110	3.0	150	1.65	T1
MT110CB12T1	1200	110	3.0	150	1.65	T1
MT110CB16T1	1600	110	3.0	150	1.65	T1
MT110CB18T1	1800	110	3.0	150	1.65	T1
MT25C08T1	800	25	2.5	150	1.80	T1
MT25C12T1	1200	25	2.5	150	1.80	T1
MT25C16T1	1600	25	2.5	150	1.80	T1
MT25C18T1	1800	25	2.5	150	1.80	T1
MT40C08T1	800	40	2.5	150	1.95	T1
MT40C12T1	1200	40	2.5	150	1.95	T1
MT40C16T1	1600	40	2.5	150	1.95	T1
MT40C18T1	1800	40	2.5	150	1.95	T1
MT40CB08T1	800	40	2.5	150	1.95	T1
MT40CB12T1	1200	40	2.5	150	1.95	T1
MT40CB16T1	1600	40	2.5	150	1.95	T1
MT40CB18T1	1800	40	2.5	150	1.95	T1
MT60C08T1	800	60	3.0	150	1.65	T1
MT60C12T1	1200	60	3.0	150	1.65	T1
MT60C16T1	1600	60	3.0	150	1.65	T1
MT60C18T1	1800	60	3.0	150	1.65	T1
MT60CB08T1	800	60	3.0	150	1.65	T1
MT60CB12T1	1200	60	3.0	150	1.65	T1
MT60CB16T1	1600	60	3.0	150	1.65	T1
MT60CB18T1	1800	60	3.0	150	1.65	T1
MT90CB08T1	800	90	3.0	150	1.65	T1
MT90CB12T1	1200	90	3.0	150	1.65	T1
MT90CB16T1	1600	90	3.0	150	1.65	T1



T1



MT25C08T1 ~ MT25C18T1  
MT40C08T1 ~ MT40C18T1  
MT60C08T1 ~ MT60C18T1  
MT110C08T1 ~ MT110C18T1



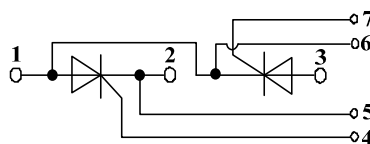
MT40CB08T1 ~ MT40CB18T1  
MT60CB08T1 ~ MT60CB18T1  
MT90CB08T1 ~ MT90CB18T1  
MT110CB08T1 ~ MT110CB18T1

# ▶ Thyristor Modules

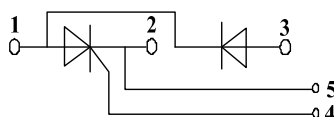
Part No.	Electrical Characteristics					Package Types
	VRRM(V)	IT(A)	VGT(V)	IGT(mA)	VTM(V)	
MT90CB18T1	1800	90	3.0	150	1.65	T1
MT130C08T2	800	130	3.0	150	1.80	T2
MT130C12T2	1200	130	3.0	150	1.80	T2
MT130C16T2	1600	130	3.0	150	1.80	T2
MT130C18T2	1800	130	3.0	150	1.80	T2
MT130CB08T2	800	130	3.0	150	1.80	T2
MT130CB12T2	1200	130	3.0	150	1.80	T2
MT130CB16T2	1600	130	3.0	150	1.80	T2
MT130CB18T2	1800	130	3.0	150	1.80	T2
MT160C08T2	800	160	3.0	150	1.70	T2
MT160C12T2	1200	160	3.0	150	1.70	T2
MT160C16T2	1600	160	3.0	150	1.70	T2
MT160C18T2	1800	160	3.0	150	1.70	T2
MT160CB08T2	800	160	3.0	150	1.70	T2
MT160CB12T2	1200	160	3.0	150	1.70	T2
MT160CB16T2	1600	160	3.0	150	1.70	T2
MT160CB18T2	1800	160	3.0	150	1.70	T2
MT200C08T2	800	200	3.0	200	1.70	T2
MT200C12T2	1200	200	3.0	200	1.70	T2
MT200C16T2	1600	200	3.0	200	1.70	T2
MT200C18T2	1800	200	3.0	200	1.70	T2
MT200CB08T2	800	200	3.0	200	1.70	T2
MT200CB12T2	1200	200	3.0	200	1.70	T2
MT200CB16T2	1600	200	3.0	200	1.70	T2
MT200CB18T2	1800	200	3.0	200	1.70	T2



T2



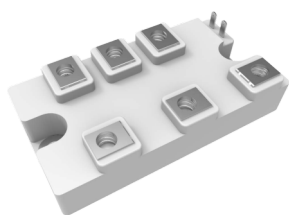
MT160C08T2~MT160C18T2  
MT130C08T2~MT130C18T2  
MT200C08T2~MT200C18T2



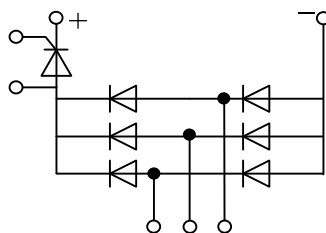
MT130CB08T2~MT130CB18T2  
MT160CB08T2~MT160CB18T2  
MT200CB08T2~MT200CB18T2

## ▶ Three Phases Bridge Rectifier With Thyristor Modules

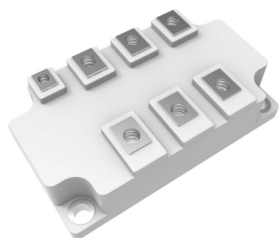
Part No.	Electrical Characteristics					Package Types
	VRRM(V)	IT(A)	VGT(V)	IGT(mA)	VTM(V)	
MT75DT08L1	800	75	3	150	1.30	L1
MT75DT12L1	1200	75	3	150	1.30	L1
MT75DT16L1	1600	75	3	150	1.30	L1
MT75DT18L1	1800	75	3	150	1.30	L1
MT100DT08L1	800	100	3	150	1.25	L1
MT100DT12L1	1200	100	3	150	1.25	L1
MT100DT16L1	1600	100	3	150	1.25	L1
MT100DT18L1	1800	100	3	150	1.25	L1
MT150DT08L2	800	150	3	150	1.35	L2
MT150DT12L2	1200	150	3	150	1.35	L2
MT150DT16L2	1600	150	3	150	1.35	L2
MT150DT18L2	1800	150	3	150	1.35	L2
MT200DT08L2	800	200	3	150	1.40	L2
MT200DT12L2	1200	200	3	150	1.40	L2
MT200DT16L2	1600	200	3	150	1.40	L2
MT200DT18L2	1800	200	3	150	1.40	L2



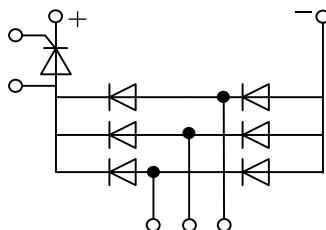
L1



MT75DT08L1~MT75DT18L1  
MT100DT08L1~MT100DT18L1



L2

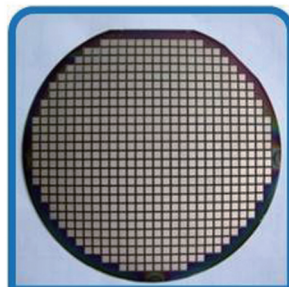
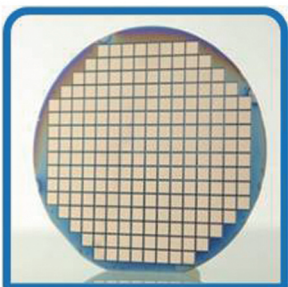


MT150DT08L2~MT150DT18L2  
MT200DT08L2~MT200DT18L2

# Encapsulation Technology



# High Quality Chips Support





# Encapsulation Technology

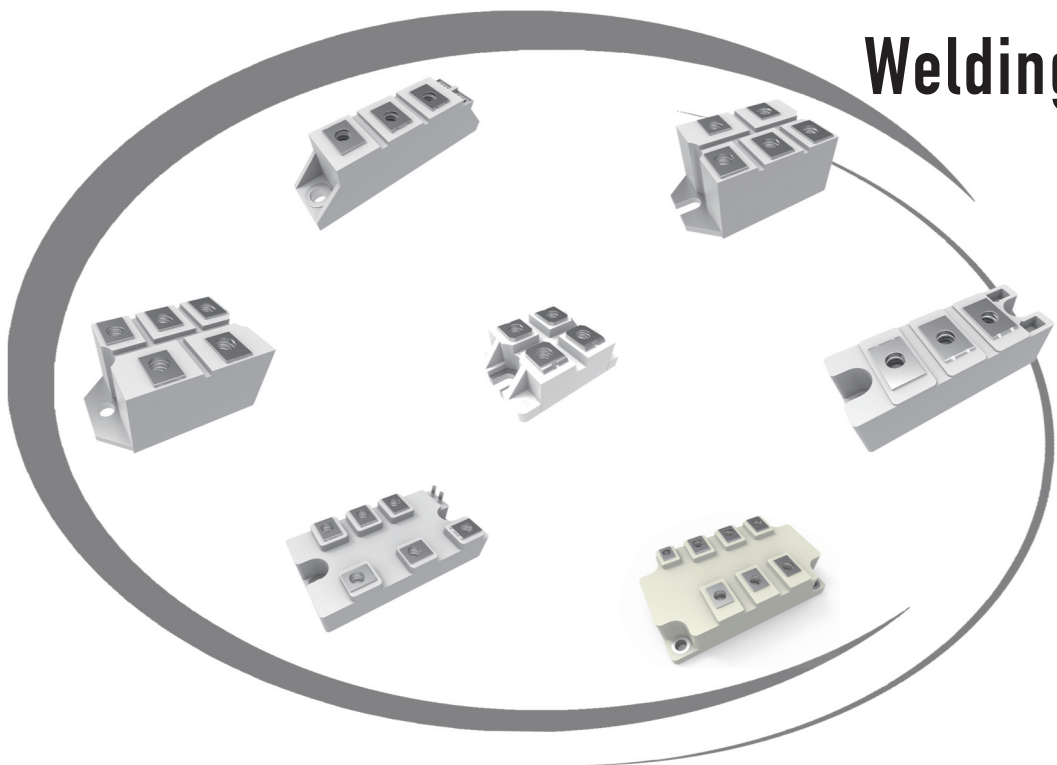
## Inverter



## Welding Machine



## Grid



## UPS