

# Thyristor & Diode Modules

Circuit configuration:Half-Bridge

ITEM	V <sub>DRM</sub> /V <sub>RRM</sub>	I <sub>T</sub> (AV)	I <sub>TSM</sub>	I <sup>2</sup> t	dv/dt	di/dt	I <sub>DRM</sub> /I <sub>RRM</sub>	I <sub>GT</sub>	V <sub>GT</sub>	I <sub>H</sub>	V <sub>TM</sub> /I <sub>TM</sub>	V <sub>TO</sub>	r <sub>T</sub>	R <sub>th(j-c)</sub>	R <sub>th(c-h)</sub>	T <sub>Jm</sub>	Viso	Out Line No.
CONDITION	125°C	85°C	10ms		125°C		125°C	25°C			25°C	125°C		per chip				
UNIT	V	A	kA	kA <sup>2</sup> s	V/μs	A/μs	mA	mA	V	mA	V/A	V	m·Ω	°C/W		°C	V(AC)	
MD70T**S	800-1,800	70	1.8	16.2	1,000	200	15	200	2.5	250	1.65/210	0.75	3.64	0.35	0.15	125	3,000	M16
MD90T**S	800-1,800	90	1.9	18.1	1,000	200	20	200	2.5	250	1.70/270	0.7	3.01	0.28	0.15	125	3,000	M16
MD110T**S	800-1,800	110	2.0	20	1,000	200	20	200	2.5	250	1.65/330	0.95	1.5	0.25	0.15	125	3,000	M16
MD135T**S	800-1,800	135	3.5	61.3	1,000	200	35	200	2.5	250	1.60/410	0.95	1.5	0.17	0.080	125	3,000	M17
MD160T**S	800-1,800	160	3.8	72.2	1,000	200	40	200	2.5	250	1.65/480	0.85	1.5	0.17	0.080	125	3,000	M17
MD182T**S	800-1,800	182	4.0	80	1,000	200	40	200	2.5	250	1.70/550	0.83	1.3	0.16	0.080	125	3,000	M17

Circuit configuration:Single

ITEM	V <sub>DRM</sub> /V <sub>RRM</sub>	I <sub>T</sub> (AV)	I <sub>TSM</sub>	I <sup>2</sup> t	dv/dt	di/dt	I <sub>DRM</sub> /I <sub>RRM</sub>	I <sub>GT</sub>	V <sub>GT</sub>	I <sub>H</sub>	V <sub>TM</sub> /I <sub>TM</sub>	V <sub>TO</sub>	r <sub>T</sub>	R <sub>th(j-c)</sub>	R <sub>th(c-h)</sub>	T <sub>Jm</sub>	Viso	Out Line No.
CONDITION	125°C	85°C	10ms		125°C		125°C	25°C			25°C	125°C		per chip				
UNIT	V	A	kA	kA <sup>2</sup> s	V/μs	A/μs	mA	mA	V	mA	V/A	V	m·Ω	°C/W		°C	V(AC)	
MH70T**S	800-1,800	70	1.8	16.2	1,000	200	15	200	2.5	250	1.65/210	0.75	3.64	0.35	0.15	125	3,000	M16
MH90T**S	800-1,800	90	1.9	18.1	1,000	200	12	200	2.5	250	1.70/270	0.7	3.01	0.28	0.15	125	3,000	M16
MH110T**S	800-1,800	110	2.0	20	1,000	200	12	200	2.5	250	1.65/330	0.8	2.29	0.25	0.15	125	3,000	M16
MH135T**S	800-1,800	135	3.5	61.3	1,000	200	15	200	2.5	250	1.60/410	0.95	1.5	0.18	0.080	125	3,000	M17
MH160T**S	800-1,800	160	3.8	72.2	1,000	200	15	200	2.5	250	1.65/480	0.85	1.5	0.17	0.080	125	3,000	M17
MH182T**S	800-1,800	182	4.0	80	1,000	200	15	200	2.5	250	1.70/550	0.83	1.3	0.16	0.080	125	3,000	M17

Circuit configuration:Half-Bridge

ITEM	V <sub>DRM</sub> /V <sub>RRM</sub>	I <sub>T</sub> (AV)	I <sub>TSM</sub>	I <sup>2</sup> t	dv/dt	di/dt	I <sub>DRM</sub> /I <sub>RRM</sub>	I <sub>GT</sub>	V <sub>GT</sub>	I <sub>H</sub>	V <sub>TM</sub> /I <sub>TM</sub>	V <sub>TO</sub>	r <sub>T</sub>	R <sub>th(j-c)</sub>	R <sub>th(c-h)</sub>	T <sub>Jm</sub>	Viso	Out Line No.
CONDITION	125°C	85°C	10ms		125°C		125°C	25°C			25°C	125°C		per chip				
UNIT	V	A	kA	kA <sup>2</sup> s	V/μs	A/μs	mA	mA	V	mA	V/A	V	m·Ω	°C/W		°C	V(AC)	
MD70TH**S	800-1,800	70	1.8	16.2	1,000	200	15	200	2.5	250	1.65/210	0.75	3.64	0.35	0.15	125	3,000	M16
MD90TH**S	800-1,800	90	1.9	18.1	1,000	200	12	200	2.5	250	1.70/270	0.70	3.01	0.28	0.15	125	3,000	M16
MD110TH**S	800-1,800	110	2.0	20	1,000	200	12	200	2.5	250	1.65/330	0.80	2.29	0.25	0.15	125	3,000	M16
MD135TH**S	800-1,800	135	3.5	61.3	1,000	200	15	200	2.5	250	1.60/410	0.95	1.5	0.18	0.080	125	3,000	M17
MD160TH**S	800-1,800	160	3.8	72.2	1,000	200	15	200	2.5	250	1.65/480	0.85	1.5	0.17	0.080	125	3,000	M17
MD182TH**S	800-1,800	182	4.0	80	1,000	200	15	200	2.5	250	1.70/550	0.83	1.3	0.16	0.080	125	3,000	M17