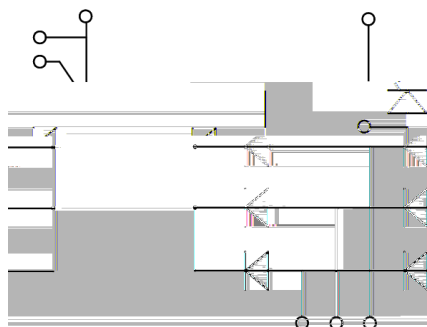




- Three phase bridge and a thyristor
- Low forward voltage
- High wave surging capability

V_{RRM}	1800	V
I_D	100	A
$I_{FSM}(@ t_P = 10ms)$	1200	A
$V_F(Max)$	1.40	V

- Inverter for AC or DC motor control
- Current stabilized power supply
- Switching power supply



(@ $T_C = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Repetitive peak reverse voltage		V_{DRM}/V_{RRM}	1800	V
Non-repetitive peak reverse voltage	$T_{vj} = 25\text{ }^{\circ}\text{C}$	V_{DSM}/V_{RSM}	1900	V
Bridge output current	$T_C = 85\text{ }^{\circ}\text{C}$	$I_{D(AV)}$	100	A
Repetitive peak forward current	$t_P = 10\text{ ms}, T_{vj} = 25\text{ }^{\circ}\text{C}$	I_{TSM}	1200	A
I^2t value for fusing	$t_P = 10\text{ ms}, T_{vj} = 25\text{ }^{\circ}\text{C}$	I^2t	7200	A ² s
Critical rate of rise of on-state current		di/dt	150	A/ μ s
Critical rate of rise of voltage	$V_D=2/3V_{DRM}$ $T_J=125^{\circ}\text{C}$ Gate Open	dv/dt	1000	V/ μ s



(@ $T_C = 25^\circ\text{C}$ unless otherwise specified)

Forward voltage	$I_T=100\text{A}$	V_{TM}		1.10	1.30	V
Repetitive peak off-state current	$V_D = V_{DRM}, T_{vj} = 25^\circ\text{C}$	I_{DRM}			0.1	mA
	$V_D = V_{DRM}, T_{vj} = 125^\circ\text{C}$				20	mA
Reverse leakage current	$V_R = V_{RRM}, T_{vj} = 25^\circ\text{C}$	I_{RRM}			0.1	mA
	$V_R = V_{RRM}, T_{vj} = 125^\circ\text{C}$				20	mA
Threshold voltage	For power loss calculation only $T_{vj} = 125^\circ\text{C}$,	V_{TO}			0.85	V
Dynamic resistance	$T_{vj} = 125^\circ\text{C}$,	r_T			2.5	m Ω
Triggering gate voltage	$V_D=12\text{V}, R_L=30\Omega$	V_{GT}			1.8	V
Triggering gate current	$V_D=12\text{V}, R_L=30\Omega$	I_{GT}	20		120	mA
Holding current	$I_T=1\text{A}$	I_H			250	mA
Latching current	$I_G=1.2 I_{GT}$	I_L			300	mA
Non triggering gate voltage	$V_D=V_{DRM}, T_{vj}=125^\circ\text{C}$	V_{GD}	0.25			V
Thermal resistance, junction to case	per diode	R_{thJC}			0.26	K/W
Temperature under operating conditions		T_{vjOP}	-40		125	$^\circ\text{C}$

(@ $T_C = 25^\circ\text{C}$ unless otherwise specified)

Repetitive peak reverse voltage		V_{RRM}	1600	V
Non-repetitive peak reverse voltage		V_{RSM}	1700	V
Output current	$T_C = 100^\circ\text{C}$	I_D	100	A
Forward surge current	1/2 cycle, Sine wave, 50Hz $T_{vj} = 25^\circ\text{C}$	I_{FSM}	1200	A
I^2t value for fusing		I^2t	7200	A ² s
Temperature under operating conditions		T_{vjOP}	-40 ~ +150	$^\circ\text{C}$



(@ $T_c = 25^\circ\text{C}$ unless otherwise specified)

Forward voltage	$I_D = 100\text{A}$, $T_{vj} = 25^\circ\text{C}$	V_F		1.20	1.40	V
Reverse leakage current	$V_R = V_{RRM}$, $T_{vj} = 25^\circ\text{C}$	I_{RRM}			0.1	mA
	$V_R = V_{RRM}$, $T_{vj} = 150^\circ\text{C}$				20	mA
Thermal resistance, junction to case	per diode	R_{thJC}			0.18	K/W

(@ $T_c = 25^\circ\text{C}$ unless otherwise specified)

RMS isolation voltage	A.C 50Hz, 1min	V_{ISO}	3000			V
Thermal resistance, case to heatsink	per module	R_{thCS}			0.10	K/W
Maximum Junction Temperature	Thyristor	$T_{vj\ max}$			125	$^\circ\text{C}$
	Diode				150	$^\circ\text{C}$
Storage temperature range		T_{stg}	-40		125	$^\circ\text{C}$
Mounting torque	To terminals(M5)	M_t	2.55		3.45	N m
	To heatsinks(M5)	M_s	2.55		3.45	N m

JMT100DS18L1C	JMT100DS18L1C	L1	210g/PCS	12 PCS	60 PCS



FIG.7: Forward characteristics(per diode)

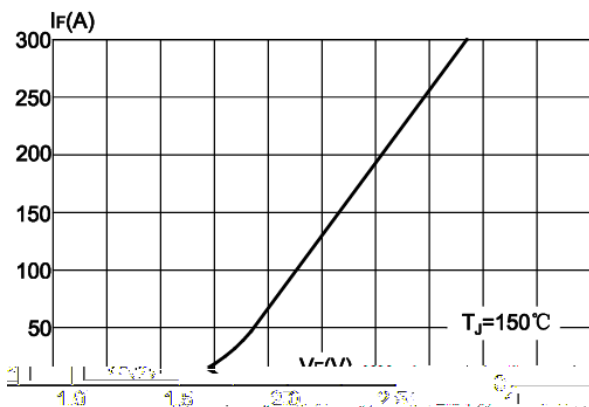


FIG.8: Peak on-state surge current (per diode or thyristor)

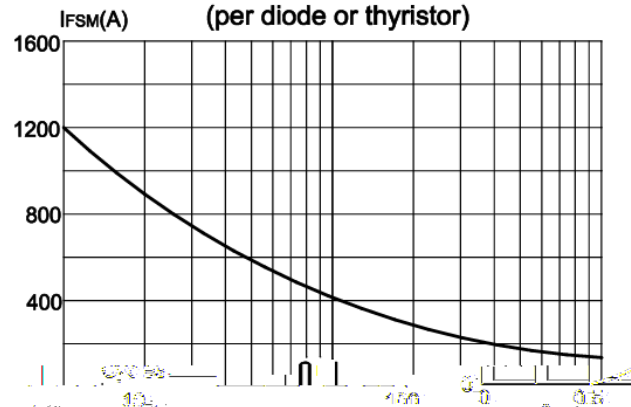


FIG.9: Forward current vs. case temperature (per diode)

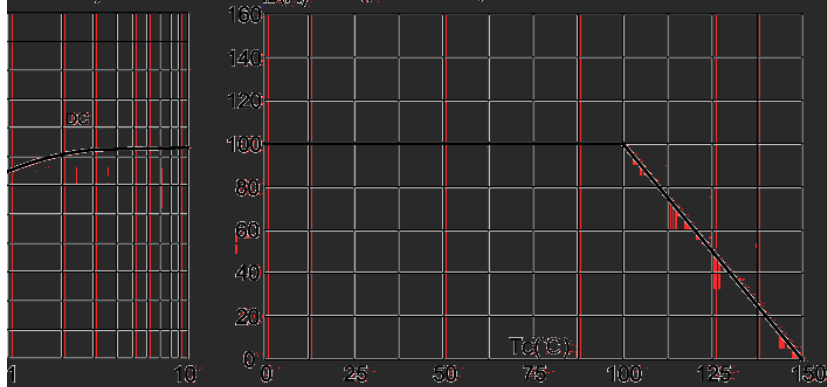
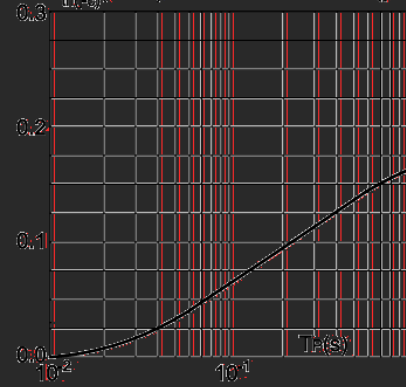
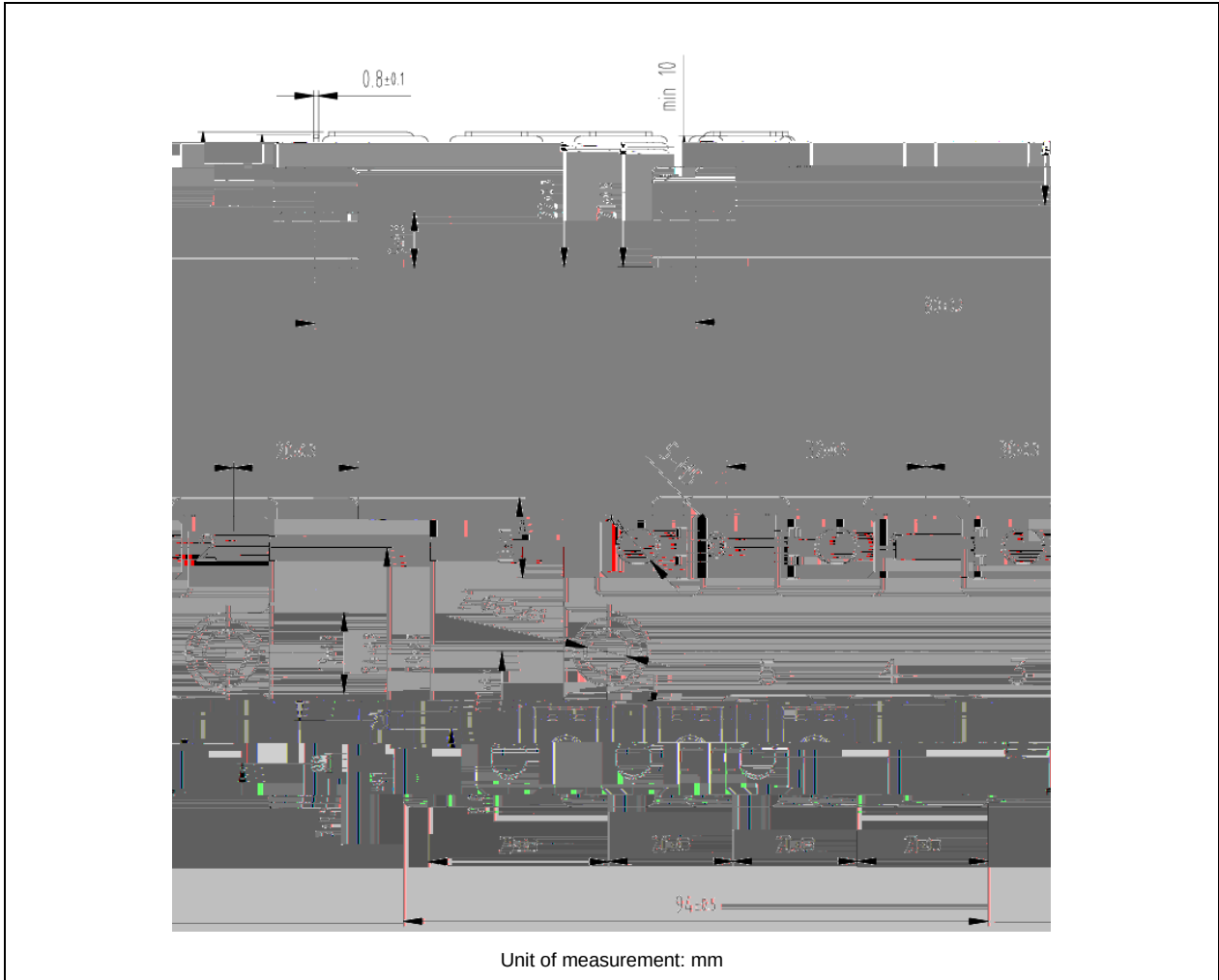
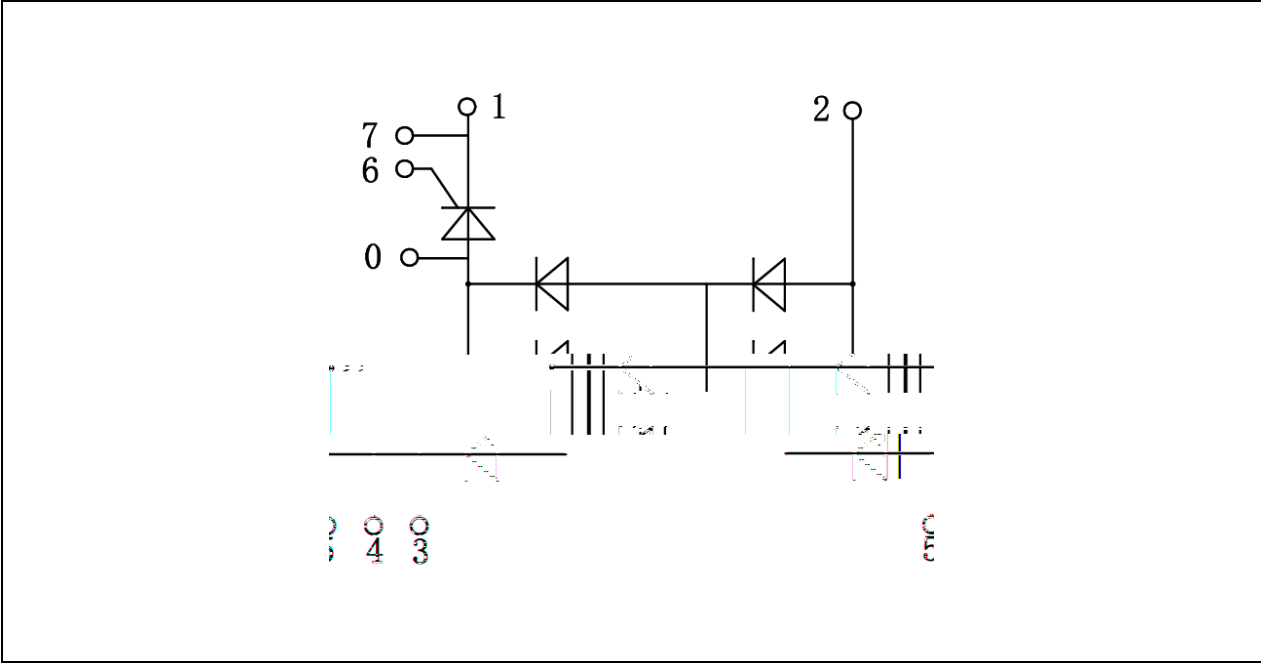


FIG.10: Maximum transient thermal resistance (per diode)







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