



Three Phase Bridge + Thyristor

VRRM / VDRM 800 to 1800V
IFAV / ITAV 100A

Features

Blocking voltage:800 to 1800V
Three Phase Bridge and a Thyristor
Isolated Module package

Applications

Inverter for AC or DC motor control
Current stabilized power supply
Switching power supply
UL recognized applied for file no. E360040

Module Type

TYPE	VRRM / VDRM	VRSM
MT100DT08L1 MT100DT12LA	A	/

Diode

Maximum Ratings

Symbol	Item	Conditions	Values	Units
ID	Output Current(D.C.)	Tc=100 Three phase full wave	100	A
IFSM	Surge forward current	t=10mS Tvj =45	1200	A
i ² t	Circuit Fusing Consideration		7200	A ² s
Visol	Isolation Breakdown Voltage(R.M.S)	a.c.50HZ;r.m.s.;1min	3000	V
Tvj	Operating Junction Temperature		-40 to +150	
Tstg	Storage Temperature		-40 to +125	
Mt	Mounting Torque	To terminals(M5)	3±15%	Nm
Ms		To heatsink M ý	` M	m

Rth(c-s)	Thermal Impedance, max.	Case to Heatsink	0.10	/W
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Electrical Characteristics

Item	Conditions
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Thyristor Maximum Ratings

Symbol	Item	Conditions	Values	
I_{TAV}	Average On-State Current	$T_c=92^\circ\text{C}$, Single Phase half wave 180° conduction	100	A
I_{TSM}	Surge On-State Current	$T_{VJ}=45^\circ\text{C}$ $t=10\text{ms}$ (50Hz), sine $V_R=0$	1200	A
i^2t	Circuit Fusing Consideration		7200	A^2s
V_{isol}	Isolation Breakdown Voltage(R.M.S)	a.c.50Hz;r.m.s.;1 min	3000	V
T_{vj}	Operating Junction Temperature		-40 to +125	
T_{stg}	Storage Temperature		-40 to +125	
M_t	Mounting Torque	To terminals(M5)	3±15%	Nm
M_s		To heatsink(M5)	3±15%	Nm
di/dt	Critical Rate of Rise of On-State Current	$T_{VJ}=T_{VJM}$, $V_D=1/2V_{DRM}$, $I_G=100\text{mA}$ $dI_G/dt=0.1\text{A}/\mu\text{s}$	150	$\text{A}/\mu\text{s}$
dv/dt	Critical Rate of Rise of Off-State Voltage, min.	$T_J=T_{VJM}$, $V_D=2/3V_{DRM}$, linear voltage rise	500	$\text{V}/\mu\text{s}$

Electrical and Thermal Characteristics

Symbol	Item	Conditions
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