

Three Phase Diode + Thyristor

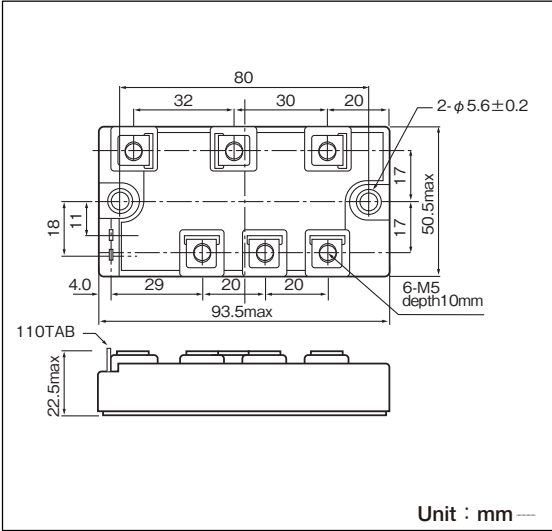
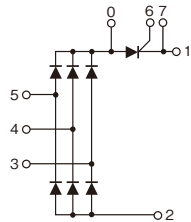
DFA50BA80/160

UL; E76102

《Features》
Power Module, DFA50BA, is complex isolated module which is designed for rash current circuit.
It contains six diodes connected in a three phase bridge configuration, and a thyristor connected to a direct current line.

- This Module is designed very compactly. Because diode module and thyristor put together.
- This Module is also isolated type between electorode terminal and mounting base. So you can put this Module and other one together in a same fin.

《Applications》
• Inverter for AC or DC motor control /
• Current stabilized power supply /
• Switching power supply



● DIODE				
(T _J =25°C unless otherwise specified)				
Item	Symbol	Unit	DFA50BA80	DFA50BA160
Repetitive Peak Reverse Voltage	V _{RRM}	V	800	1600
Non-Repetitive Peak Reverse Voltage	V _{RSM}	V	960	1700

Item	Symbol	Unit	Ratings	Conditions
Output Current (D.C.)	I _D	A	50	Three phase full wave, T _C =117°C
Surge forward current	I _{FSM}	A	730/800	1/2cycle, 50/60Hz, peak value, non-repetitive
Repetitive Peak Reverse Current,max	I _{RRM}	mA	8	T _J =150°C, V _R =V _{RRM}
Forward Voltage Drop,max	V _{FM}	V	1.30	I _F =50A, Inst. measurement
Operating Junction Temperature	T _J	°C	-40 to +150	
Thermal Resistance,max	R _{th(j-c)}	°C/W	0.25	Junction to Case (Total)

● THYRISTOR				
(T _J =25°C unless otherwise specified)				
Item	Symbol	Unit	DFA50BA80	DFA50BA160
Repetitive Peak Reverse Voltage	V _{RRM}	V	800	1600
Non-Repetitive Peak Reverse Voltage	V _{RSM}	V	960	1700
Repetitive Peak Off-State Voltage	V _{DRM}	V	800	1600

Item	Symbol	Unit	Ratings	Conditions
Average On-State Current	I _{T(AV)}	A	50	Single phase half wave. 180° conduction, T _C =85°C
Surge On-State Current	I _{TSM}	A	730/800	1/2cycle, 50/60Hz, Peak value, non-repetitive
I ² t (for fusing)	I ² t	A ² S	2660	Value for one cycle of surge current
Critical Rate of Rise of On-State Current	di/dt	A/μs	150	I _G =100mA V _D =1/2V _{DRM} di _G /dt=0.1A/μs
Operating Junction Temperature	T _J	°C	-40 to +135	
Repetitive Peak Off-State Current,max.	I _{DRM}	mA	50	T _J =135 °C, V _D =V _{DRM}
Repetitive Peak Reverse Current,max.	I _{RRM}	mA	50	T _J =135 °C, V _R =V _{RRM}
Peak On-State Voltage,max.	V _{TM}	V	1.25	I _T = 50A Inst. measurement
Gate Trigger Current,max.	I _{GT}	mA/V	70	I _T =1A V _D =6V T _J =25°C
Gate Trigger Voltage,max.	V _{GT}	mA/V	3	I _T =1A V _D =6V T _J =25°C
Critical Rate of Rise of Off-State Voltage,min.	dv/dt	V/μs	500	T _J =125°C V _D =2/3V _{DRM} Exponential wave
Holding Current	I _H	mA	100	T _J =25°C
Latching Current	I _L	mA	80	T _J =25°C
Thermal Resistance,max	R _{th(j-c)}	°C/W	0.80	Junction to Case

●GENERAL

(T_J=25°C unless otherwise specified)

Item		Symbol	Unit	Ratings	Conditions
Isolation Breakdown Voltage (R.M.S.)		V _{ISO}	V	2500	A.C., 1minute
Storage Temperature		T _{stg}	°C	-40 to +125	
Thermal Resistance,max		R _{th(c-f)}	°C/W	0.10	Case to fin
Mounting Torque	Mounting (M5)		N·m (kgf·cm)	2.7(28)	Recommended Value 1.5 to 2.5 (15 to 25)
	Terminal (M5)			2.7(28)	Recommended Value 1.5 to 2.5 (15 to 25)
Mass			g	150	Typical value

