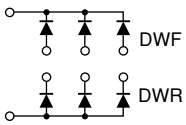
DIODE MODULE

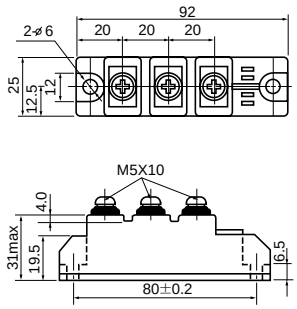
DWF(R)50A30/40

DWF(R)50A is a non-isolated diode module designed for 3 phase rectification.

- $I_{F(AV)}$=50A, V_{RRM}=400V
- Easy Construction with Joint-Cathode(F)Type and Joint-Anode(R)type.
- Non-isolated. (Mounting Base as terminals.)
- High Surge Capability

(Applications)
Welding Power Supply
3 Phase Rectifier





Unit : mm

■Maximum Ratings

(Tj=25℃ unless otherwise specified)

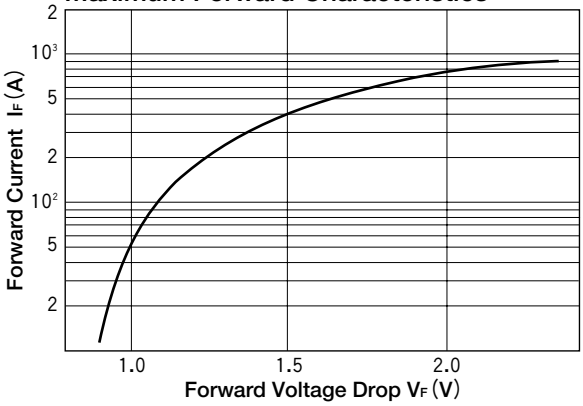
Symbol	Item	Ratings		Unit
		DWF(R)50A30	DWF(R)50A40	
V_{RRM}	Repetitive Peak Reverse Voltage	300	400	V
V_{RSM}	Non-Repetitive Peak Reverse Voltage	360	480	V
$V_{R(DC)}$	D.C. Reverse Voltage	240	320	V

Symbol	Item		Conditions	Ratings	Unit
$I_{F(AV)}$	Average Forward Current		Single phase, half wave, 180°conduction, Tc : 122℃	50	A
$I_{F(RMS)}$	R.M.S. Forward Current		Single phase, half wave, 180°conduction, Tc : 122℃	78	A
I_{FSM}	Surge Forward Current		½cycle, 60Hz, peak value, non-repetitive	1000	A
I^2t	I^2t		Value for one cycle of surge current	4150	A^2S
Tj	Operating Junction Temperature			−30 to +150	℃
Tstg	Storage Temperature			−30 to +125	℃
	Mounting Torque	Mounting (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	N·m (kgf·cm)
		Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)	
	Mass			170	g

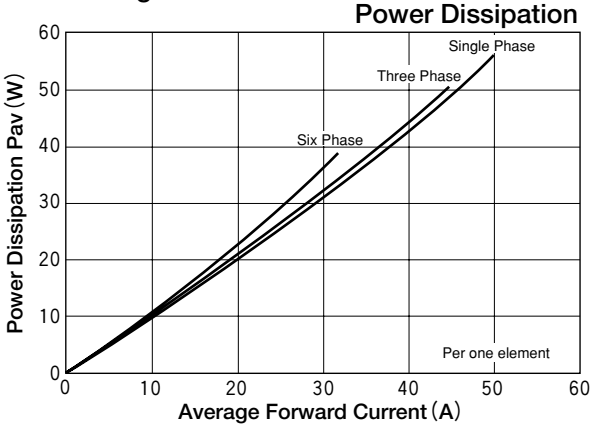
■Electrical Characteristics

Symbol	Item	Conditions	Ratings	Unit
I_{RRM}	Repetitive Peak Reverse Current, max.	at V_{DRM}, single phase, half wave, Tj=150℃	10	mA
V_{FM}	Forward Voltage Drop, max.	Forward current 150A, Tj=25℃, Inst. measurement	1.15	V
Rth(j-c)	Thermal Impedance, max.	Junction to case	0.50	℃/W

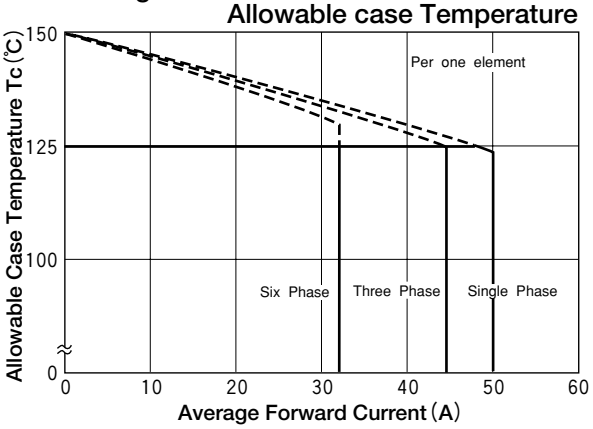
Maximum Forward Characteristics



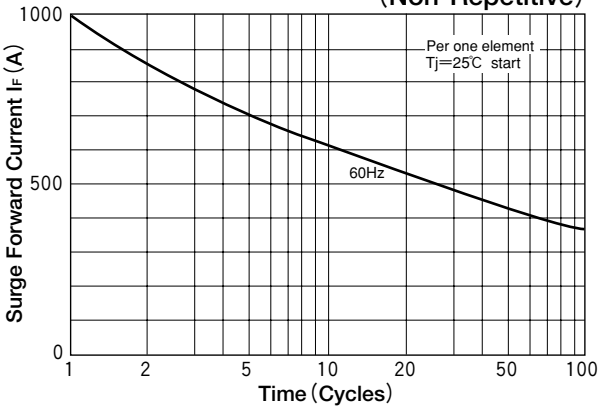
Average Forward Current vs. Power Dissipation



Average Forward Current vs. Allowable case Temperature



Cycle Surge Forward Current Rating (Non-Repetitive)



Transient Thermal Impedance (max)