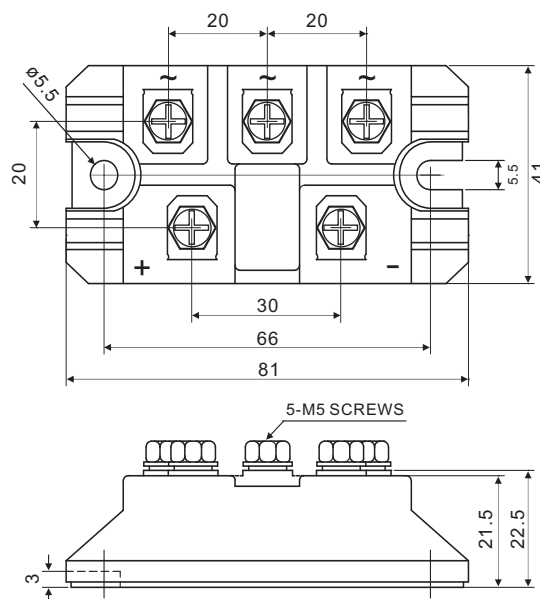


Three-Phase Bridge Rectifier, 100A

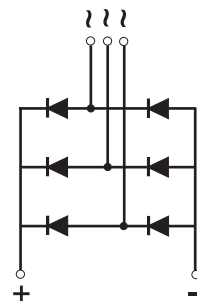
MTP10008A Thru MTP10016A



All dimensions in millimeters

FEATURES

- UL recognition file number E320098
- Typical IR less than 2.0 μA
- High surge current capability
- Low thermal resistance
- Compliant to RoHS
- Isolation voltage up to 2500V



TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for big power supply, field supply for DC motor, industrial automation applications.

ADVANTAGE

- International standard package
- Epoxy meets UL 94 V-O flammability rating
- Small volume, light weight
- Small thermal resistance
- **Weight:** 195g (6.9 ozs)

PRIMARY CHARACTERISTICS

$I_{F(AV)}$	100A
V_{RRM}	800V to 1800V
I_{FSM}	1200A
I_R	20 μA
V_F	1.3V
$T_{J\max.}$	150°C

Nell High Power Products

MAJOR RATINGS AND CHARACTERISTICS (T _A = 25°C unless otherwise noted)							
PARAMETER	SYMBOL	MTP100..A					UNIT
		08	10	12	16	18	
Maximum repetitive peak reverse voltage	V _{RRM}	800	1000	1200	1600	1800	V
Peak reverse non-repetitive voltage	V _{RSM}	900	1100	1300	1700	1900	V
Maximum DC blocking voltage	V _{DC}	800	1000	1200	1600	1800	V
Maximum average forward rectified output current	I _{F(AV)}	100					A
Peak forward surge current single sine-wave superimposed on rated load	I _{FSM}	1200					A
Rating (non-repetitive, for t greater than 1 ms and less than 8.3 ms) for fusing	I ² t	7200					A ² s
RMS isolation voltage from case to leads	V _{ISO}	2500					V
Operating junction storage temperature range	T _J	-40 to 150					°C
Storage temperature range	T _{STG}	-40 to 125					°C

ELECTRICAL CHARACTERISTICS (T _A = 25°C unless otherwise noted)								
PARAMETER	TEST CONDITIONS	SYMBOL	MTP100..A					UNIT
			08	10	12	16	18	
Maximum instantaneous forward drop per diode	I _F = 100A	V _F	1.3					V
Maximum reverse DC current at rated DC blocking voltage per diod	T _A = 25°C	I _R	20					μA
	T _A = 150°C		4000					

THERMAL AND MECHANICAL (T _A = 25°C unless otherwise noted)								
PARAMETER	TEST CONDITIONS	SYMBOL	MTP100..A					UNIT
			08	10	12	16	18	
Typical thermal resistance junction to case	Single-side heat dissipation, sine half wave	R _{θJC} ⁽¹⁾	0.2					°C/W
Mounting torque to heatsink, M5 ± 10 %	A mounting compound is recommended and the torque should be rechecked after a period of 3 hours to allow for the spread of the compound.		4					Nm
			4					
Approximate weight			195					g

Notes

- (1) With heatsink, single side heat dissipation, half sine wave.
 (2) M5 screw.

Device code

MTP	100	16	A
------------	------------	-----------	----------

①

②

③

④

- ① - Module type: "MTP" for 3Ø Bridge
- ② - I_{F(AV)} rating: "100" for 100A
- ③ - Voltage code: code x 100 = V_{RRM}
- ④ - Package Outline: A type package

Fig.1 Forward characteristic

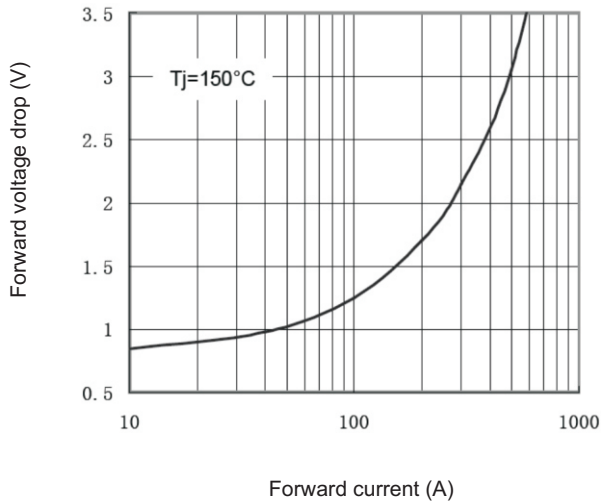


Fig.2 Thermal Impedance (junction to case)

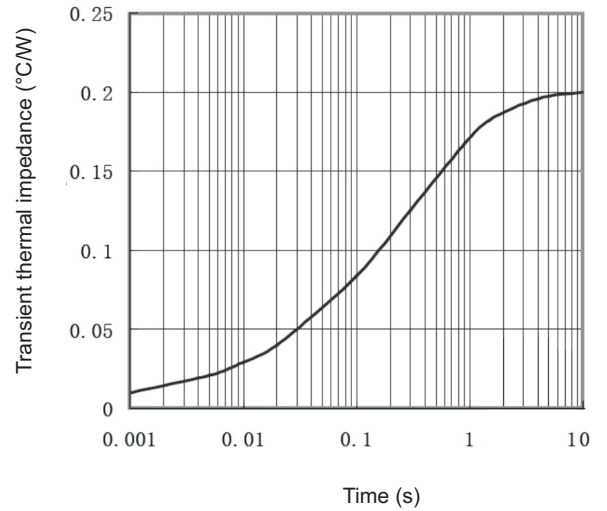


Fig.3 Power dissipation vs. output current

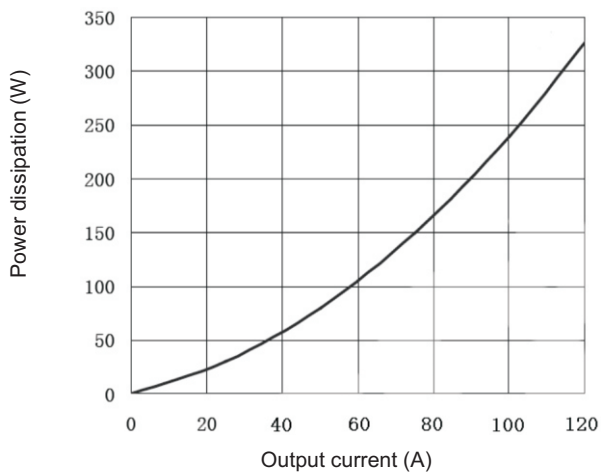


Fig.4 Case temperature vs. output current

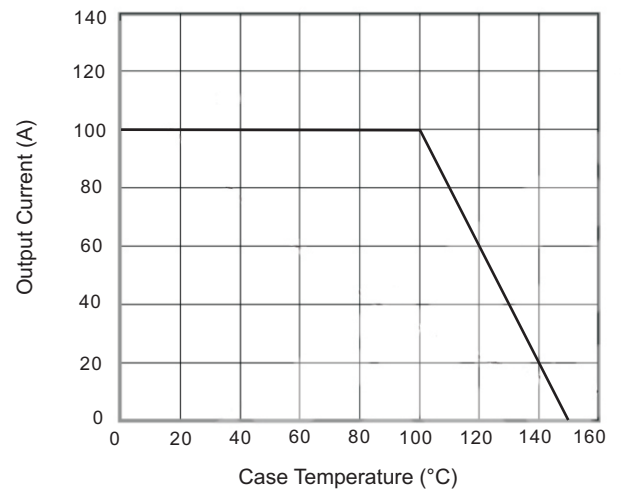


Fig.5 Forward surge current vs. cycle

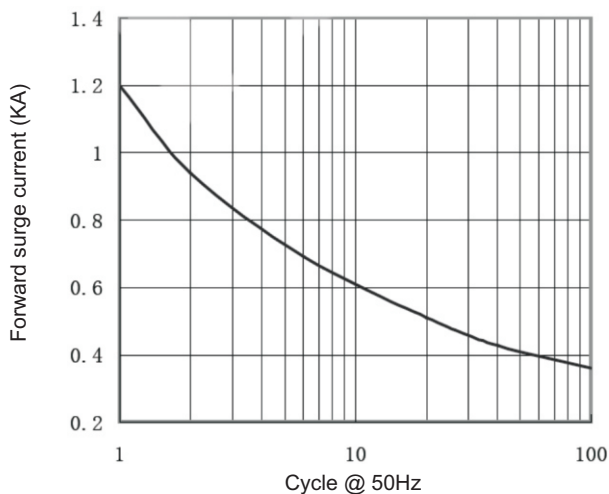


Fig.6 I^2t characteristic

