

Silicon Standard Recovery Diode

$$V_{RRM} = 800 \text{ V} - 1600 \text{ V}$$

$$I_F = 100 \text{ A}$$

Features

- Terminals and the mounting plate are electrically isolated
- Types up to 1600 V V_{RRM}
- Modules can be installed in the same cooling fin as other modules, thus saving installation space
- Diode chips are coated with a glass of zinc oxide, making them highly resistant to temperature and humidity variation
- 6 diode chips are connected to the 3-phase bridge rectifying circuit inside the module; a cost effective feature

Three Phase Package



Applications

- Inverters for AC motors
- Power supply units for DC motors
- DC power supply units for battery cl
- General purpose DC power supply

Maximum ratings, at $T_j = 25^\circ\text{C}$, unless otherwise specified

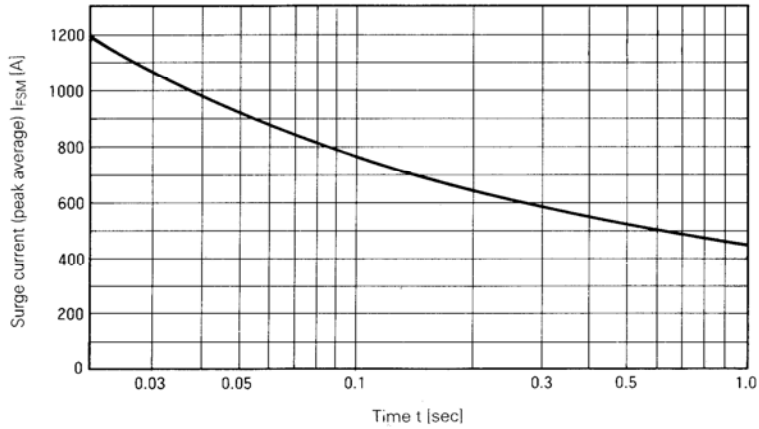
Parameter	Symbol	Conditions	M3P100A-80	M3P100A-160	Unit
Repetitive peak reverse voltage	V_{RRM}		800	1600	V
Non-repetitive peak reverse voltage	V_{RSM}		880	1700	V
Continuous forward current	I_F	$T_C \leq 103^\circ\text{C}$	100	100	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25^\circ\text{C}$, $t_p = 8.3 \text{ ms}$	1200	1200	A
I^2t	I^2t		6000	6000	A^2S
Operating temperature	T_j		-40 to 150	-40 to 150	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to 125	-40 to 125	$^\circ\text{C}$
Tightening torque			25±2	25±2	kg-cm
Vibration resistance			5	5	G
Dielectric strength			2000 VAC 1 min	2000 VAC 1 min	
Net weight			150	150	g

Electrical characteristics, at $T_j = 25^\circ\text{C}$, unless otherwise specified

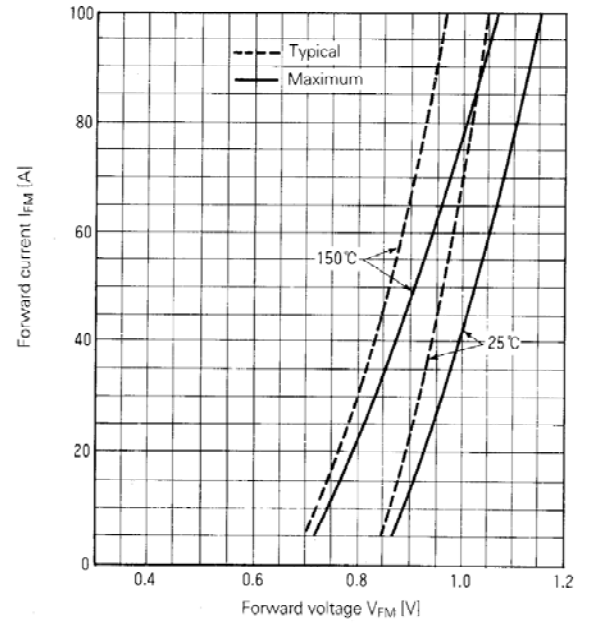
Parameter	Symbol	Conditions	M3P100A-80	M3P100A-160	Unit
Diode forward voltage	V_F	$I_F = 100 \text{ A}$, $T_j = 25^\circ\text{C}$	1.15	1.15	V
Reverse current		$V_R = V_{RRM}$, $T_j = 150^\circ\text{C}$	10	10	mA

Thermal characteristics

Thermal resistance, junction - case	R_{thJC}		0.22	0.22	$^\circ\text{C/W}$
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Surge Current



Forward Characteristics

