

## 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 $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified

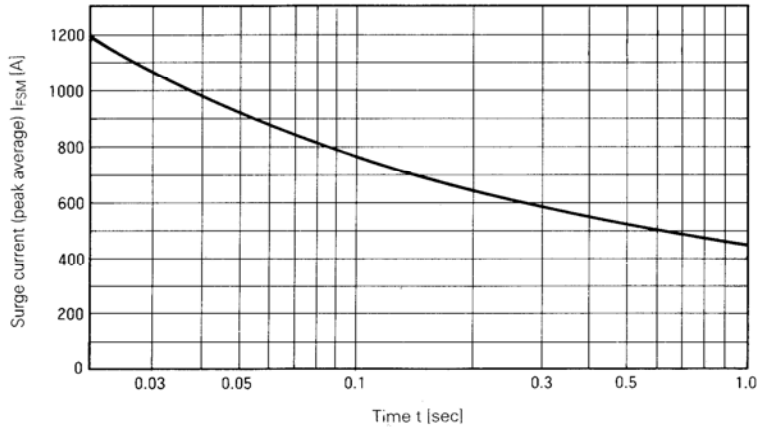
Parameter	Symbol	Conditions	M3P100A-80	M3P100A-160	Unit
Repetitive peak reverse voltage	$V_{RRM}$		800	1600	V
Non-repetitive peak reverse voltage	$V_{RSM}$		880	1700	V
Continuous forward current	$I_F$	$T_C \leq 103\text{ }^\circ\text{C}$	100	100	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$	1200	1200	A
$I^2t$	$I^2t$		6000	6000	A <sup>2</sup> S
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 $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified

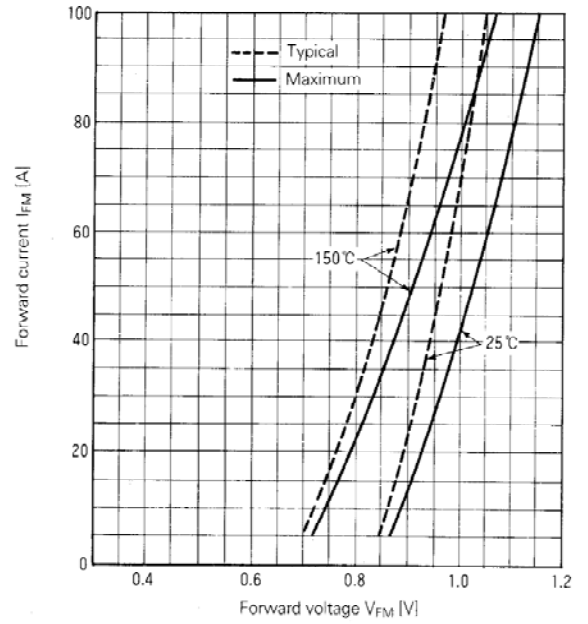
Parameter	Symbol	Conditions	M3P100A-80	M3P100A-160	Unit
Diode forward voltage	$V_F$	$I_F = 100\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$	1.15	1.15	V
Reverse current		$V_R = V_{RRM}$ , $T_j = 150\text{ }^\circ\text{C}$	10	10	mA

### Thermal characteristics

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



**Forward Characteristics**

