

## M3P75A-80 thru M3P75A-160

# Silicon Standard Recovery Diode

 $V_{RRM} = 800 \text{ V} - 1600 \text{ V}$   $I_F = 75 \text{ A}$ 

#### **Features**

- Terminals and the mounting plate are electrically isolated
- Types up to 1600 V V<sub>RRM</sub>
- 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 huminity variation
- 6 diode chips are connected to the 3-phase bridge rectifying circuit inside the module; a cost effective feature

#### **Applications**

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

#### **Three Phase Package**



#### Maximum ratings, at T<sub>i</sub> = 25 °C, unless otherwise specified

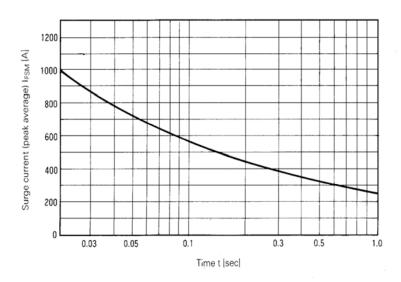
Parameter	Symbol	Conditions	M3P75A-80	M3P75A-160	Unit
Repetitive peak reverse voltage	$V_{RRM}$	T <sub>J</sub> =25°C, I <sub>R</sub> =25 μA	800	1600	V
Non-repetitive peak reverse voltage	$V_{RSM}$	T <sub>J</sub> =25°C, I <sub>R</sub> =25 μA	880	1700	V
Continuous forward current	I <sub>F</sub>	T <sub>C</sub> ≤ 103 °C	75	75	Α
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_{\rm C}$ = 25 °C, $t_{\rm p}$ = 8.3 ms	1000	1000	Α
$\overline{I^2t}$	l <sup>2</sup> t		4400	4400	A <sup>2</sup> S
Operating temperature	Tj		-40 to 150	-40 to 150	°C
Storage temperature	T <sub>stg</sub>		-40 to 125	-40 to 125	°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			133	133	g

#### Electrical characteristics, at Tj = 25 °C, unless otherwise specified

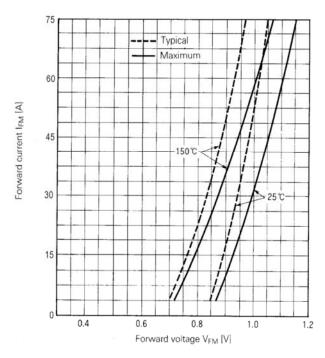
Parameter	Symbol	Conditions	M3P75A-80	M3P75A-160	Unit
Diode forward voltage	V <sub>F</sub>	I <sub>F</sub> = 75 A, T <sub>j</sub> = 25 °C	1.15	1.15	V
Reverse current		$V_R = V_{RRM}$ , $T_j = 150 °C$	10	10	mA
Thermal characteristics					
Thermal resistance, junction - case	$R_{\text{thJC}}$		0.25	0.25	°C/W



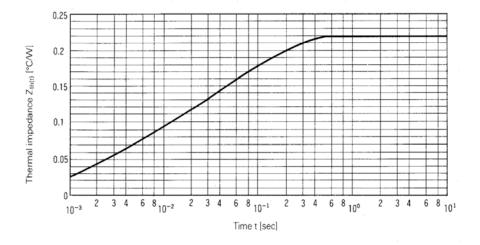
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Surge Current



Forward Characteristics



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