

Package Outline Dimensions		Features	
<p style="text-align: center;">Dimensions in millimeters</p>		<ul style="list-style-type: none"> <li>● ROHS Compliant </li> <li>● 6000 V<sub>RMS</sub> isolating voltage</li> <li>● Pressure contact technology with increased power cycling capability</li> <li>● Space and weight savings</li> </ul>	
Typical Application			
		<ul style="list-style-type: none"> <li>● Inverter</li> <li>● Inductive heating</li> <li>● Chopper</li> </ul>	
Maximum rating (T <sub>a</sub> =25°C unless otherwise noted)			
Parameter	Symbol	SPMH416	Unit
Maximum repetitive peak reverse voltage (T <sub>J</sub> =T <sub>J</sub> max.)	V <sub>RRM</sub>	1600	V
Maximum RMS voltage (T <sub>J</sub> =T <sub>J</sub> maximum)	V <sub>RMS</sub>	1130	V
Maximum DC blocking voltage (T <sub>J</sub> =T <sub>J</sub> max.)	V <sub>DC</sub>	1600	V
Maximum DC output current at T <sub>C</sub> = 100 °C (Three-phase full wave rectifying circuit)	I <sub>O</sub>	300	A
Peak forward surge current (tp=10ms single half sine-wave, V <sub>R</sub> =0.6V <sub>RRM</sub> , T <sub>J</sub> =T <sub>J</sub> max.)	I <sub>FSM</sub>	2.0	KA
Rating for Fusing (t<10ms) (T <sub>J</sub> =T <sub>J</sub> max.)	I <sup>2</sup> T	20.1	A <sup>2</sup> S*10 <sup>3</sup>
Threshold voltage (T <sub>J</sub> =T <sub>J</sub> max.)	V <sub>FO</sub>	0.8	V
Forward slop resistance (T <sub>J</sub> =T <sub>J</sub> max.)	r <sub>F</sub>	2.8	mΩ
Maximum forward voltage drop at I <sub>F</sub> =400A	V <sub>FM</sub>	1.35	V
Maximum DC reverse current at rated DC blocking voltage (T <sub>J</sub> =T <sub>J</sub> max.)	I <sub>R</sub>	15	mA
RMS Isolation voltage (50Hz,t=1min.I <sub>ISO</sub> =1mA (max.))	V <sub>ISO</sub>	2500 ~ 6000	V
Terminal connection torque (M6)	Fm	3 to 4	N.m
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 40 to + 150	°C
Typical thermal resistance junction to case (Single side cooled)	Rth J-C	0.10	°C/W
Typical thermal resistance case to heatsink (Single side cooled)	Rth C-H	0.07	
Size		115 x83 x51	mm

### RATINGS AND CHARACTERISTICS CURVES

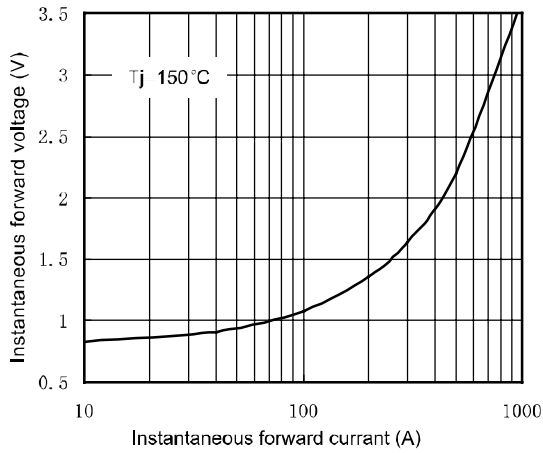


Fig. 1 – Peak forward voltage vs. peak forward current

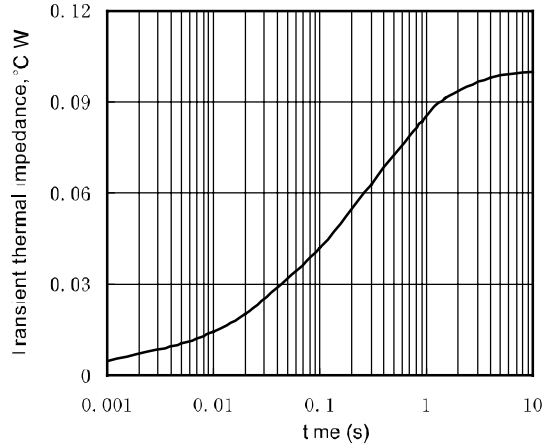


Fig. 2 – Max. junction to case thermal impedance vs. time

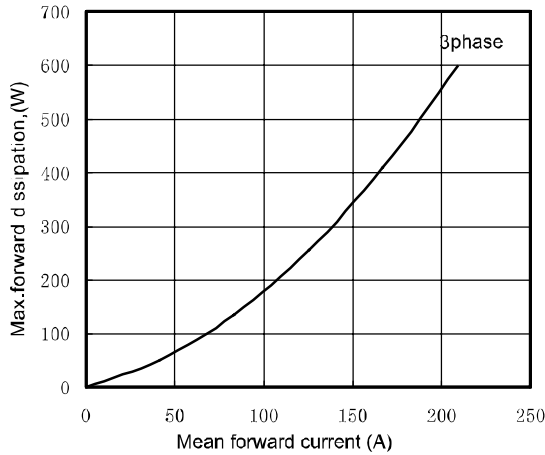


Fig. 3 – Max. power dissipation vs. mean forward current

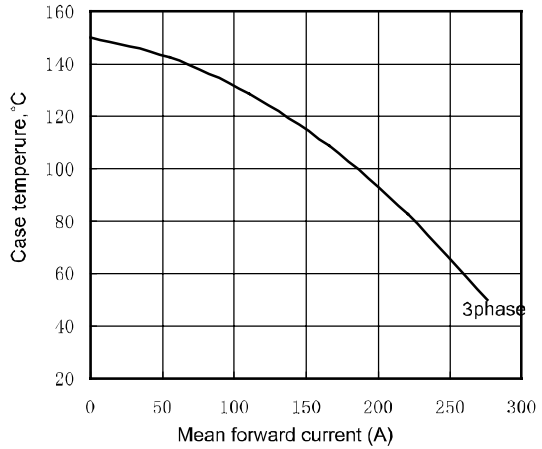


Fig. 4 – Max. case temperature vs. mean forward current

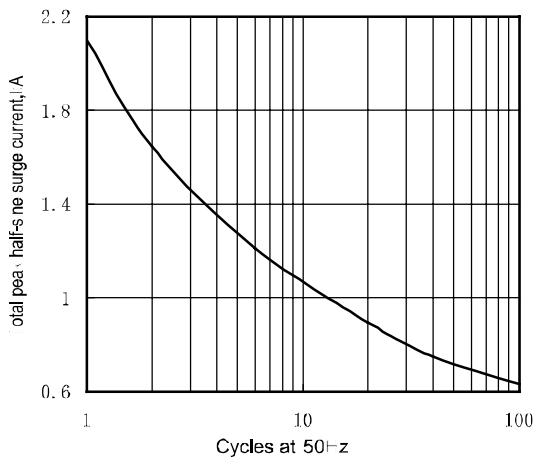


Fig. 5 – Surge current vs. cycles

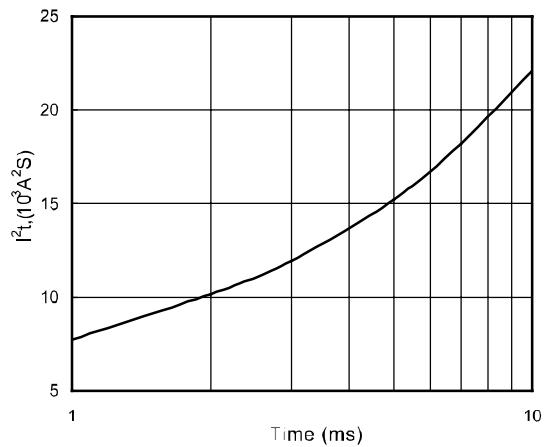


Fig. 6 –  $I^2T$  vs. time

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