
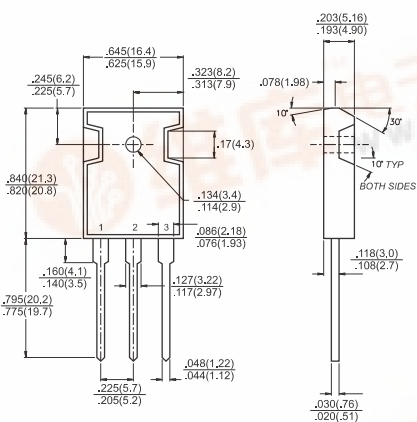
	<h1 style="margin: 0;">SR4020PT THRU SR4060PT</h1> <h2 style="margin: 0;">40.0 AMPS. Schottky Barrier Rectifiers</h2>																																																																																															
	<p>Voltage Range 20 to 60 Volts</p> <p>Current 40.0 Amperes</p>																																																																																															
<h3>Features</h3> <ul style="list-style-type: none"> <li>✦ Dual rectifier construction, positive center-tap</li> <li>✦ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0</li> <li>✦ Metal silicon junction, majority carrier conduction</li> <li>✦ Low power loss, high efficiency</li> <li>✦ High current capability, low VF</li> <li>✦ High surge capability</li> <li>✦ Epitaxial construction</li> <li>✦ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications</li> <li>✦ High temperature soldering guaranteed: 260°C/ 10 seconds, 0.17"(4.3mm)lead lengths at 5 lbs., (2.3kg) tension</li> </ul> <h3>Mechanical Data</h3> <ul style="list-style-type: none"> <li>✦ Cases: JEDEC TO-3P/TO-247AD molded plastic</li> <li>✦ Terminals: Leads solderable per MIL-STD-750, Method 2026</li> <li>✦ Polarity: As marked</li> <li>✦ Mounting position: Any</li> <li>✦ Weight: 0.2 ounce, 5.6 grams</li> </ul>	<h3 style="text-align: center;">TO-3P/TO-247AD</h3>  <p style="text-align: center;"><b>Dimensions in inches and (millimeters)</b></p>																																																																																															
<h3>Maximum Ratings and Electrical Characteristics</h3> <p>Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%</p>																																																																																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Type Number</th> <th style="text-align: left;">Symbol</th> <th style="text-align: center;">SR 4020PT</th> <th style="text-align: center;">SR 4030PT</th> <th style="text-align: center;">SR 4040PT</th> <th style="text-align: center;">SR 4050PT</th> <th style="text-align: center;">SR 4060PT</th> <th style="text-align: left;">Units</th> </tr> </thead> <tbody> <tr> <td>Maximum Recurrent Peak Reverse Voltage</td> <td><math>V_{RRM}</math></td> <td style="text-align: center;">20</td> <td style="text-align: center;">30</td> <td style="text-align: center;">40</td> <td style="text-align: center;">50</td> <td style="text-align: center;">60</td> <td style="text-align: center;">V</td> </tr> <tr> <td>Maximum RMS Voltage</td> <td><math>V_{RMS}</math></td> <td style="text-align: center;">14</td> <td style="text-align: center;">21</td> <td style="text-align: center;">28</td> <td style="text-align: center;">35</td> <td style="text-align: center;">42</td> <td style="text-align: center;">V</td> </tr> <tr> <td>Maximum DC Blocking Voltage</td> <td><math>V_{DC}</math></td> <td style="text-align: center;">20</td> <td style="text-align: center;">30</td> <td style="text-align: center;">40</td> <td style="text-align: center;">50</td> <td style="text-align: center;">60</td> <td style="text-align: center;">V</td> </tr> <tr> <td>Maximum Average Forward Rectified Current at <math>T_c=100^\circ\text{C}</math></td> <td><math>I_{(AV)}</math></td> <td colspan="5" style="text-align: center;">40</td> <td style="text-align: center;">A</td> </tr> <tr> <td>Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)</td> <td><math>I_{FSM}</math></td> <td colspan="5" style="text-align: center;">400</td> <td style="text-align: center;">A</td> </tr> <tr> <td>Maximum Instantaneous Forward Voltage 20.0A (Note 3)</td> <td><math>V_F</math></td> <td colspan="3" style="text-align: center;">0.55</td> <td colspan="2" style="text-align: center;">0.70</td> <td style="text-align: center;">V</td> </tr> <tr> <td>Maximum D.C. Reverse Current @ <math>T_c=25^\circ\text{C}</math> at Rated DC Blocking Voltage @ <math>T_c=100^\circ\text{C}</math></td> <td><math>I_R</math></td> <td colspan="3" style="text-align: center;">1.0</td> <td colspan="2" style="text-align: center;">75</td> <td style="text-align: center;">mA mA</td> </tr> <tr> <td>Typical Thermal Resistance Per Leg (Note 1)</td> <td><math>R_{\theta JC}</math></td> <td colspan="3" style="text-align: center;">1.2</td> <td colspan="2"></td> <td style="text-align: center;"><math>^\circ\text{C}/\text{W}</math></td> </tr> <tr> <td>Typical Junction Capacitance (Note 2)</td> <td><math>C_j</math></td> <td colspan="3" style="text-align: center;">1100</td> <td colspan="2" style="text-align: center;">600</td> <td style="text-align: center;">pF</td> </tr> <tr> <td>Operating Junction Temperature Range</td> <td><math>T_J</math></td> <td colspan="3" style="text-align: center;">-65 to +125</td> <td colspan="2" style="text-align: center;">-65 to +150</td> <td style="text-align: center;"><math>^\circ\text{C}</math></td> </tr> <tr> <td>Storage Temperature Range</td> <td><math>T_{STG}</math></td> <td colspan="5" style="text-align: center;">-65 to +150</td> <td style="text-align: center;"><math>^\circ\text{C}</math></td> </tr> </tbody> </table>	Type Number	Symbol	SR 4020PT	SR 4030PT	SR 4040PT	SR 4050PT	SR 4060PT	Units	Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	V	Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	V	Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	V	Maximum Average Forward Rectified Current at $T_c=100^\circ\text{C}$	$I_{(AV)}$	40					A	Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	400					A	Maximum Instantaneous Forward Voltage 20.0A (Note 3)	$V_F$	0.55			0.70		V	Maximum D.C. Reverse Current @ $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_c=100^\circ\text{C}$	$I_R$	1.0			75		mA mA	Typical Thermal Resistance Per Leg (Note 1)	$R_{\theta JC}$	1.2					$^\circ\text{C}/\text{W}$	Typical Junction Capacitance (Note 2)	$C_j$	1100			600		pF	Operating Junction Temperature Range	$T_J$	-65 to +125			-65 to +150		$^\circ\text{C}$	Storage Temperature Range	$T_{STG}$	-65 to +150					$^\circ\text{C}$
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Notes: 1. Thermal Resistance from Junction to Case Per Leg, with Heatsink size (4" x 6" x 0.25") Al-Plate.  
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.  
 3. 300 us Pulse Width, 2% Duty Cycle





## RATINGS AND CHARACTERISTIC CURVES (SR4020PT THRU SR4060PT)

FIG.1- FORWARD CURRENT DERATING CURVE

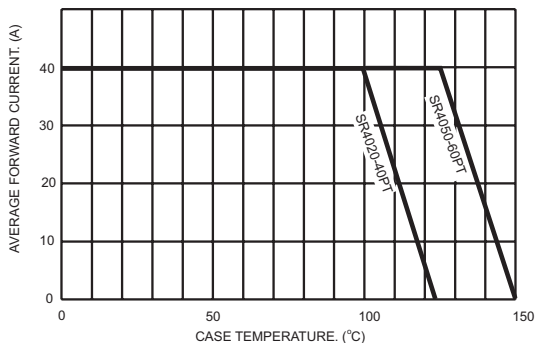


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

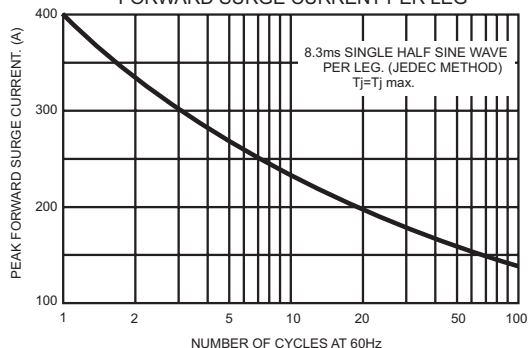


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

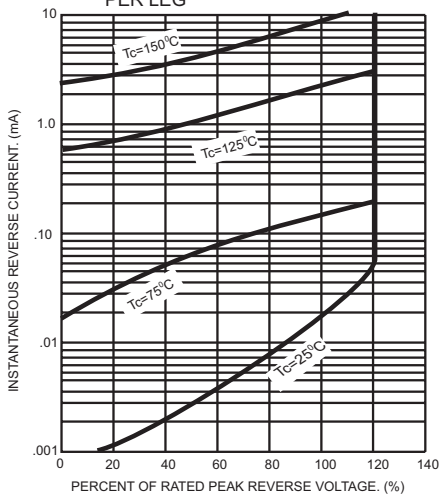


FIG.4- TYPICAL FORWARD CHARACTERISTICS PER LEG

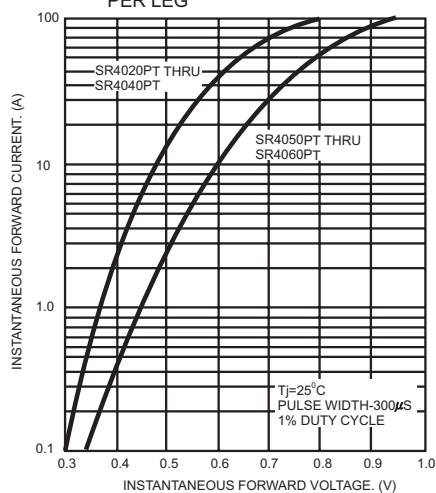


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

