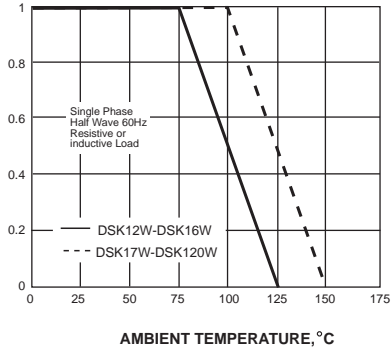


Surface Mount Schottky Barrier Rectifier

<p style="text-align: center;">SOD-123FL</p> <p style="text-align: center;">Dimensions in millimeters</p>	<p style="text-align: center;">FEATURES</p> <ul style="list-style-type: none"> ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0 ◆ Metal silicon junction, majority carrier conduction ◆ Low power loss, high efficiency ◆ High forward surge current capability ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension 																																																																																																																																																					
<p style="text-align: center;">MECHANICAL DATA</p> <p>Case: JEDEC SOD-123FL molded plastic body Terminals: Solderable per MIL-STD-750, Method 2026 Polarity: Color band denotes cathode end Mounting Position: Any Weight: 0.0007 ounce, 0.02 grams</p>																																																																																																																																																						
<p style="text-align: center;">MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</p>																																																																																																																																																						
<p>Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.</p>																																																																																																																																																						
<p>Catalog Number</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">SYMBOLS</th> <th>DSK12W</th> <th>DSK13W</th> <th>DSK14W</th> <th>DSK15W</th> <th>DSK16W</th> <th>DSK17W</th> <th>DSK18W</th> <th>DSK19W</th> <th>DSK110W</th> <th>DSK115W</th> <th>DSK120W</th> <th>UNITS</th> </tr> </thead> <tbody> <tr> <td>Maximum repetitive peak reverse voltage</td> <td>V_{RRM}</td> <td>20</td> <td>30</td> <td>40</td> <td>50</td> <td>60</td> <td>70</td> <td>80</td> <td>90</td> <td>100</td> <td>150</td> <td>200</td> <td>VOLTS</td> </tr> <tr> <td>Maximum RMS voltage</td> <td>V_{RMS}</td> <td>14</td> <td>21</td> <td>28</td> <td>35</td> <td>42</td> <td>49</td> <td>56</td> <td>63</td> <td>70</td> <td>105</td> <td>140</td> <td>VOLTS</td> </tr> <tr> <td>Maximum DC blocking voltage</td> <td>V_{DC}</td> <td>20</td> <td>30</td> <td>40</td> <td>50</td> <td>60</td> <td>70</td> <td>80</td> <td>90</td> <td>100</td> <td>150</td> <td>200</td> <td>VOLTS</td> </tr> <tr> <td>Maximum average forward rectified current</td> <td>$I_{(AV)}$</td> <td colspan="10" style="text-align: center;">1.0</td> <td>Amp</td> </tr> <tr> <td>Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)</td> <td>I_{FSM}</td> <td colspan="10" style="text-align: center;">25.0</td> <td>Amps</td> </tr> <tr> <td>Maximum instantaneous forward voltage at 1.0A</td> <td>V_F</td> <td colspan="3" style="text-align: center;">0.55</td> <td colspan="3" style="text-align: center;">0.70</td> <td colspan="3" style="text-align: center;">0.85</td> <td colspan="2" style="text-align: center;">0.95</td> <td>Volts</td> </tr> <tr> <td>Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$</td> <td>I_R</td> <td colspan="5" style="text-align: center;">0.5</td> <td colspan="5" style="text-align: center;">5.0</td> <td colspan="2" style="text-align: center;">0.2 2.0</td> <td>mA</td> </tr> <tr> <td>Typical junction capacitance (NOTE 1)</td> <td>C_J</td> <td colspan="5" style="text-align: center;">110</td> <td colspan="5" style="text-align: center;">80</td> <td>pF</td> </tr> <tr> <td>Operating junction temperature range</td> <td>T_J</td> <td colspan="5" style="text-align: center;">-65 to +125</td> <td colspan="5" style="text-align: center;">-65 to +150</td> <td>°C</td> </tr> <tr> <td>Storage temperature range</td> <td>T_{STG}</td> <td colspan="10" style="text-align: center;">-65 to +150</td> <td>°C</td> </tr> </tbody> </table>	SYMBOLS	DSK12W	DSK13W	DSK14W	DSK15W	DSK16W	DSK17W	DSK18W	DSK19W	DSK110W	DSK115W	DSK120W	UNITS	Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	150	200	VOLTS	Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	105	140	VOLTS	Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	150	200	VOLTS	Maximum average forward rectified current	$I_{(AV)}$	1.0										Amp	Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25.0										Amps	Maximum instantaneous forward voltage at 1.0A	V_F	0.55			0.70			0.85			0.95		Volts	Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	0.5					5.0					0.2 2.0		mA	Typical junction capacitance (NOTE 1)	C_J	110					80					pF	Operating junction temperature range	T_J	-65 to +125					-65 to +150					°C	Storage temperature range	T_{STG}	-65 to +150										°C
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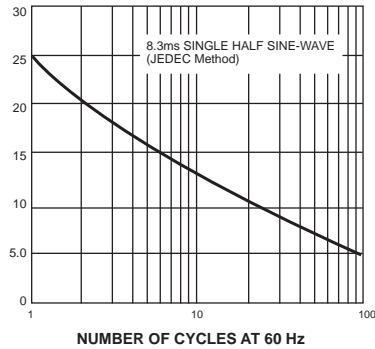
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



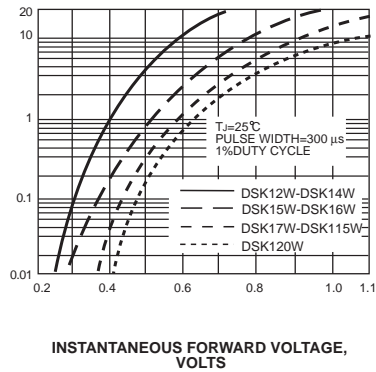
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



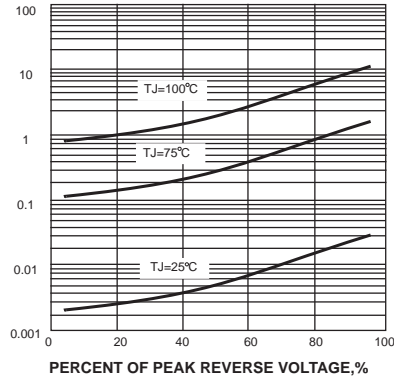
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



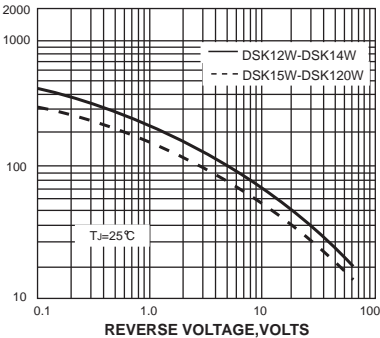
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



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