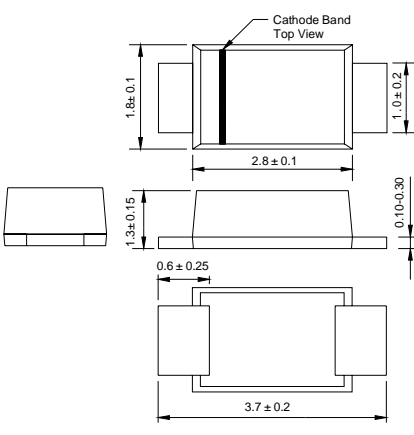
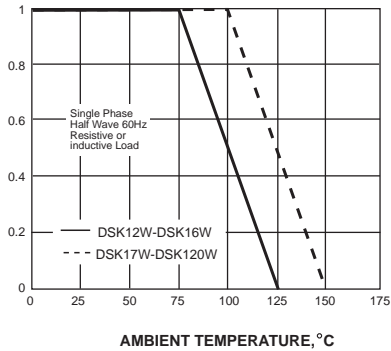


## Surface Mount Schottky Barrier Rectifier

<p style="text-align: center;"><b>SOD-123FL</b></p>  <p style="text-align: center;">Dimensions in millimeters</p>	<p style="text-align: center;"><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0</li> <li>◆ Metal silicon junction, majority carrier conduction</li> <li>◆ Low power loss, high efficiency</li> <li>◆ High forward surge current capability</li> <li>◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension</li> </ul>																																																																																																																																																																								
<p style="text-align: center;"><b>MECHANICAL DATA</b></p> <p><b>Case:</b> JEDEC SOD-123FL molded plastic body  <b>Terminals:</b> Solderable per MIL-STD-750, Method 2026  <b>Polarity:</b> Color band denotes cathode end  <b>Mounting Position:</b> Any  <b>Weight:</b> 0.0007 ounce, 0.02 grams</p>																																																																																																																																																																									
<p style="text-align: center;"><b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b></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>																																																																																																																																																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Catalog Number</th> <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 style="text-align: left;">UNITS</th> </tr> </thead> <tbody> <tr> <td>Maximum repetitive peak reverse voltage</td> <td><math>V_{RRM}</math></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><math>V_{RMS}</math></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><math>V_{DC}</math></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><math>I_{(AV)}</math></td> <td colspan="11" 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><math>I_{FSM}</math></td> <td colspan="11" style="text-align: center;">25.0</td> <td>Amps</td> </tr> <tr> <td>Maximum instantaneous forward voltage at 1.0A</td> <td><math>V_F</math></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 rowspan="2">Maximum DC reverse current at rated DC blocking voltage</td> <td rowspan="2"><math>I_R</math></td> <td colspan="11" style="text-align: center;">0.5</td> <td style="text-align: center;">0.2</td> <td rowspan="2">mA</td> </tr> <tr> <td colspan="6" style="text-align: center;">10.0</td> <td colspan="3" style="text-align: center;">5.0</td> <td colspan="2" style="text-align: center;">2.0</td> </tr> <tr> <td>Typical junction capacitance (NOTE 1)</td> <td><math>C_J</math></td> <td colspan="5" style="text-align: center;">110</td> <td colspan="7" style="text-align: center;">80</td> <td>pF</td> </tr> <tr> <td>Operating junction temperature range</td> <td><math>T_J</math></td> <td colspan="6" style="text-align: center;">-65 to +125</td> <td colspan="6" style="text-align: center;">-65 to +150</td> <td>°C</td> </tr> <tr> <td>Storage temperature range</td> <td><math>T_{STG}</math></td> <td colspan="11" style="text-align: center;">-65 to +150</td> <td>°C</td> </tr> </tbody> </table>	Catalog Number	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	$I_R$	0.5											0.2	mA	10.0						5.0			2.0		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	
Catalog Number	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	$I_R$	0.5											0.2	mA																																																																																																																																																											
		10.0						5.0			2.0																																																																																																																																																														
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																																																																																																																																																												
<p><b>Note:</b> 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.</p>																																																																																																																																																																									

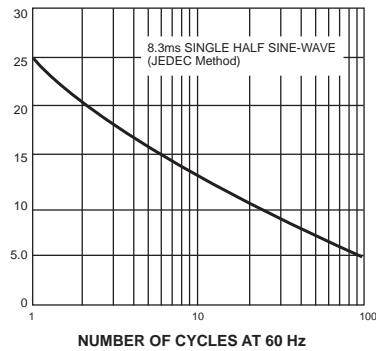
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



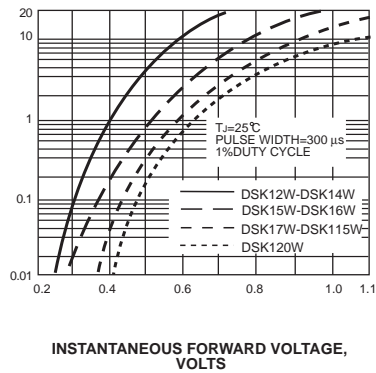
PEAK FORWARD SURGE CURRENT,  
AMPERES

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



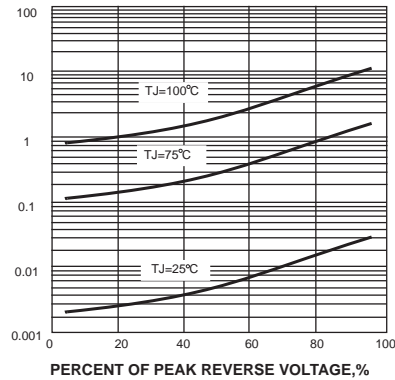
INSTANTANEOUS FORWARD CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

