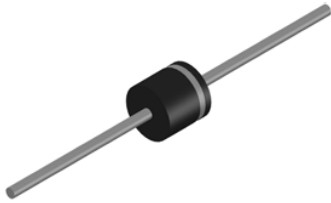




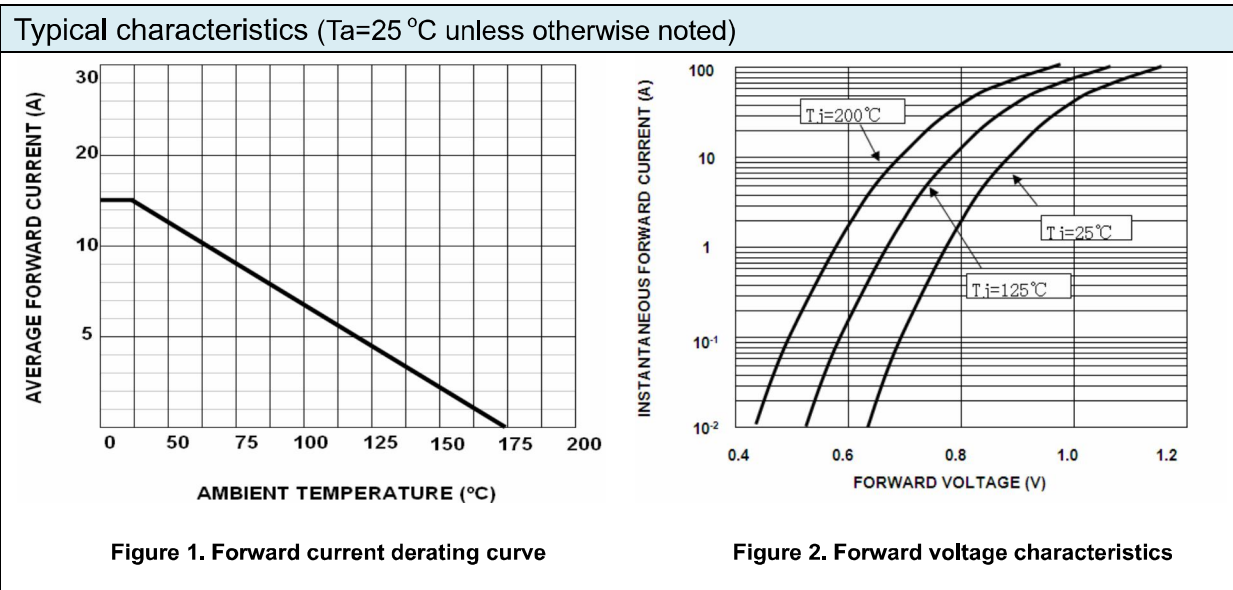
<p><u>R-7</u></p>  <p>Anode  Cathod</p>		<p>Features</p> <ul style="list-style-type: none"> • ROHS Compliant  • Low forward voltage drop • High forward surge capability • High current capability • Solder dip 260 °C / 10S 																																													
<p>Primary characteristics</p> <table border="1"> <tr> <td>$I_{F(AV)}$</td> <td>15A</td> </tr> <tr> <td>V_{RRM}</td> <td>1500V</td> </tr> <tr> <td>I_{FSM}</td> <td>450A</td> </tr> <tr> <td>V_F</td> <td>0.92V</td> </tr> <tr> <td>T_J max.</td> <td>175 °C</td> </tr> <tr> <td>DC forward mode</td> <td>200 °C</td> </tr> </table>		$I_{F(AV)}$	15A	V_{RRM}	1500V	I_{FSM}	450A	V_F	0.92V	T_J max.	175 °C	DC forward mode	200 °C	<p>Applications</p> <p>Ideal for solar PV application such as by-pass diode</p>																																	
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		<p>Mechanical data</p> <ul style="list-style-type: none"> • Case: R-7 Axial-leaded, molded plastic • Epoxy meets UL 94 V-0 flammability rating • Terminals: Tin plated leads. • Polarity: As marked • Weight: 2.10 grams 																																													
<p>Maximum rating (Ta=25°C unless otherwise noted)</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Symbol</th> <th>SPAL1515</th> <th>Unit</th> </tr> </thead> <tbody> <tr> <td>Max. repetitive peak reverse voltage</td> <td>V_{RRM}</td> <td>1500</td> <td>V</td> </tr> <tr> <td>Max. RMS reverse voltage</td> <td>V_{RMS}</td> <td>1050</td> <td></td> </tr> <tr> <td>Max. DC blocking voltage</td> <td>V_{DC}</td> <td>1500</td> <td>V</td> </tr> <tr> <td>Max. average forward current (see Fig.1)</td> <td>$I_{F(AV)}$</td> <td>15</td> <td>A</td> </tr> <tr> <td>Non-repetitive peak forward surge current 8.3ms single half-sine-wave</td> <td>I_{FSM}</td> <td>450</td> <td>A</td> </tr> <tr> <td>Rating for fusing, 1ms ≤ t ≤ 8.3ms</td> <td>I^2t</td> <td>840</td> <td>A²S</td> </tr> <tr> <td>Operating junction temperature</td> <td>T_J</td> <td>-50 ~ +175</td> <td>°C</td> </tr> <tr> <td>Max. junction temperature in DC forward mode</td> <td>T_J</td> <td>200</td> <td>°C</td> </tr> <tr> <td>Storage temperature</td> <td>T_{STG}</td> <td>-65 ~ +175</td> <td>°C</td> </tr> <tr> <td>Thermal resistance junction to ambient⁽¹⁾</td> <td>$R_{\theta J-A}$</td> <td>9</td> <td>°C/W</td> </tr> </tbody> </table>				Parameter	Symbol	SPAL1515	Unit	Max. repetitive peak reverse voltage	V_{RRM}	1500	V	Max. RMS reverse voltage	V_{RMS}	1050		Max. DC blocking voltage	V_{DC}	1500	V	Max. average forward current (see Fig.1)	$I_{F(AV)}$	15	A	Non-repetitive peak forward surge current 8.3ms single half-sine-wave	I_{FSM}	450	A	Rating for fusing, 1ms ≤ t ≤ 8.3ms	I^2t	840	A ² S	Operating junction temperature	T_J	-50 ~ +175	°C	Max. junction temperature in DC forward mode	T_J	200	°C	Storage temperature	T_{STG}	-65 ~ +175	°C	Thermal resistance junction to ambient ⁽¹⁾	$R_{\theta J-A}$	9	°C/W
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Note: (1) Leads are kept at ambient temperature at a distance of 10 mm from case

(2) Pulse test with PW=300us, 1%duty cycle.

Maximum rating (Ta=25°C unless otherwise noted)							
Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit	
Forward voltage drop ⁽²⁾	T _J =25°C	I _F =5A	V _F	-	0.84	-	V
	T _J =125°C			-	0.71	-	V
	T _J =200°C			-	0.62	-	V
	T _J =25°C	I _F =8A	V _F	-	0.87	-	V
	T _J =125°C			-	0.75	-	V
	T _J =200°C			-	0.66	-	V
	T _J =25°C	I _F =12A	V _F	-	0.90	-	V
	T _J =125°C			-	0.79	-	V
	T _J =200°C			-	0.71	-	V
	T _J =25°C	I _F =15A	V _F	-	0.92	1.0	V
	T _J =125°C			-	0.82	-	V
	T _J =200°C			-	0.74	-	V
Reverse leakage current	T _J =25°C	V _R =V _{RRM}	I _R	-	0.25	10	uA
	T _J =100°C			-	-	100	uA

Note: (1) Leads are kept at ambient temperature at a distance of 10 mm from case
 (2) Pulse test with PW=300us, 1% duty cycle.



Typical characteristics (Ta=25°C unless otherwise noted)

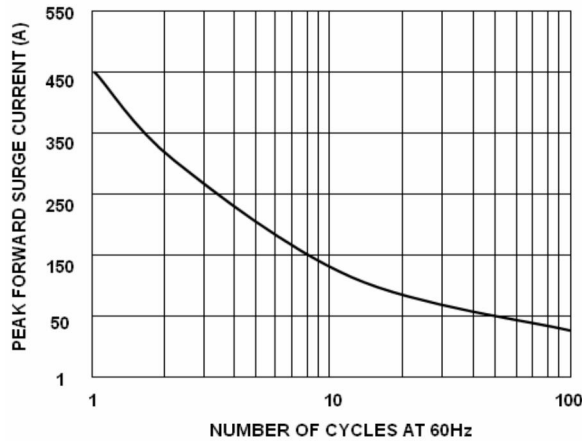
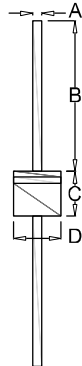


Figure 3. Non-repetitive surge current

Package outline dimensions



Dim.	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	0.059	0.063	1.50	1.60
B	1		25.40	
C	0.291	0.299	7.40	7.60
D	0.311	0.319	7.90	8.10

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