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RL251 THRU RL257

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability

2.5 Amp Silicon Rectifier 50 to 1000 Volts

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Typical Thermal Resistance ($R_{\theta JA}$) 35°C/W

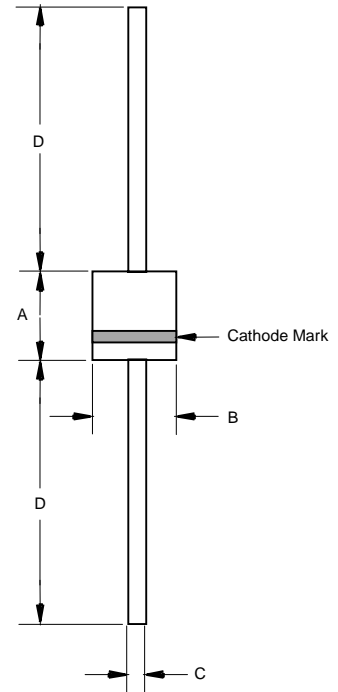
Microsemi Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RL251	50V	35V	50V
RL252	100V	70V	100V
RL253	200V	140V	200V
RL254	400V	280V	400V
RL255	600V	420V	600V
RL256	800V	560V	800V
RL257	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2.5 A	$T_A = 75^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	$I_{FM} = 2.5\text{A}; T_A = 25^\circ\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0 μA 50 μA	$T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$
Typical Junction Capacitance	C_J	35pF	Measured at 1.0MHz, $V_R=4.0\text{V}$

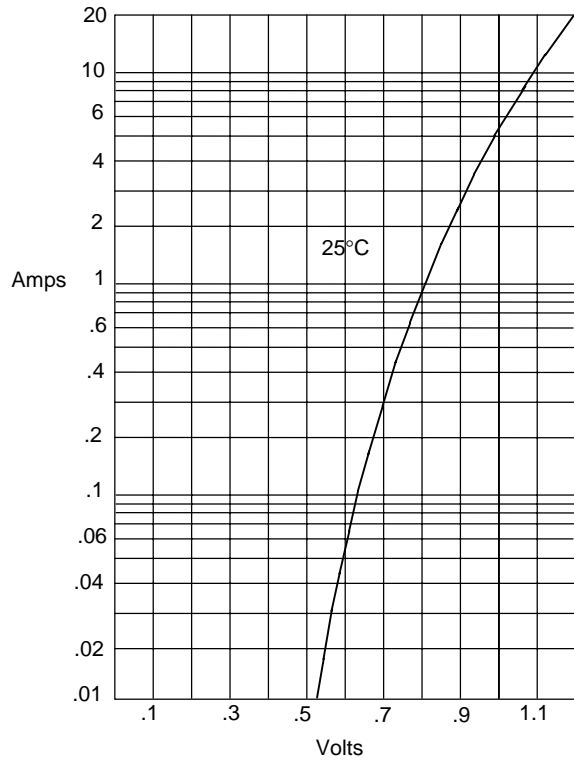
*Pulse Test: Pulse Width 300 μsec , Duty Cycle 1%

R-3



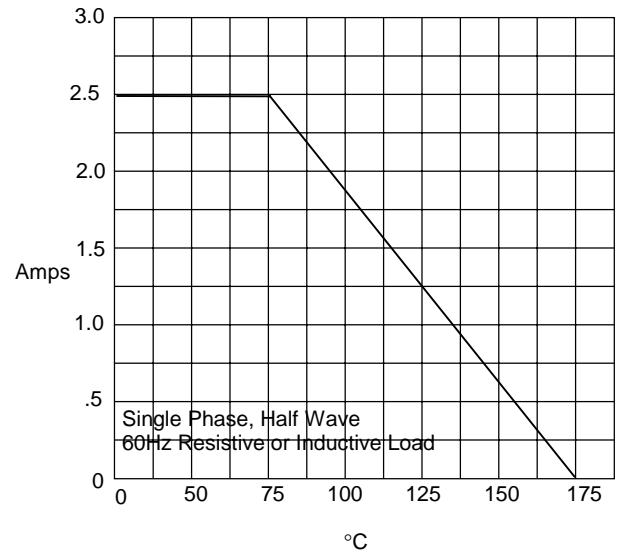
DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	---	.160	---	4.10	
B	---	.160	---	4.10	
C	.040	.042	1.01	1.07	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



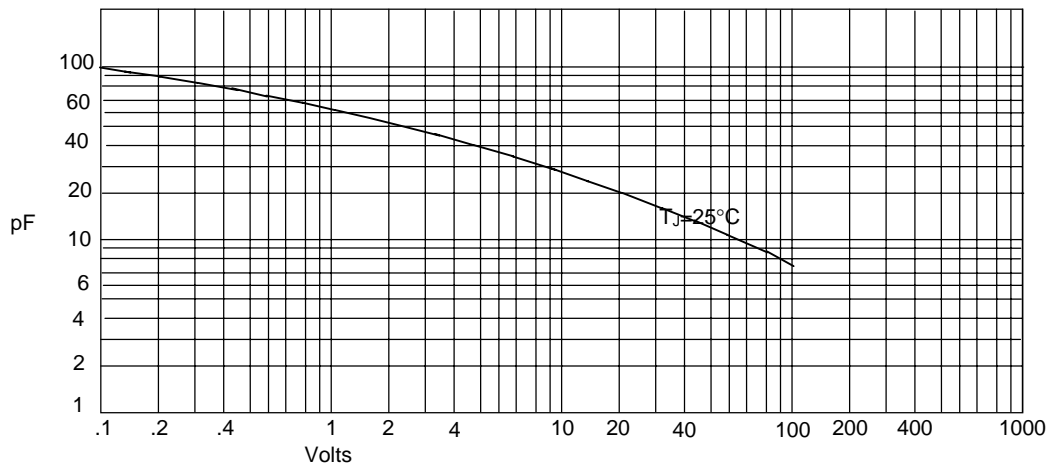
Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



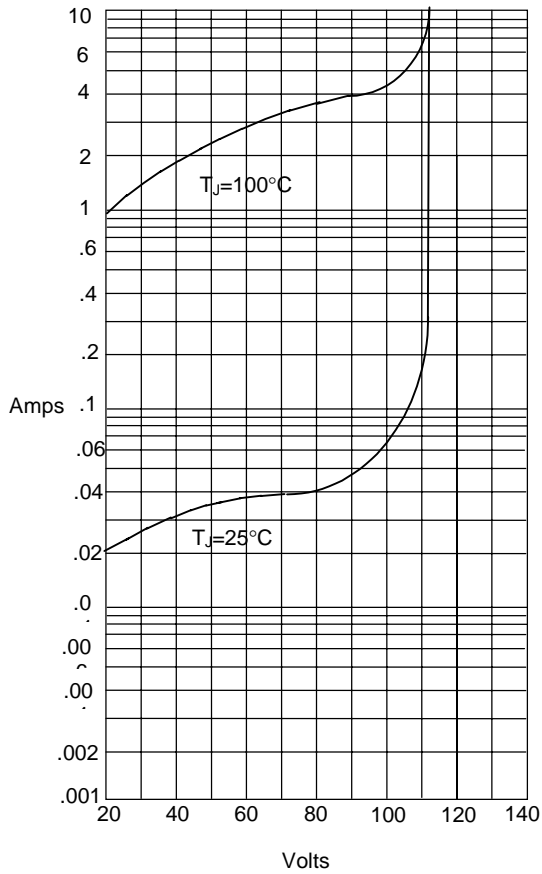
Single Phase, Half Wave
60Hz Resistive or Inductive Load
Average Forward Rectified Current - Amperes versus
Ambient Temperature - °C

Figure 3
Junction Capacitance



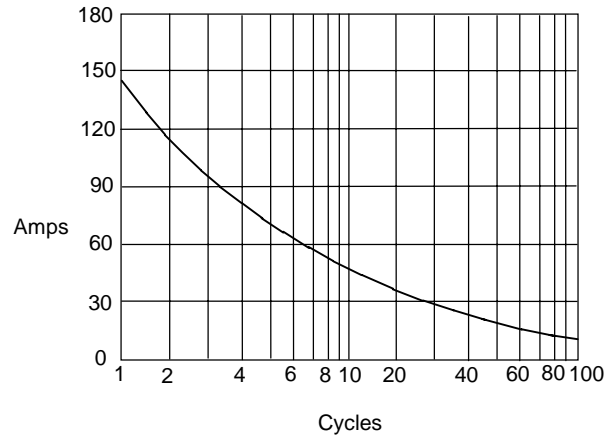
Junction Capacitance - pF versus
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Current - Amps *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles