

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

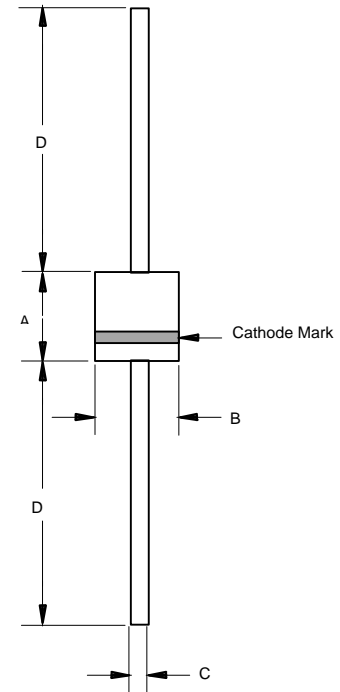
Microsemi Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RL251	---	50V	35V	50V
RL252	---	100V	70V	100V
RL253	---	200V	40V	200V
RL254	---	400V	280V	400V
RL255	---	600V	420V	600V
RL256	---	800V	560V	800V
RL257	---	1000V	700V	1000V

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	$I_{FM} = 2.0\text{A};$ $T_A = 25^\circ\text{C}$
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%

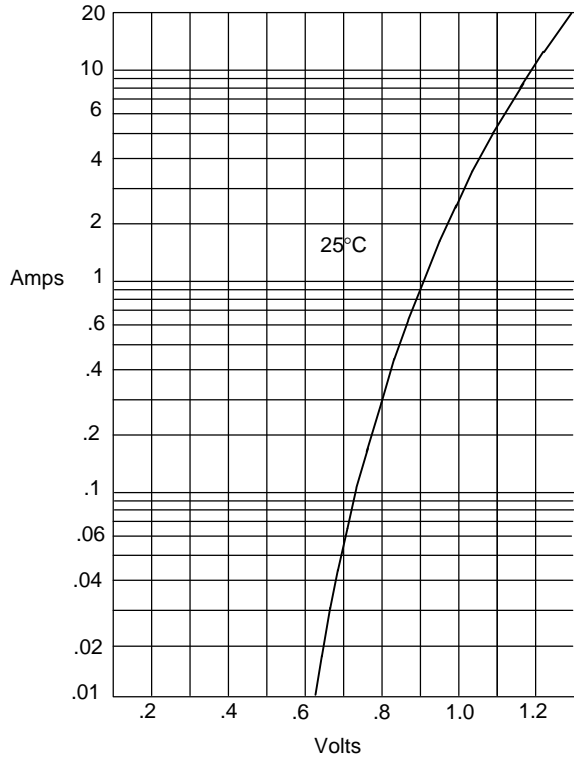
R-3



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	---	

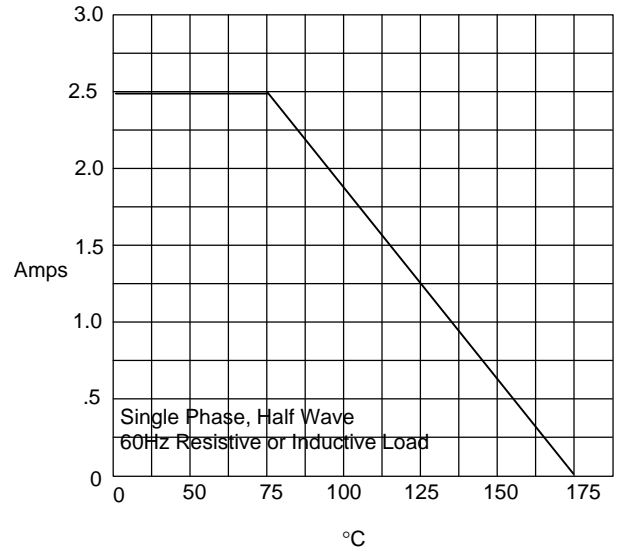
RL251 thru RL257

Figure 1
Typical Forward Characteristics



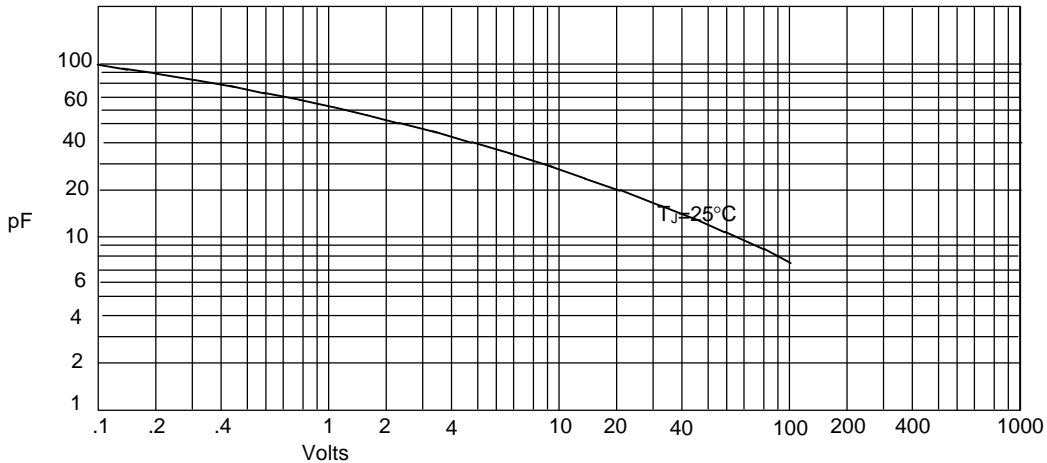
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

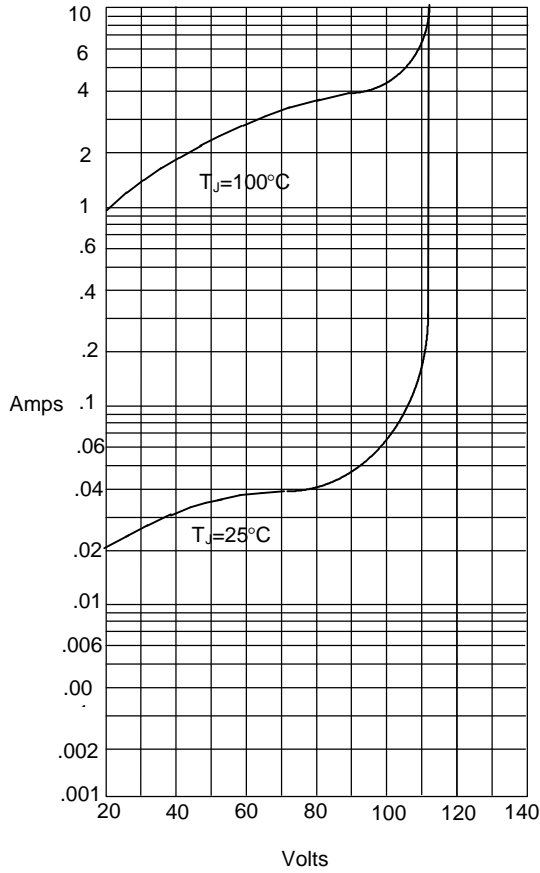
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

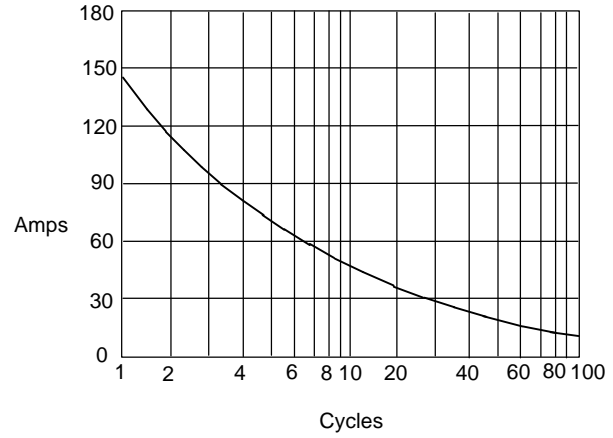
RL251 thru RL257

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