

HIGH RELIABILITY SILICON POWER RECTIFIER

Qualified per MIL-PRF-19500/162

- Glass Passivated Die
- Glass to Metal Seal Construction
- VRRM 200 to 1000 Volts

DEVICES

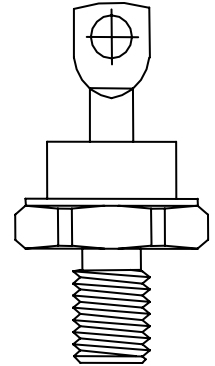
1N1614	1N4458	1N1614R	1N4458R
1N1615	1N4459	1N1615R	1N4459R
1N1616		1N1616R	

LEVELS

JAN
JANTX

ABSOLUTE MAXIMUM RATINGS ($T_C = +25^\circ\text{C}$ unless otherwise noted)

Parameters / Test Conditions	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RWM}	200	V
1N1614 1N1614R		400	
1N1615 1N1615R		600	
1N1616 1N1616R		800	
1N4458 1N4458R		1000	
Average Forward Current, $T_C = 150^\circ$	I_F	15	A
Peak Surge Forward Current @ $t_p = 8.3\text{ms}$, half sinewave, $T_C = 150^\circ\text{C}$	I_{FSM}	100	A
Thermal Resistance, Junction to Case	$R_{\theta JC}$	4.5	$^\circ\text{C/W}$
Operating Case Temperature Range	T_j	-65°C to 175°C	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65°C to 175°C	$^\circ\text{C}$



DO-203AA (DO-4)

ELECTRICAL CHARACTERISTICS ($T_A = +25^\circ\text{C}$, unless otherwise noted)

Parameters / Test Conditions	Symbol	Min.	Max.	Unit	
Forward Voltage $I_{FM} = 15\text{A}$, $T_C = 25^\circ\text{C}^*$	V_{FM}		1.5	V	
Reverse Current	I_{RM}		50	μA	
$V_{RM} = 200$, $T_C = 25^\circ\text{C}$					1N1614 1N1614R
$V_{RM} = 400$, $T_C = 25^\circ\text{C}$					1N1615 1N1615R
$V_{RM} = 600$, $T_C = 25^\circ\text{C}$					1N1616 1N1616R
$V_{RM} = 800$, $T_C = 25^\circ\text{C}$					1N4458 1N4458R
$V_{RM} = 1000$, $T_C = 25^\circ\text{C}$					1N4459 1N4459R
Reverse Current	I_{RM}		500	μA	
$V_{RM} = 200$, $T_C = 150^\circ\text{C}$					1N1614 1N1614R
$V_{RM} = 400$, $T_C = 150^\circ\text{C}$					1N1615 1N1615R
$V_{RM} = 600$, $T_C = 150^\circ\text{C}$					1N1616 1N1616R
$V_{RM} = 800$, $T_C = 150^\circ\text{C}$					1N4458 1N4458R
$V_{RM} = 1000$, $T_C = 150^\circ\text{C}$					1N4459 1N4459R

* Pulse test: Pulse width 300 μsec , Duty cycle 2%

Note:

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GRAPHS

FIGURE 1
TYPICAL FORWARD CHARACTERISTICS

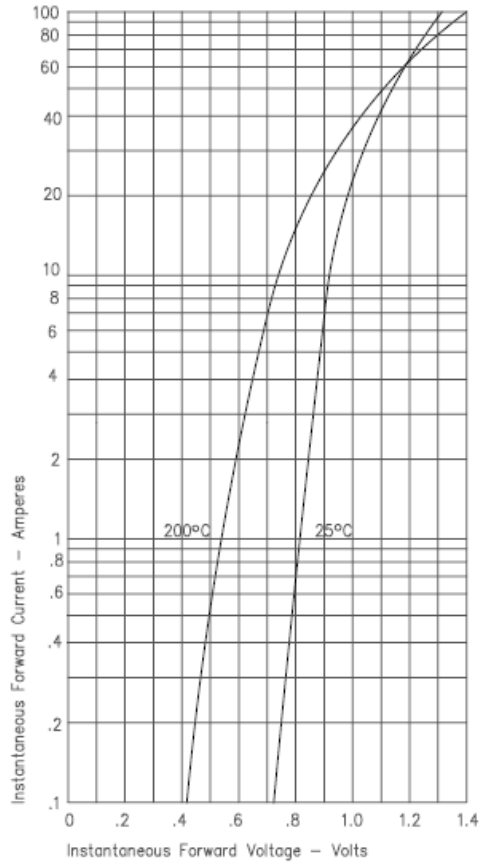


FIGURE 3
FORWARD CURRENT DERATING

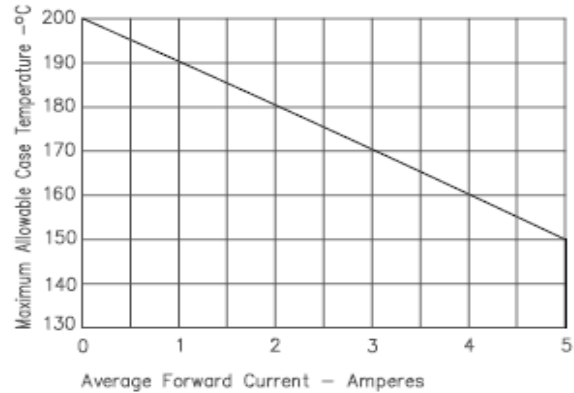


FIGURE 4
TRANSIENT THERMAL IMPEDANCE

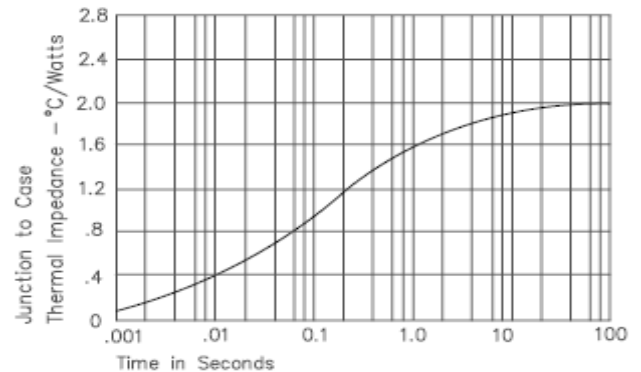


FIGURE 2
TYPICAL REVERSE CHARACTERISTICS

