Rochester Electronics

Datasheet

Rochester Electronics Manufactured Components

Rochester branded components are manufactured using either die/wafers purchased from the original suppliers or Rochester wafers recreated from the original IP. All recreations are done with the approval of the OCM.

Parts are tested using original factory test programs or Rochester developed test solutions to guarantee product meets or exceed the OCM data sheet.

Quality Overview

- ISO-9001
- AS9120 certification
- Qualified Manufacturers List (QML) MIL-PRF-35835
    - Class Q Military
    - Class V Space Level
- Qualified Suppliers List of Distributors (QSLD)

    - Rochester is a critical supplier to DLA and meets all industry and DLA standards.

Rochester Electronics, LLC is committed to supplying products that satisfy customer expectations for quality and are equal to those originally supplied by industry manufacturers.

The original manufacturer's datasheet accompanying this document reflects the performance and specifications of the Rochester manufactured version of this device. Rochester Electronics guarantees the performance of its semiconductor products to the original OEM specifications. 'Typical' values are for reference purposes only. Certain minimum or maximum ratings may be based on product characterization, design, simulation, or sample testing.

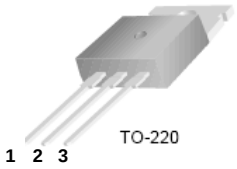
FAIRCHILD SEMICONDUCTOR®

November 2010

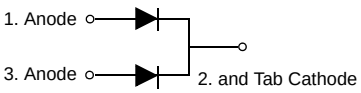
MBR20200CT
Dual High Voltage Schottky Rectifier

Features

- Low Forward Voltage Drop
- Low Power Loss and High Efficiency
- High Surge Capability
- RoHS Compliant
- Matte Tin(Sn) Lead Finish
- Terminal Leads Surface is Corrosion Resistant and can withstand to 260°C
- Wave Soldering or per MIL-STD-750 Method 2026.



Mark : MBR20200CT



Absolute Maximum Ratings* T_a = 25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Maximum Repetitive Reverse Voltage	200	V
V_R	Maximum DC Reverse Voltage	200	V
$I_{F(AV)}$	Average Rectified Forward Current, T_C=115°C	10 (Per Leg) 20 (Per Device)	A
I_{FSM}	Peak Forward Surge Current, 8.3mS Half Sine wave	150	A
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics* T_a = 25°C unless otherwise noted

Symbol	Parameter	Max.	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case per Leg	1.5	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient per Leg	62.5	°C/W

* MIL standard 883-1012 & JESD51-10

Electrical Characteristics* T_a = 25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Unit
I_R	Reverse Current	V_R=200V T_C = 25 °C V_R=200V T_C = 125 °C		0.2 5	mA
V_F	Forward Voltage	I_F=10A T_C = 25 °C I_F=10A T_C = 125 °C I_F=20A T_C = 25 °C I_F=20A T_C = 125 °C		0.9 0.8 1.0 0.9	V

* DC Item are tested by Pulse Test : Pulse Width≤300μs, Duty Cycle≤2%

Typical Performance Characteristics

Figure 1. Forward Current Characteristics

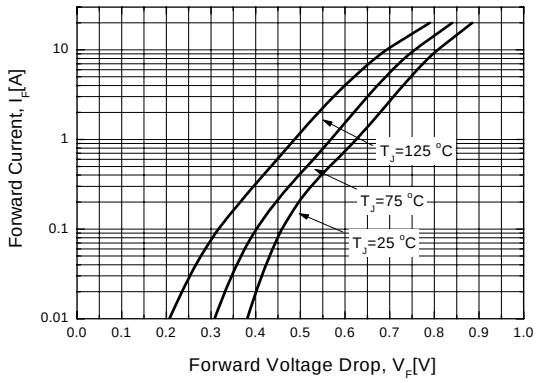


Figure 2. Reverse Leakage Current

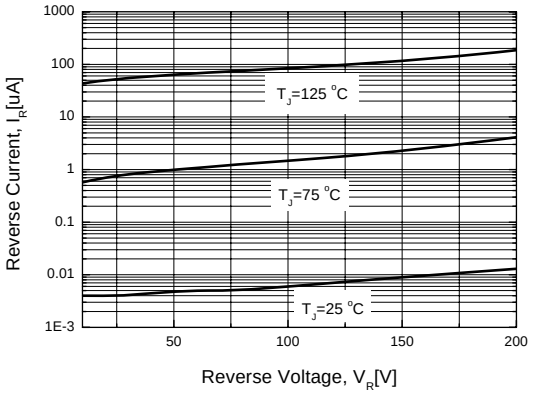


Figure 3.Junction Capacitance

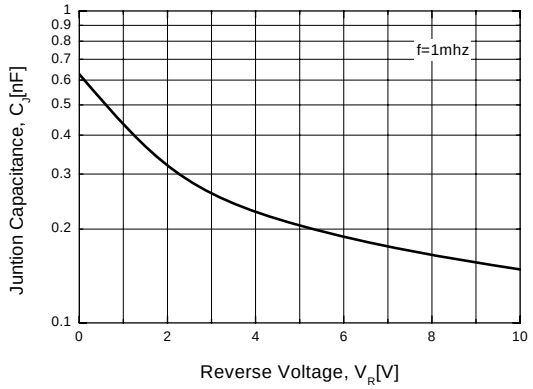
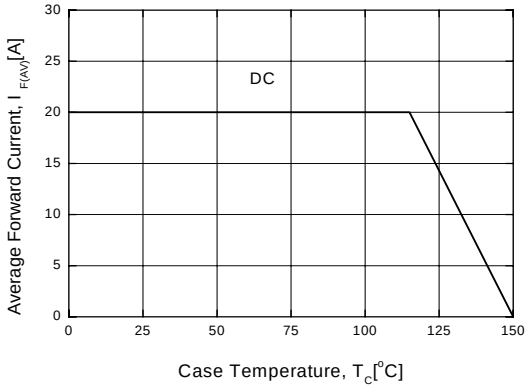
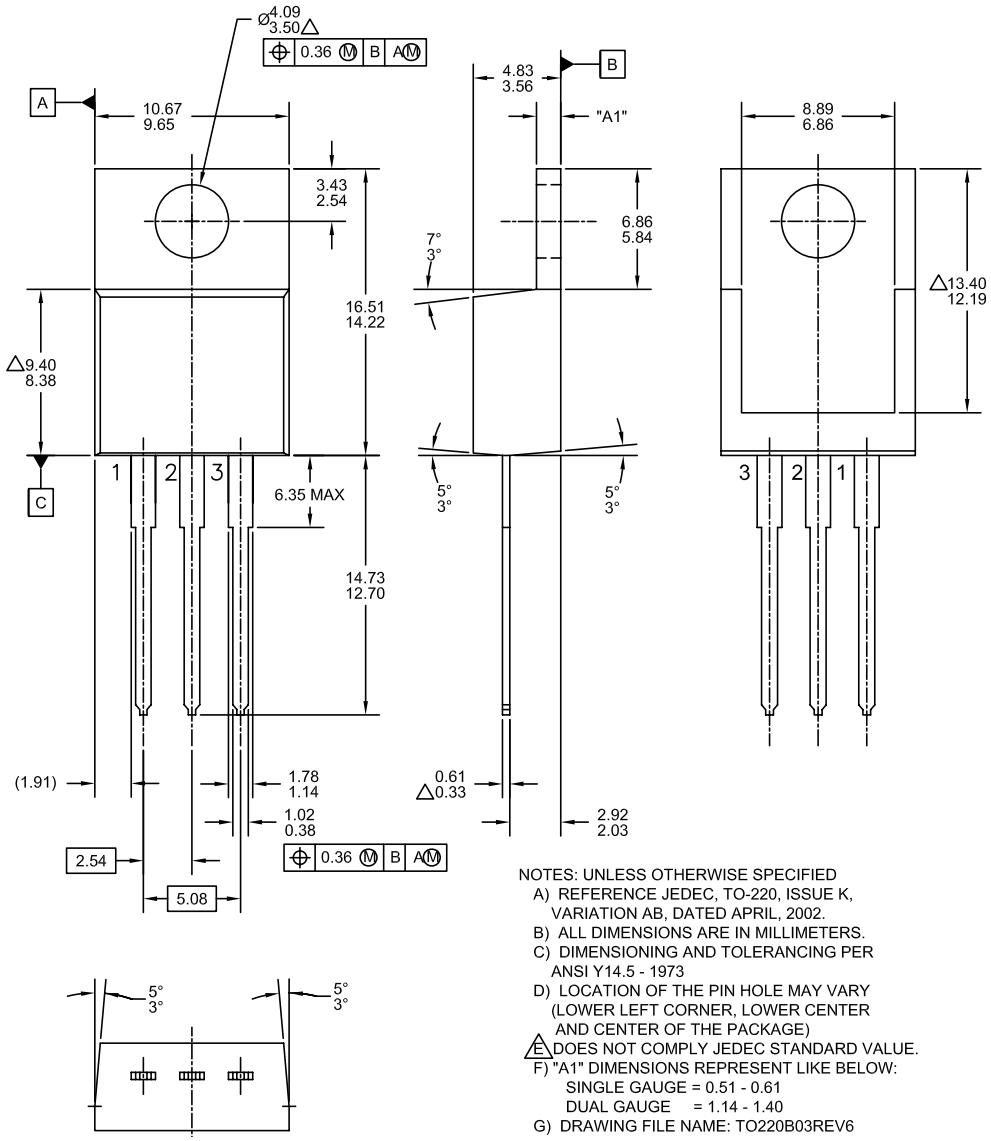


Figure 4. Power Derating



Phisical Dimensions

TO-220 [DUAL GAUGE]



NOTES: UNLESS OTHERWISE SPECIFIED
A) REFERENCE JEDEC, TO-220, ISSUE K, VARIATION AB, DATED APRIL, 2002.
B) ALL DIMENSIONS ARE IN MILLIMETERS.
C) DIMENSIONING AND TOLERANCING PER ANSI Y14.5 - 1973
D) LOCATION OF THE PIN HOLE MAY VARY (LOWER LEFT CORNER, LOWER CENTER AND CENTER OF THE PACKAGE)
△E DOES NOT COMPLY JEDEC STANDARD VALUE.
F) "A1" DIMENSIONS REPRESENT LIKE BELOW:
SINGLE GAUGE = 0.51 - 0.61
DUAL GAUGE = 1.14 - 1.40
G) DRAWING FILE NAME: TO220B03REV6

Dimensions in Millimeters

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2. A critical component in any component of a life support, device, or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative / In Design	Datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.

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