WS4A020065A

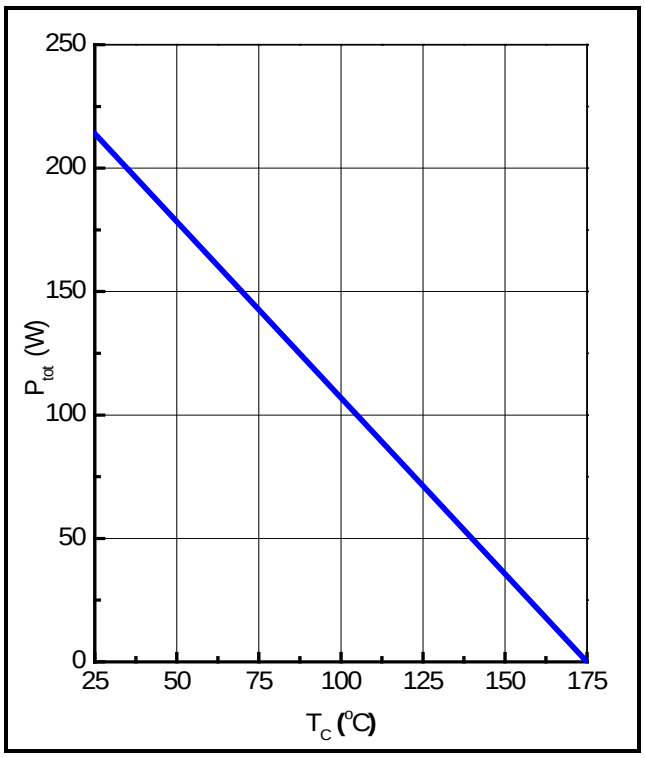
V_{RRM} =

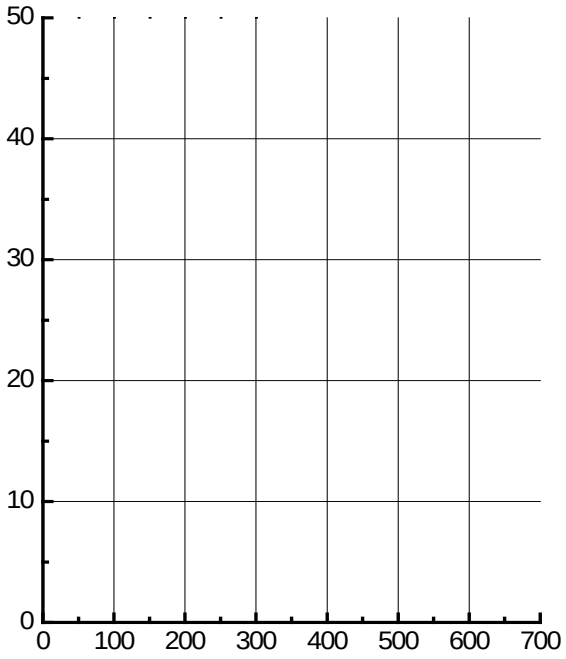
Silicon Carbide Schottky Diode

Electrical Characteristics

Symbol	Parameter	Typ.	Max.	Unit	Test Conditions	Note

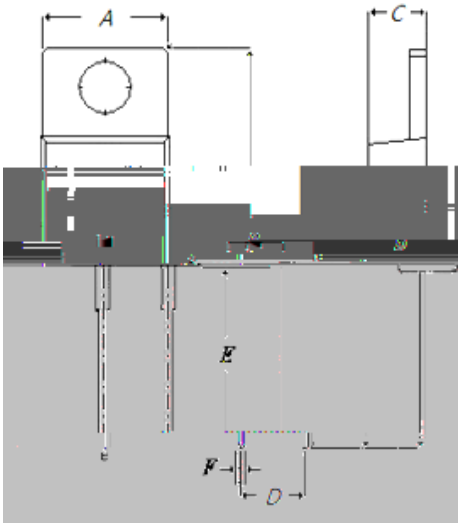
Typical Performance

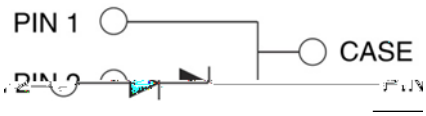




Package Dimensions

Package TO-220-2





mbol	Min. (mm)	Typ. (mm)	Max. (mm)
A	9.17	10.08	10.91
B	27.00	28.58	30.00
C	3.89	4.50	5.00
D	4.20	5.10	5.80
E	11.70	13.30	14.97
F	0.50	0.80	1.21

Simplified Diode Model

Equivalent IV Curve for Model

Mathematical Equation

$$V_F = V_t + I_F \times R_{diff}$$

$V_t = -0.001 \times T_j + 0.99$ [V]

$R_{diff} = 3.64 \times 10^{-7} \times T_j^2 - 2.27 \times 10^{-5} \times T_j + 0.015$ > @

Note:

Tj = Diode Junction Temperature In Degrees Celsius, valid from 25°C to 175°C

I_F= Forward Current

Less than 40A

Notes

1) Before using our products, please contact our marketing managers and get the latest specifications.

2) Ongoing efforts are being made to improve the reliability and quality of the products by CETC, but the semiconductors can malfunction due to various factors. Therefore, in order to prevent artificial damage or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. CETC doesn't have responsibility for any damages arising from the use of our products beyond the rating specified by CETC.

3) All the information contained in this document, such as the examples of application circuits, circuit constants, is provided only to illustrate the standard usage and operations of the products. The other relevant conditions must be taken into consideration when designing circuits for mass production.

4) The information specified in this document is intended only to show the typical functions and examples of application circuits for the products. CETC does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by CETC or any other parties. CETC shall have no responsibility whatsoever for any dispute arising from the use of such technical information.

5) The products specified in this document are not designed to be radiation tolerant.

6) For use of our products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a CETC representative: transportation equipment (cars, ships, trains, etc.), primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, and power transmission systems.

7) Do not use our products in applications requiring extremely high reliability, such as aerospace equipment, nuclear power control systems and submarine repeaters.

8) CETC shall not be responsible for any damages or injury caused by non-compliance with the recommended usage (()-12(e)27(d4e)-12(e)27(d4e0.042 Tw -43.30w)-18(i)-18(t)-41(h a C)-18(E)-21(T27(d)]TJ 0 Tc 0 Tw ( )Tj -96(r)-12w)-18(i)-18(tj)-18(u

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