

Title (en)  
CERAMIC HEATER AND GLOW PLUG

Title (de)  
KERAMISCHE HEIZUNG UND GLÜHSTIFT

Title (fr)  
ÉLÉMENT CHAUFFANT EN CÉRAMIQUE ET BOUGIE DE PRÉCHAUFFAGE

Publication  
**EP 3106754 A2 20161221 (EN)**

Application  
**EP 16174239 A 20160613**

Priority  
JP 2015121117 A 20150616

Abstract (en)  
[Objective] To reduce the specific resistance of a heat-generating resistor of a ceramic heater while ensuring the strength of the ceramic heater and to suppress the occurrence of cracks in the heat-generating resistor. [Means for Solution] The ceramic heater 100 includes a substrate 10 formed from an insulating ceramic and a heat-generating resistor 20 formed inside the substrate 10 and containing tungsten carbide (WC) and silicon nitride (Si<sub>3</sub>N<sub>4</sub>). In any cross section of the heat-generating resistor 20, the ratio of the area of tungsten carbide portions to the total area of the cross section is 33 to 67%, and the average diameter of tungsten carbide aggregates that is measured by a line intercept method is 1.4 to 7.0 μm.

IPC 8 full level  
**F23Q 7/00** (2006.01)

CPC (source: EP)  
**F23Q 7/001** (2013.01)

Citation (applicant)  
• JP 2006127995 A 20060518 - NGK SPARK PLUG CO  
• JP 2002220285 A 20020809 - NGK SPARK PLUG CO  
• JP 2007335397 A 20071227 - NGK SPARK PLUG CO

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3106754 A2 20161221; EP 3106754 A3 20170315; EP 3106754 B1 20191204**; JP 2017004915 A 20170105; JP 6608627 B2 20191120

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**EP 16174239 A 20160613**; JP 2015121117 A 20150616