Panasonic



Chopper evaluation board (with dedicated X-GaN driver + general isolator) for evaluating the performance of X-GaN power transistor

EVB Part Number

PGA26E07BA-SWEVB006 PGA26E19BA-SWEVB006

Key Device Part Number

X-GaN 70m Ω - PGA26E07BA X-GaN 190m Ω - PGA26E19BA X-GaN Driver - AN34092B



Overview

The PGA26ExxBA-SWEVB006 is the chopper evaluation board for measuring the switching characteristics of the GaN power transistor using X-GaN driver.

Features

- Maximum input voltage: DC 400V
- PGA26E19BA: ON resistance 190mΩ, PGA26E07BA: ON resistance 70mΩ
- X-GaN driver: AN34092B
- Support evaluation of switching characteristics using 2-pulse test using

inductive load for dv/dt and di/dt measurement.

• High speed switching and high frequency operation performance.

Application

X-GaN Power FET characterization, Fly back topology





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Terminal information

Recommended Operating Conditions

Terminal Name	Function	
Р	Terminal connected to DC power supply(+) and the external inductor	
N	Terminal connected to DC power supply(-)	
OUT	Terminal connected to external inductor	
VCC	Terminal connected to auxiliary power supply(+)	
IN+	Terminal connected to output of the external clock signal (non-inverting input)	
IN-	Terminal connected to output of the external clock signal (inverting input)	

Parameter	Condition
DC power supply	400V (Rating)
Auxiliary power supply for low side	12V
External clock signal	5V
External Inductor	120uH

Evaluation circuit diagram





Examples of switching waveforms





Turn-off (VPN=400V, IL=10A)

PGA26E19BA-SWEVB006 Turn-on/off waveform

Important notice

- To avoid electric shock, please ensure to check the capacitor connected with line VPN and VS is discharged after evaluation.
- Depending on the conditions of the evaluation, please use an appropriate inductor for the DC superposition characteristics. Otherwise, there is possibility that GaN power transistor is damaged due to large current by magnetic saturation.
- To avoid damaging the GaN power transistor by overheating, please don't apply a constant positive voltage as a clock signal.
- Please adjust the pulse width so the maximum drain-source current rating is not exceeded.

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