

NCP4318

Dual Channel Synchronous Rectification Controller

Product Overview

For complete documentation, see the data sheet.

NCP4318 is a mixed mode, which uses instantaneous drain voltage and previous dead time information, Synchronous Rectification (SR) controller for LLC resonant converter with minimum external components. The adaptive dead time control compensates induced parasitic inductance voltage to maximize SR MOSFET conduction and the efficiency. Multi-step turn-off threshold control and SR current inversion detection function prevent inversion current during fast load transient and allows stable SR operation over entire load range. In addition, to improve light load efficiency, VGATE is adaptively reduced from 10V to 6V/5V.

Features

- Adaptive dead time control
- Current inversion detection
- Adaptive gate voltage control
- 200V rated drain sensing pins for two channel MOSFET control

Benefits

- Maximized efficiency
- Stable load transient
- Reduced switching losses at light load condition
- covers high output voltage application

Applications

- LLC resonant PSU

End Products

- Gaming, servers, network, telecom
- Laptop adapter, LED TV

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	V _{CC} Max (V)	V _{ref} Typ (V)	I _{CC} Max (A)	T _A Min (°C)	T _A Max (°C)	Package Type
NCP4318AHDD R2G	0.4525		Active	37		0.01	-40	125	SOIC-8
NCP4318AHJDR 2G	0.4525		Active	37		0.01	-40	125	SOIC-8
NCP4318ALCDR 2G	0.4525		Active	37		0.01	-40	125	SOIC-8
NCP4318ALKDR 2G	0.4525		Active	37		0.01	-40	125	SOIC-8
NCP4318ALLDR 2G	0.5247		NEW	37		0.01	-40	125	SOIC-8
NCP4318ALS DR 2G	0.4525		Active	37		0.01	-40	125	SOIC-8
NCP4318BLCDR 2G	0.4525		Active	37		0.01	-40	125	SOIC-8