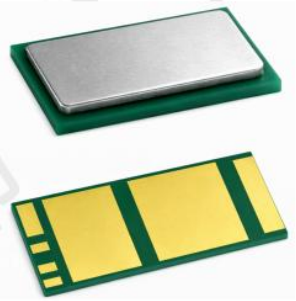
BNR02AH40VCQ1

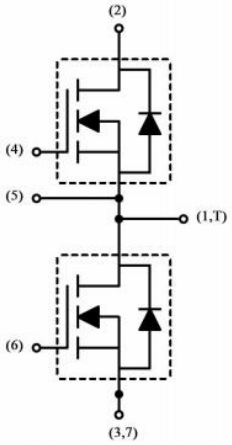
General Description

BNR02AH40VCQ1 is an ultra-compact half-bridge power module that integrates a matched pair of high-performance MOSFETs and a built-in copper heat spreader in a single, low-profile package. Its optimized internal layout yields very low stray inductance, minimal loop area, and true double-sided cooling, giving higher power density, lower switching losses, and reduced EMI compared with conventional discrete or molded solutions. Ideal for compact motor drives, DC-link stages, and high-efficiency converters.



Features

- Low-profile package with integrated heat spreader
- Double-sided thermal paths for efficient cooling
- Half-bridge pair of matched MOSFETs
- Low R_{DSON} and minimal stray inductance
- Standard SMT reflow compatibility
- Package size: 3.5*7.5*1.0mm



Applications

- BLDC motor drives (e-mobility, tools, robotics)
- Drone ESCs & gimbals
- High-current buck / multiphase VRMs
- Fast chargers and compact adapters

Parameters

P/N	B_{VDSS}	R_{DSON}	I_D (T_C=100°C)	T_{vjmax}
BNR02AH40VCQ1	40V	1.5mΩ	100A	150°C

Preliminary