STANDARD 1200V 6PACK SiC MODULE

Product Specification

TT Electronics

”By combining SiC technology with advanced manufacturing techniques, we can deliver modules with significantly higher power densities and serve markets that conventional COTS solutions cannot”
Richard Smith, Chief Engineer.

SCOPE

This document defines the technical requirements for TT Electronics Standard 1200V 6Pack SiC Module

MECHANICAL OUTLINE

Overall dimensions of module 164 mm x 64mm x 16 mm

ELECTRICAL INTERFACE

- Six power terminals with embedded M6 bolts; P1, N1, U, P2, N2, V, P3, N3,
- 24 control pins; Gate sense, Source sense and NTC for each half bridge

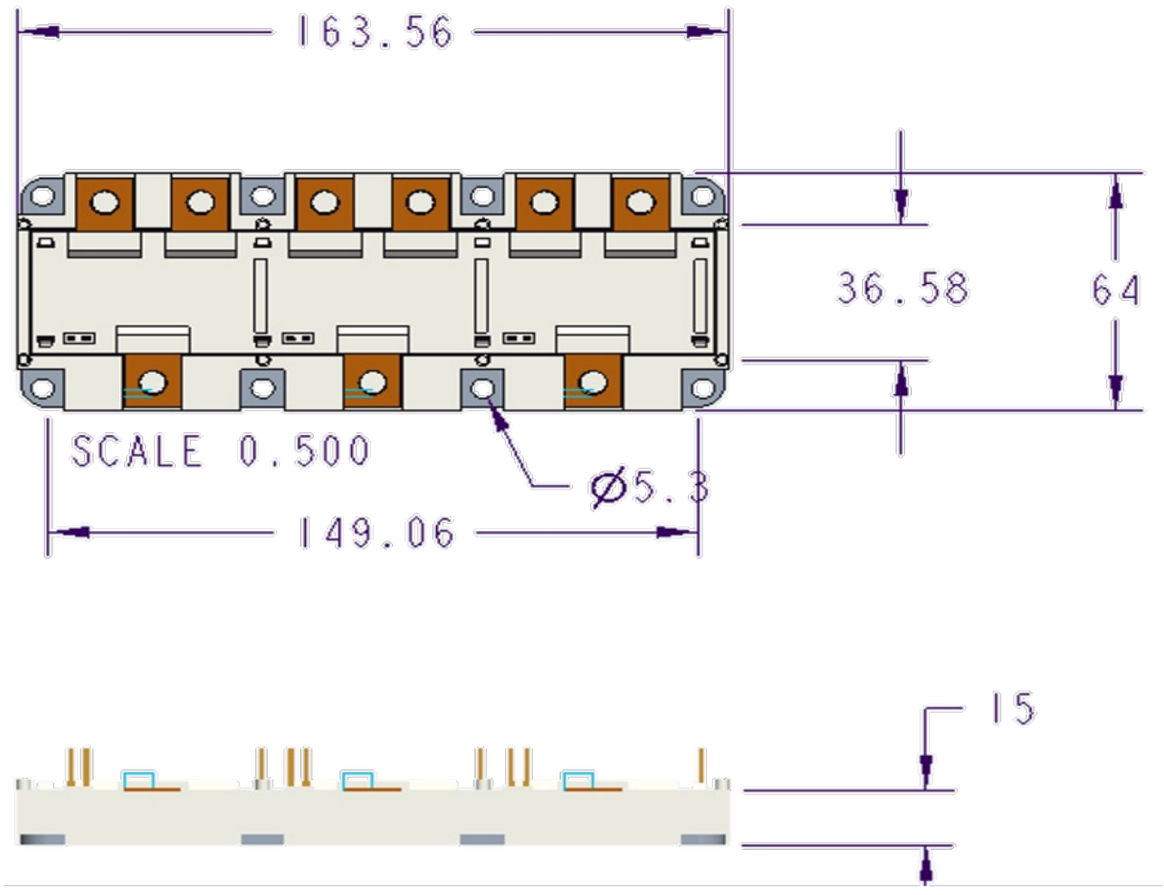
MARKING

- Welwyn part number 980001
- Manufacturers identification WEL
- Date code YYWW

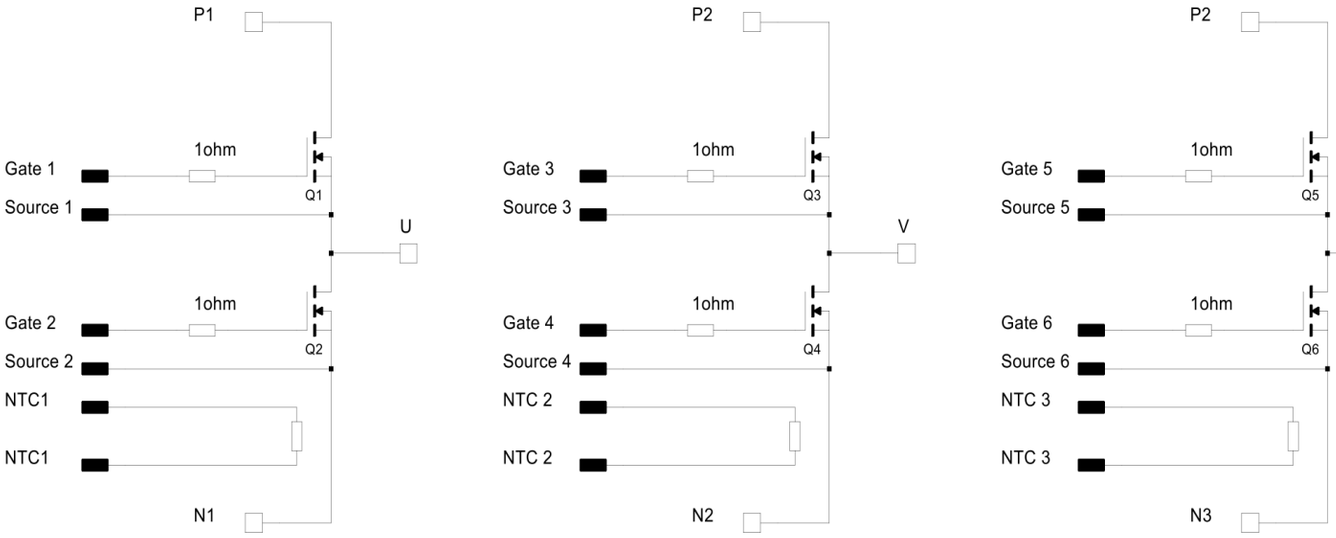
ROHS

- Lead free and compliant with EU directive 2011/65/EU and amendment 2015/863

OUR SOLUTION



CIRCUIT SCHEMATIC



KEY TECHNICAL

Key module parameters are shown in the table below. Some values can not be confirmed until design is complete or hardware has been tested.

PARAMETER	SYMBOL	MIN	TYP	MAX	CONDITIONS
Drain source voltage	Vds			1200V	
Drain source resistance	Rds(on)		4.6mΩ		
Continuous drain current	Ids			330A	Tc = 100 deg
Gate source voltage (recommended)	Vgsrec		-4/15V		
Power dissipation	Pd			1250W	Tc = 25 deg per switch
assuming Tj = 175 and					
Tj-c = 0.12 K/W					
Turn on energy	Eon				
Turn off energy	Eoff				
Junction to case thermal resistance	Rth		per switch		
Case isolation voltage	Viso				AC 50Hz 60s

ENVIRONMENTAL REQUIREMENTS

- Operational temperature range -55C to 150C
- Suitable for operation at altitude

QUALITY REQUIREMENTS

The module shall meet the visual quality requirements of the current issues of Welwyn inspection procedures OI.4100 and OI.4090.

GET IN TOUCH

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OUR POWER MODULES

With over 40 years of experience in power module design and development, TT Electronics is able to deliver the latest generation of high-performance, high-reliability power modules. Our expertise spans the full design lifecycle - from concept and design to qualification and production - enabling us to engineer solutions that meet the most demanding electrical, thermal, and environmental requirements.

We work with our customers to develop fully custom and application-specific modules in bespoke form factors. Whether the goal is to simplify system integration, minimise footprint, reduce interconnect complexity, or optimise overall system performance, our engineering team can tailor mechanical layouts, electrical architectures, and thermal interfaces to meet unique customer needs.