MITSUBISHI GCT THYRISTORS

Product Data Sheet

GCU08CB-130

Gate Commutated Thyristor Unit

REPETITIVE REVERSE VOLTAGE	OFF-STATE VOLTAGE, DRIVER ENERGIZED	LONG-TERM DC STABILITY VOLTAGE	GATE DRIVER SUPPLY
6500 V	**6500 V**	**3600 V at 100 FIT**	**19 to 21 V DC, 20 V typical**

Mitsubishi Electric GCU08CB-130 is a symmetrical gate-commutated turn-off thyristor unit for high-power inverter service. It combines a press-pack GCT device with its connected gate driver, giving the power stage an optical control interface and a dedicated low-voltage gate-driver supply.

01 TECHNICAL DATA

Repetitive reverse voltage	6500 V
Off-state voltage, driver energized	6500 V
Long-term DC stability voltage	3600 V at 100 FIT
Gate driver supply	19 to 21 V DC, 20 V typical
Gate power consumption	35 W max at 420 A rms, 780 Hz, duty 0.33
Turn-on gate delay	3 microseconds max at 25 degrees C
Turn-off gate delay	3 microseconds max at 25 degrees C
Gate signal input	Optical fibre, HFBR-2521Z receiver
Gate supply connector	MSTB25/2-G-508AU
Mounting force	11.1 to 15.8 kN, 13 kN typical

Mitsubishi Electric GCU08CB-130 specification TSH-437-A, March 2018; exact-model voltage, driver, mechanical and thermal

02 ADDITIONAL PRODUCT DATA

Junction operating temperature	-20 to +125 degrees C
Storage temperature	-40 to +60 degrees C
Ambient operation temperature	-10 to +60 degrees C; recommended <=40 degrees C
Junction-to-fin thermal resistance	0.025 K/W max
Maximum on-state voltage	5.5 V at 400 A, junction 125 degrees C

03 PRODUCT FUNCTION

The unit is rated for 6500 V repetitive reverse voltage and 6500 V off-state voltage with the driver energized. Its gate driver operates from 19 to 21 V DC, with 20 V nominal supply. The press-pack mounting force is 11.1 to 15.8 kN, while junction temperature extends from -20 to +125 degrees C; the specified thermal and gate-drive conditions must be maintained as part of the converter design.

04 SYSTEM COMPATIBILITY

The press-pack arrangement needs 11.1 to 15.8 kN clamping force, with 13 kN typical. Maintain the documented contact and cooling arrangement and the 0.025 K/W maximum junction-to-fin thermal resistance. The drawing specifies a minimum 160 mm heat-sink span for its indicated arrangement.

05 REFERENCE

Mitsubishi Electric GCU08CB-130 specification TSH-437-A, March 2018; exact-model voltage, driver, mechanical and thermal tables.

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