

1.2 Specifications

1.2.1 Introduction

The performance figures given are minimum figures, unless otherwise indicated, for equipment tuned with the maximum switching range and operating at standard room temperature (+22°C to +28°C) and standard test voltage (13.8V DC).

Where applicable, the test methods used to obtain the following performance figures are those described in the EIA and ETS specifications. However, there are several parameters for which performance according to the Chinese specification GB/T 15938 is given. Refer to Section 1.2.6 for details of test standards.

Details of test methods and the conditions which apply for Type Approval testing in all countries can be obtained from Tait Electronics Ltd.

1.2.2 General

Number Of Channels .. 128 (standard)¹

Supply Voltage:

Operating Voltage	.. 10.8 to 16V DC
Standard Test Voltage	.. 13.8V DC
Polarity	.. negative earth only
Polarity Protection	.. crowbar diode
Line Keying Supply (if required)	.. -50V DC

Supply Current:

Transmit	.. <650mA
Standby - T837-2X-1020	.. <150mA
- T837-2X-1021	.. <200mA

Operating Temperature Range .. -30°C to +60°C

Dimensions:

Height	.. 183mm
Width	.. 60mm
Length	.. 320mm

Weight .. 2.1kg

Time-Out Timer (optional) .. 0 to 5 minutes² adjustable in 10 second steps

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1. Additional channels may be factory programmed. Contact your nearest Tait Dealer or Customer Service Organisation.
 2. Adjustable from 0 to 10 minutes in PGM800Win version 2.12 and later.

Tail Timer	.. 0 to 5 seconds adjustable in 100ms ¹ steps
Transmit Key Time:	
T837-20-102X	.. <100ms
T837-26-102X	.. <30ms
Transmit Lockout Timer	.. 0 to 1 minute adjustable in 10 second steps

1.2.3 RF Section

Frequency Range	.. 148-174MHz
Modulation Type	.. DFSK
Frequency Increment:	
T837-20-102X	.. 5 or 6.25kHz
T837-26-102X	.. 2.5 or 3.125kHz
VCO Switching Range	.. 8MHz
Load Impedance	.. 50 ohms
Frequency Stability:	
T837-2X-1020	.. ±1.0ppm, -20°C to +70°C ±2.0ppm, -30°C to +70°C
T837-2X-1021	.. ±1.5ppm, -30°C to +70°C
External Reference Frequency (T837-2X-1021)	.. 100kHz to 25.6MHz in 100kHz steps
External Reference Amplitude	.. 0 to +10dBm into 50Ω
Adjacent Channel Power (4.5kHz deviation)	.. -75dBc (ETS) -70dBc (GB/T 15938)
Transmitter Side Band Noise: (no modulation, 15kHz bandwidth)	
At ±25kHz	.. -95dBc
At ±1MHz	.. -105dBc
Radiated Spurious Emissions:	
Transmit	.. -36dBm to 1GHz -30dBm to 4GHz
Standby	.. -57dBm to 1GHz -47dBm to 4GHz

1. Adjustable in 20ms steps in PGM800Win version 2.12 and later.

Power Output	.. 800mW \pm 200mW
Transmit Keying Noise	.. -70dBc (GB/T 15938)

1.2.4 Low Speed Paging Modulator

Accepted Protocols/Speeds:

T837-20-102X	.. POCSAG 512/1200 and FLEX 1600
T837-26-102X	.. POCSAG 512/1200/2400 and FLEX 1600

Input Data Levels .. TTL

Data Rise Time (10% - 90%):

T837-20-102X	.. <150 μ s (GB/T 15938)
T837-26-102X	.. <115 μ s

1.2.5 Microcontroller

Auxiliary Ports:

Open Drain Type	.. capable of sinking 2.25mA via 2k2 Ω
V _{ds} max.	.. 5V

1.2.6 Test Standards

Where applicable, this equipment is tested in accordance with the following standards.

1.2.6.1 European Telecommunication Standard

ETS 300 113 March 1996

Radio equipment and systems; land mobile service; technical characteristics and test conditions for radio equipment intended for the transmission of data (and speech) and having an antenna connector.

1.2.6.2 Telecommunications Industry Association

ANSI/TIA/EIA-603-1992

Land mobile FM or PM communications equipment measurement and performance standards.

1.2.6.3 Chinese Radio Regulatory Commission**GB/T 15938 - 1995**

General specification for equipment of radio paging systems.