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**2.5 kW TV
TRANSMITTERS
AND
TRANSPOSERS**



PRINCIPALI CARATTERISTICHE:

- > Costruzione modulare.
- > Raffreddamento forzato.
- > Controlli A.G.C. e A.L.C.
- > Precorrezione di linearità a 3 pendenze.
- > Eccellente figura di rumore.
- > Tecnologia LDMOS nelle versioni UHF.
- > Digital ready.
- > Cambio del canale dal pannello frontale (opzionale).
- > Predisposto per OFFSET di precisione.
- > Display digitale multifunzione.
- > Circuito di "soft-start".
- > Basso consumo.
- > Circuito di "economy" in assenza di segnale d'ingresso.
- > Filtro vestigiale di tipo S.A.W.
- > Power limiter incorporato.
- > Rigenerazione dei sincronismi (SCT).
- > Limitatore automatico del livello del bianco e dei sincronismi (SCT).
- > Modulatore multi-standard (SCT).
- > Disponibile in versione stereo/dual sound.

MAIN FEATURES:

- > Modular construction.
- > Forced air cooling.
- > AGC and ALC controls.
- > 3-slope linearity pre-correction.
- > Excellent noise figure.
- > LDMOS technology in UHF versions.
- > Digital ready.
- > Channel change from front panel (optional).
- > Pre-set for precision OFFSET.
- > Multifunction digital display.
- > Soft-start circuit.
- > Low power consumption.
- > Economy circuit in case of input signal lack.
- > SAW vestigial filter.
- > Incorporated power limiter.
- > Sync restore (SCT).
- > Automatic white level and sync limiter (SCT).
- > Multistandard modulator (SCT).
- > Available in stereo/dual sound versions.

CARACTERÍSTICAS PRINCIPALES:

- > Construcción modular.
- > Ventilación forzada.
- > Controles A.G.C. y A.L.C.
- > Precorrección de linealidad de 3 pendientes.
- > Excelente figura de ruido.
- > Tecnología LDMOS en versiones UHF.
- > Digital ready.
- > Cambio de canal desde el panel frontal (opcional).
- > Configurado para OFFSET de precisión.
- > Display digital multifunciones.
- > Circuito de "soft-start".
- > Bajo Consumo.
- > Circuito de "economy" en ausencia de señal de entrada.
- > Filtro vestigial de tipo S.A.W.
- > Limitador de potencia integrado.
- > Regeneración de sincronismos (SCT).
- > Limitador automático del nivel del blanco y de los sincronismos (SCT).
- > Modulador multi-estándar (SCT).
- > Disponible en versión estéreo/audio dual.



SCT 202UB 2.5 kW UHF TRANSMITTER

La continua ricerca tecnologica svolta dai laboratori di Screen Service ha permesso la realizzazione di questa nuova serie di trasmettitori e ripetitori televisivi con potenza d'uscita nella gamma dei 2.5 kW p.s. Questi apparati sono disponibili in tutte le bande di frequenza VHF e UHF in versioni ultra-compatte o con amplificatori ridondanti, con singolo e doppio eccitatore, in modo da soddisfare ogni esigenza. L'altissima linearità degli stadi finali garantisce prestazioni ottimali, un basso de-rating di potenza quando gli amplificatori sono utilizzati con segnali digitali, ed un basso consumo energetico. Ognuna delle unità parte del sistema è provvista di alimentatori e di circuiti di protezione e controllo indipendenti così da assicurare il più alto livello di affidabilità e di continuità del servizio oltre ad una semplice e veloce manutenzione. Un pannello di controllo generale raccoglie i dati da tutti i componenti del sistema e provvede a fornire i parametri di funzionamento ad un pratico display nonché ad instradare gli stessi alle interfacce per la monitoraggio remota, disponibili per diversi protocolli di comunicazione.

Screen Service's continuous ongoing technical research has made possible the realization of this new series of television transmitters and transposers in 2.5 kW output power versions. These units are available in VHF and UHF frequency bands and in ultra-compact versions or with redundant amplifiers, with single and double exciters in order to satisfy every need. The excellent linearity of the stages guarantees optimal performance, low power de-rating when amplifiers are used with digital signals and low power consumption. Each individual unit within the system is equipped with power supply and protection circuits as well as independent controls to ensure the highest levels of reliability and durability in the system. A main control panel collects data from all system components and furnishes operating parameters through a practical display, sending them to interfaces for remote monitoring, available for different communication protocols.

MODEL-SPECIFIC DATA

Model	Output band	Dimensions	Number of amplifiers	Nominal analog output power (p.s.)	Digital output power (rms) without filter (Shoulders -36 dB @ $F_0 \pm 4.3$ MHz)	
					DVB-T	ATSC
SCT, SCR *						
252FB	VHF I	1 x 30 RU	2	2.5 kW	640 W	1000 W
252TB	VHF III	1 x 30 RU	2	2.5 kW	640 W	1000 W
202UB	UHF	1 x 15 RU	1	2.5 kW	625 W	1000 W
202UM	UHF	1 x 30 RU	2	2.5 kW	625 W	1000 W

* SCT Series = analog transmitters
SCR Series = transposers

Specifications and characteristics are subject to change without notice.



SCT 202UB REAR VIEW



SCT 202UM REAR VIEW



SCT 202UM 2.5 kW UHF TRANSMITTER



La continua investigación tecnológica efectuada por los laboratorios de Screen Service ha permitido realizar esta nueva serie de transmisores y repetidores de televisión con potencia de salida en la gama de 2.5 kW p.s.

Estos aparatos están disponibles en todas las bandas de frecuencia VHF y UHF en versiones ultra-compactas o con amplificadores redundantes, con excitador individual o doble, para satisfacer toda exigencia.

La altísima linealidad de las etapas finales garantiza óptimas prestaciones, un bajo de-rating de potencia cuando los amplificadores se utilizan con señales digitales y un bajo consumo energético.

Cada una de las unidades del sistema está provista de alimentadores y circuitos de protección y control independientes para asegurar el más alto nivel de fiabilidad y continuidad del servicio así como un mantenimiento sencillo y rápido.

Un panel de control general recoge los datos de todos los componentes del sistema y procede a suministrar los parámetros de funcionamiento a un práctico display así como a enviarlos a las interfaces para la monitorización remota, quedando disponibles para varios protocolos de comunicación.

2.5 kW TV TRANSMITTERS AND TRANSPOSERS

ANALOG

TECHNICAL CHARACTERISTICS

TRANSMITTER VERSION

VIDEO PARAMETERS

Number of inputs	2 (mono version), 1 (stereo version)
Input impedance	75 Ω
Input level	1 V p.p. ± 3 dB
White / Sync level limiter	95%
2T K factor	< 1.5%
Amplitude / frequency response	± 0.5 dB (throughout the vision band)
Differential gain	< 5%
Differential phase	< 3°
Tilt (50 Hz)	< 2%
Tilt (15 kHz)	< 2%
Group delay	± 35 ns (throughout the vision band)
Vestigial side-band filter	SAW for all standards
Sync pulse compression	< 3%
S/N ratio (weighted)	> 60 dB
ICPM	< 3°
Luminance non linearity	< 4%
Field time bar tilt	< 2%
Line time bar tilt	< 2%

AUDIO PARAMETERS

Number of inputs	2
Input impedance (balanced)	600 Ω or > 5 k Ω , selectable
Input level	0 dBm ± 6 dB
Carrier level	-10 dB (adjustable)
Modulation capability	± 120 kHz
Frequency response (30 Hz to 15 kHz)	± 0.4 dB
T.H.D. (30 Hz to 15 kHz)	< 0.4%
Pre-emphasis	50 μ s or 75 μ s or flat
S/N ratio (un-weighted)	> 60 dB
Sound transmission	Dual sound coding to IRT or FM single sound and NICAM 728 (-13, -20 dB) or FM single sound
Stereo / Dual sound option	Available
Stereo separation (equivalent)	Better than -55 dB (typ.)

TRANSPOSER VERSION

Input frequency bands	VHF I, VHF III, UHF (agile)
Input impedance	50 Ω
Input matching	> 26 dB
Input level amplitude	-30 to -75 dBm
A.G.C. + A.L.C. dynamic	> 45 dB
Noise figure	< 5 dB (typ.)

GENERAL

Available standards	B, D, G, H, I, K, M, N
Colour system	PAL, NTSC, SECAM
Output connector	7/8" EIA
Output impedance	50 Ω
Working class	AB
Protections	Overpower Adjustable exciter power limiter VSWR Overvoltage Overcurrent Overtemperature RF fold-back on HI-VSWR (optional)
Frequency stability	1 ppm (optional 1×10^{-10} /day, 3×10^{-8} /year)
External reference frequency input	5 MHz or 10 MHz
Offset steps (optional)	1 Hz (CCIR), 0.999000999 Hz (FCC)
I.M.D. at rated output power	better than -57 dBc (-60 dBc typical)
Harmonics (with output filter)	-60 dB or better
Spurious emissions (with output filter)	-60 dB or better
External control and monitoring interfaces	logic and analog signal outputs, enable input, RS 485 TCP/IP (optional) SNMP (optional)
Cooling	Forced air
Operating temperature	-10°C to +45°C
Maximum relative humidity	90%, non condensing
Maximum operating altitude	2500 m a.s.l. (> 2500 m on request)
Mains power supply	90-135 V AC or 185-264 V AC or 220 / 400 V AC $\pm 15\%$ 3-phase (according to the model or request)



Screen Service

SCREEN SERVICE

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