

DE241CG Character Generator Decoder

Standard Definition NTSC EIA-608B Character Generator/Decoder used to create open captions in a video signal.

The DE241CG provides two Character Generator modes. In CC Mode, data received at its RS 232C port in standard caption data format is decoded and displayed on the monitor screen without the need of encoding the data into Line 21 of the video. The TITLING Mode provides additional capability in generating captions or subtitles without the use of the Closed Caption format. This mode uses an EEG defined data input format called Script. When not in CG mode the DE241CG is a multi-standard, broadcast quality Closed Caption Display Decoder capable of processing closed caption data in Line 21 of an NTSC signal or Line 22 of a PAL signal. It decodes the CAPTION, TEXT, or XDS information transmitted and generates the appropriate display. The DE241CG conforms to the FCC display requirements of the Television Decoder Circuits Act of 1990 and includes the extended characters and attributes defined in the Recommended Practice For Line 21 Data Service, EIA/ANSI 608.

INPUT VIDEO CHARACTERISTICS

Video Input Level	1.0 Vp-p nominal
Video Input Variation	0.7 to 1.4 Vp-p
Input Impedance	75 Ohms
Input Return Loss	>35dB to 5MHz with external load having a 40dB return loss
Input Signal-To-Random	Functions to 25dB ratio (CCIR NOISE RATIO weighted) with typically one error per row at that level

OUTPUT VIDEO CHARACTERISTICS

Video Outputs	2 provided
Video Output Level	1.0 Vp-p nominal
Video Output Variation	0.7 to 1.4 Vp-p
Insertion Gain	Unity \pm 0.5%
Output Impedance	75 Ohms nominal
Output Return Loss	30dB to 5MHz
Output DC Level	0V \pm 50mV at back porch
Clamp Type	Keyed back porch
Frequency Response	\pm 0.1 dB, 50KHz to 5 MHz +0.1 dB, -0.5 dB 5 MHz to 8 MHz
Line Tilt	Less than 1%
Field Tilt	Less than 1%
Signal-To-Random Noise Ratio	65 dB or greater CCIR weighting
Spurious Signals	-60 dB down up to 5 MHz, - 40 dB down above 5 MHz
Character Video	90 Units (adjustable)
Character Background Level	10 Units (adjustable)

FRONT PANEL CONTROLS AND DISPLAYS

Power (On-Off)	Push-button power switch with reset. White bar indicates status.
Display On	Push-button switch enables decoder display. Lights indicator LED
Display Select	Push-button switch selects CAPTIONS, TEXT or XDS. Lights LED.
LED Activity	Push-button switch changes LED display mode.

REAR PANEL CONNECTORS

Video Input	BNC connector for 75 Ohm video signal at 1 Vp-p nominal level.
Monitor Video Outputs 1,2	BNC connectors, unity gain video output (75 Ohm source impedance) with TEXT or CAPTIONS.
R,G,B	BNC connectors providing the color video signals at 0.7V level.
Box	BNC connector providing the key pulse signal at 3.0 V level.
Data	DB9 female connector for data input.
120 V 60 Hz Line Cord	Standard captive 3-wire line cord. 5 feet long.

PHYSICAL CHARACTERISTICS

Height	1.75 inches (4.45 cm)
Width	19 inches (48.3 cm)
Depth	51/4 inches (13.3 cm)
Mounting	Designed for rack mounting.
Weight	3 lbs. (1.36 kg)
Operating Ambient	0 C to +50 C

POWER REQUIREMENTS

Line Frequency	47-440 Hz
Line Voltage	117 VAC +/- 10%
Line Current	0.07 A maximum
Input Power	10 W maximum
Circuit Breaker	0.1 A trip current. In Power On/Off switch.