

D-E440/E441/E441SR/E443/E445/ E446CK/E449CK

SERVICE MANUAL

Ver 1.0 1999.02



Photo : D-E441

US Model

D-E441/E445/E446CK/E449CK

Canadian Model

D-E441/E445/E446CK

AEP Model

D-E440/E441/E441SR/E443/E445/E446CK

UK Model

D-E441/E441SR/E443/E445/E446CK

E Model

D-E441/E443/E445/E446CK

Australian Model

D-E441/E445/E446CK

Chinese Model

D-E441/E445

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM-2811EAA
Optical Pick-up Type	DAX-11E

SPECIFICATIONS

CD player

System

Compact disc digital audio system

Laser diode properties

Material: GaAlAs

Wavelength : $\lambda = 780 \text{ nm}$

Emission duration: Continuous

Laser output : Less than $44.6 \mu\text{W}$ (This output is the value measured at a distance of 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)

Error correction

Sony Super Strategy Cross Interleave Reed Solomon Code

D-A conversion

1-bit quartz time-axis control

Frequency response

20 - 20,000 Hz $+1$ dB -2 dB (measured by EIAJ CP-307)

Output (at 4.5 V input level)

Headphones (stereo minijack)

15 mW + 15 mW at 16 ohms

Line output (stereo minijack)

Output level 0.7 V rms at 47 kilohms

Recommended load impedance over 10 kilohms

General

Power requirements

For the area code of the model you purchased, check the upper left side of the bar code on the package.

- Sony BP-DM10 Rechargeable battery: 2.4 V DC, Ni-Cd, 650 mAh
- Sony BP-DM20 Rechargeable battery: 2.4 V DC, Ni-MH, 1,200 mAh
- Two LR6 (size AA) batteries: 3 V DC
- AC power adaptor (DC IN 4.5 V jack):
 - US, Canadian, Central and South America model: 120 V, 60 Hz
 - AEP, German, French, EE, E13 model: 220 - 230 V, 50/60 Hz
 - UK model: 230 - 240 V, 50 Hz
 - EA model: 110 - 240 V, 50/60 Hz
 - AUS model: 240 V, 50 Hz
 - E33 model: 100 - 240 V, 50/60 Hz
 - Hong Kong model: 220 V, 50/60 Hz
 - Chinese, Argentine model: 220 V, 50 Hz
- Sony CPM-300P mount plate for use on car battery : 4.5V DC

Dimensions (w/h/d) (without projecting parts and controls)

Approx. 129 x 28 x 146 mm
(5¹/₈ x 1¹/₈ x 5³/₄ in.)

Mass (without rechargeable battery)

Approx. 220 g (7.8 oz)

Operating temperature

5°C - 35°C (41°F - 95°F)

Supplied accessories

For the area code of the model you purchased, check the upper left side of the bar code on the package.

D-E440

Earphones (1)

D-E441

AC power adaptor (1)

Headphones (1)*1

Earphones (1)*2

AC plug adaptor (1)*3

*1 Supplied with US model

*2 Not supplied with US model

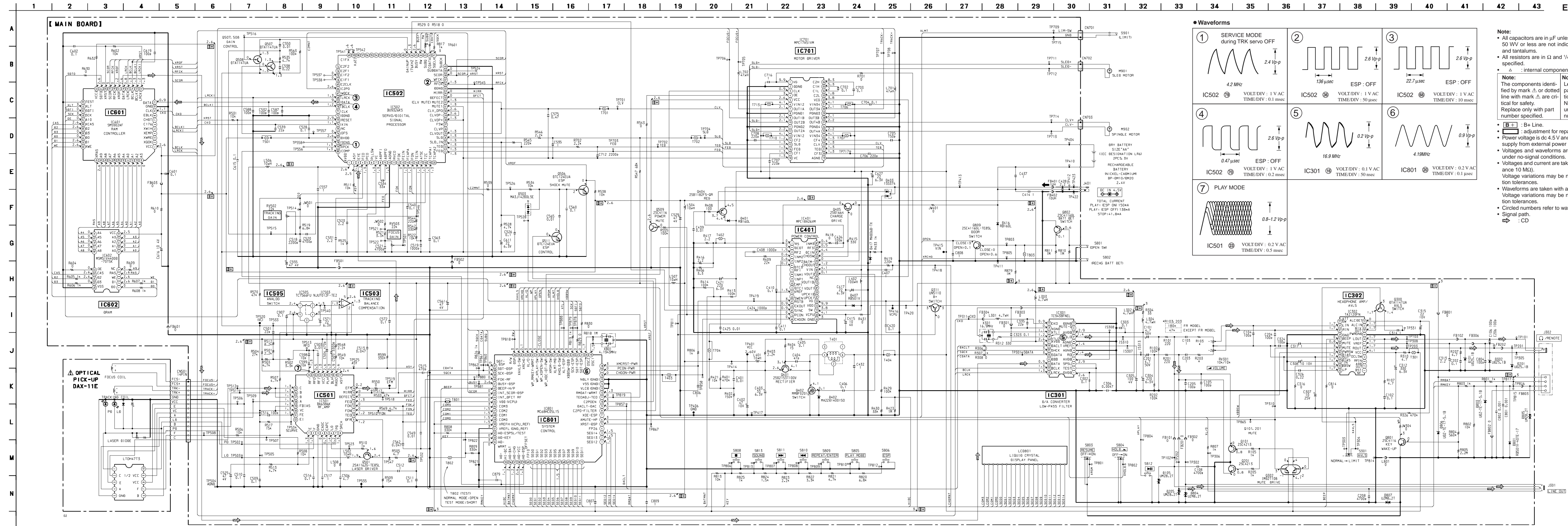
*3 Supplied with E33, E13 and EA models

– Continued on page 2 –

COMPACT DISC COMPACT PLAYER



SONY®



Note:

- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- Δ : internal component.

Note:

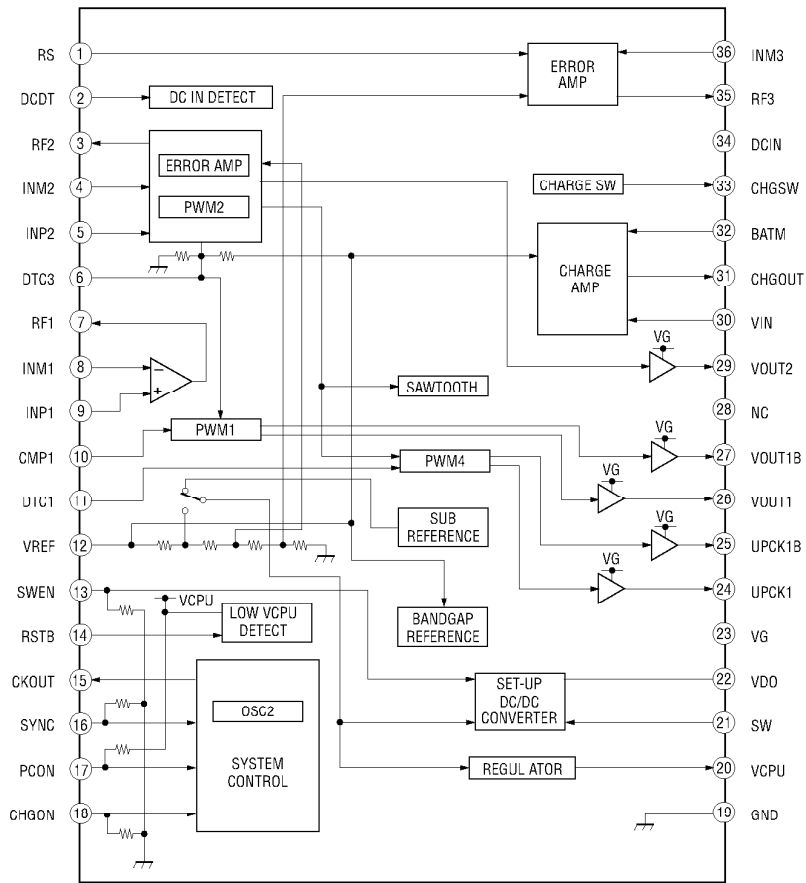
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

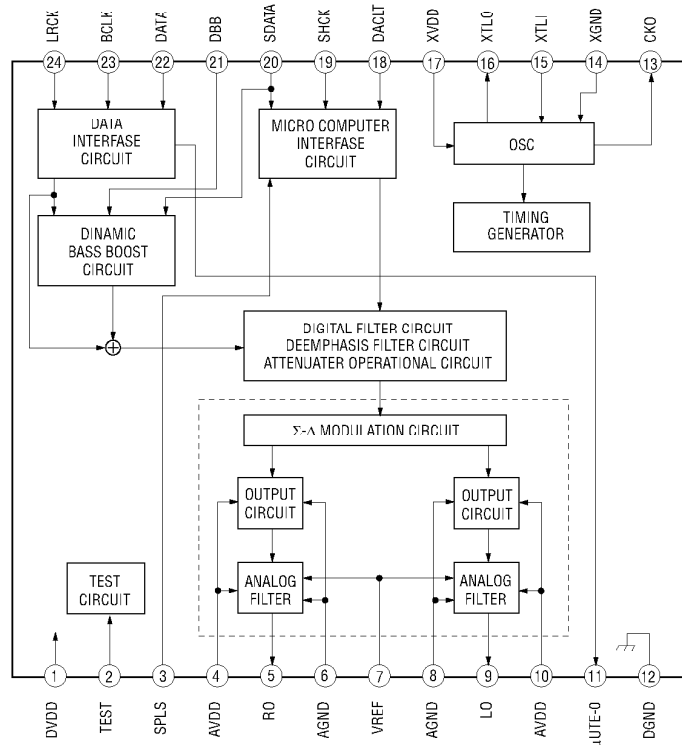
- ⊞ : B+ Line.
- ⊞ : adjustment for repair.
- Power voltage is dc 4.5 V and fed with regulated dc power supply from external power voltage jack. (J401)
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages and current are taken with a VOM (Input impedance 10 MΩ).
- Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- ⊞ : CD

● IC Block Diagrams

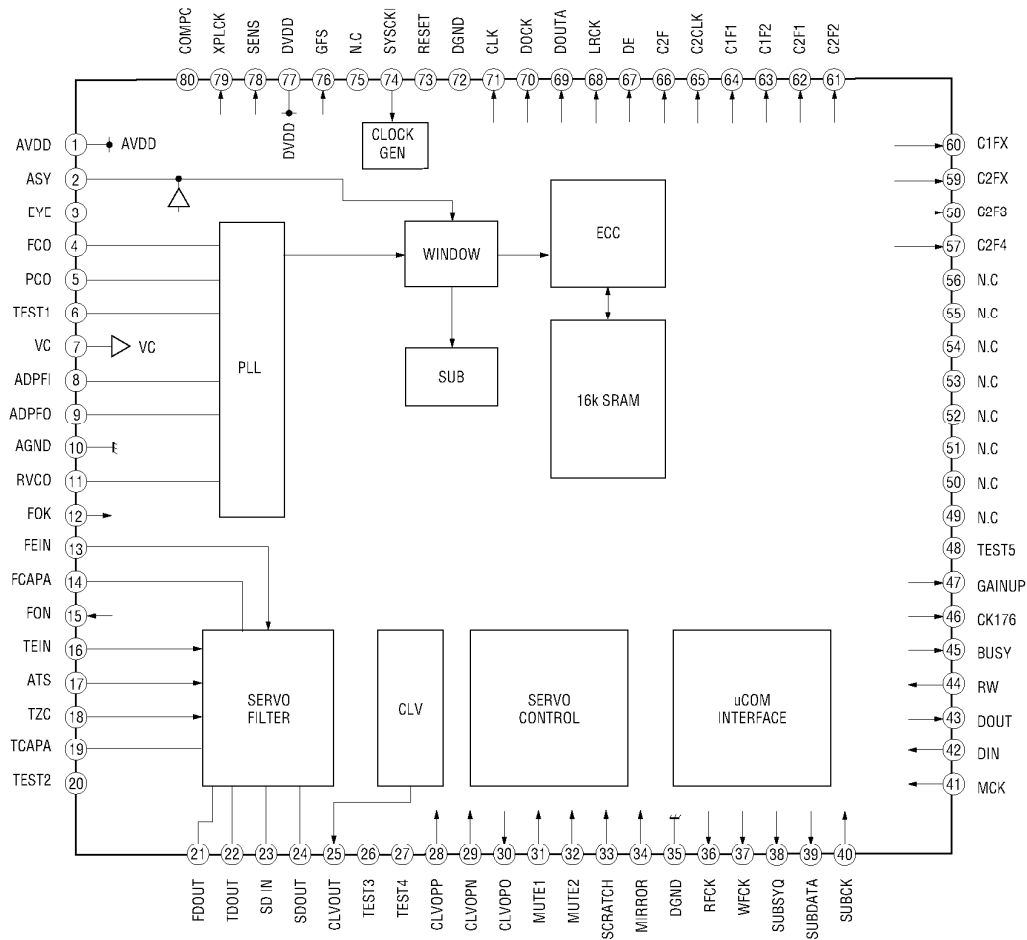
IC401 MPC18A26VMEL



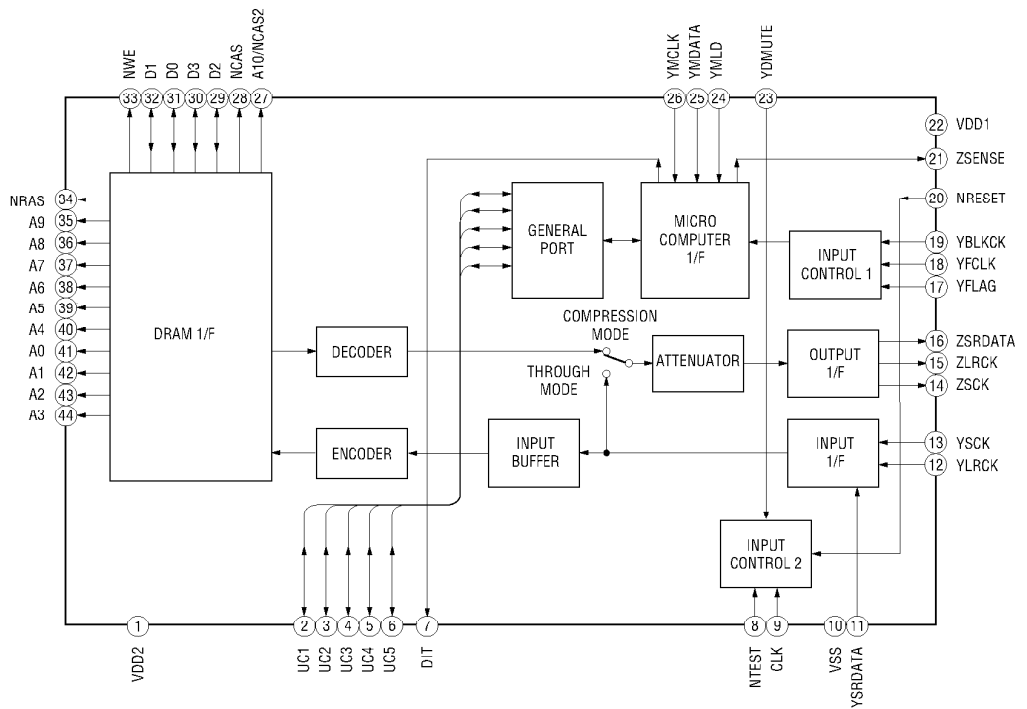
IC301 TC9438FNEL



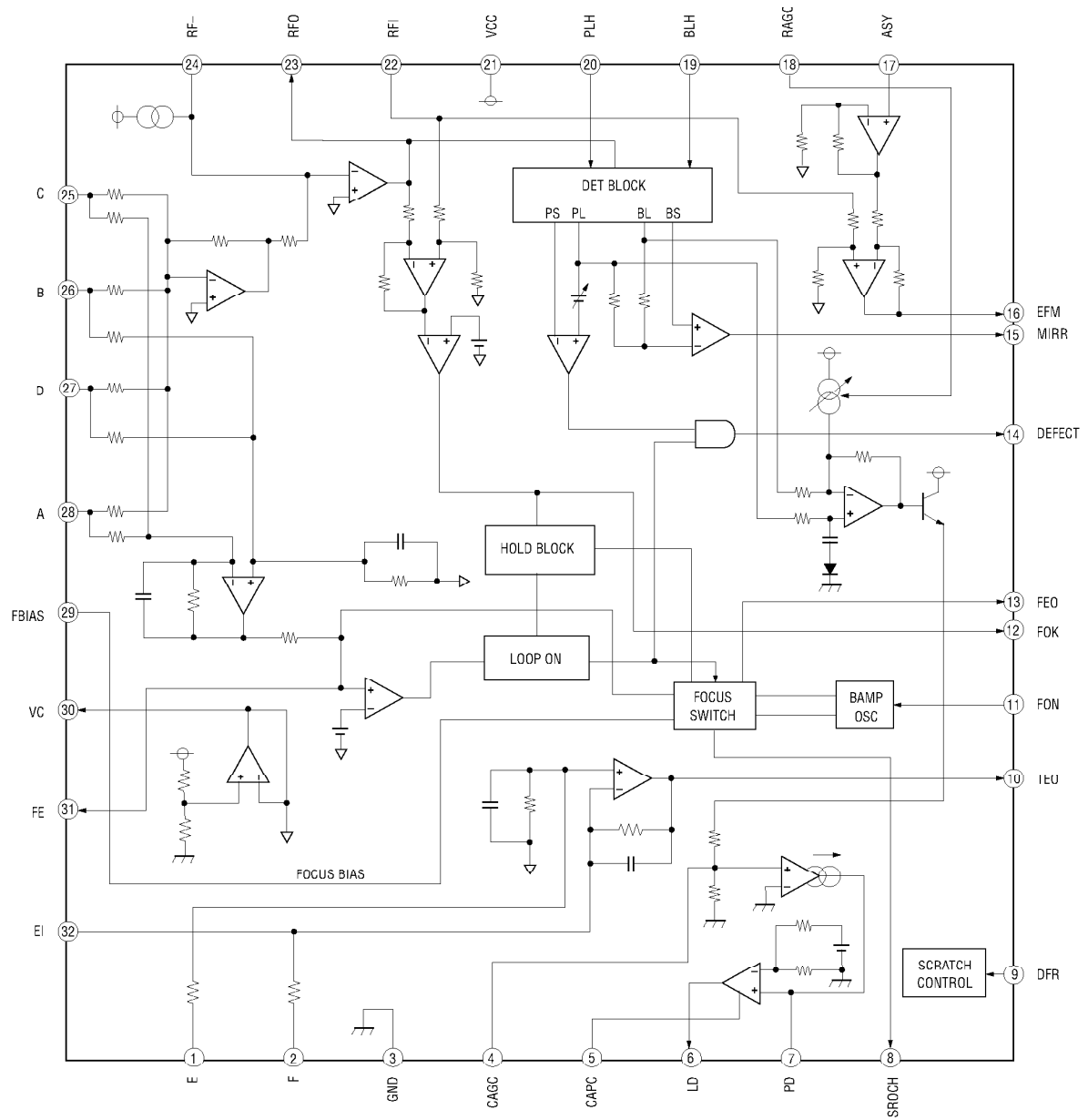
IC502 BU9326KS



IC601 SM5902BF



IC501 BA6386K



IC701 MPC17A51VMEL

