

## CS134-15D07-55-1

Former P/N: 5412PX

Rev. 7-2026  
RoHS3 & REACH  
Coaxial Speakers



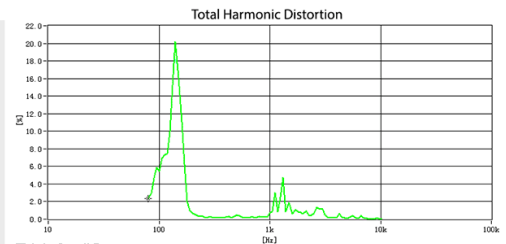
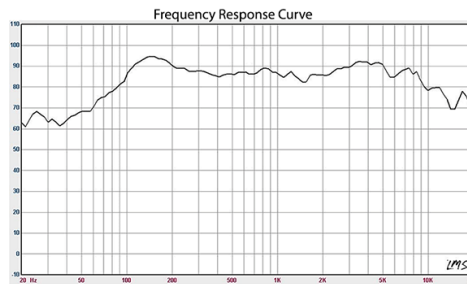
### Operating Characteristics

#### ELECTRICAL

Rated Power	15.0 W
Short Term Max Power	30.0 W
Impedance	4 Ω ± 15 % 1000 Hz; 0.25 W

#### ACOUSTIC: Baffle Board

$f_0$	150 Hz ± 20 % 0.25 W
Freq. Range	120 to 13000 Hz
Rated SPL	88 ± 3 dB 400, 600, 800, 1000, 1500 Hz; AVG; 1 W; 100 cm
Distortion	< 5 % 1000 Hz; 0.125 W



Thiele Small Parameters:  
 $R_{vc} = 3.600 \text{ Ohm}$     $F_0 = 168.857 \text{ Hz}$     $S_d = 100.290 \text{ cm}^2$     $K_{rm} = 8.458 \text{ m Ohm}$   
 $E_{rm} = 0.590$     $K_{sm} = 6.233 \text{ m H}$     $E_{xm} = 0.613$     $V_{as} = 1.984 \text{ ltr}$   
 $C_{ms} = 138.9 \mu\text{M/N}$     $M_{md} = 5.552 \text{ g}$     $M_{ms} = 6.129 \text{ g}$     $BL = 3.638 \text{ T-M}$   
 $Q_{ms} = 5.168$     $Q_{es} = 1.807$     $Q_{ts} = 1.339$     $N_0 = 0.534\%$   
 $SPL_0 = 89.296 \text{ dB}$

### Physical Characteristics

#### MATERIALS

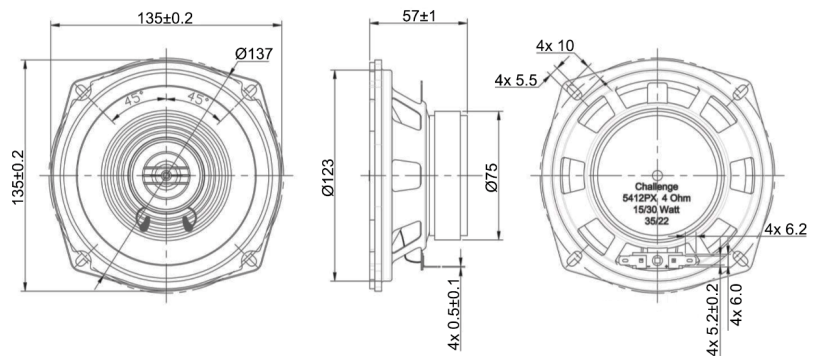
Housing	Steel
Cone	Paper with foam edge
Magnet	NdFeB
Solder Tab	Tin Plated Iron

Coaxial Mounting: Tweeter + Speaker

#### TEMPERATURE RANGES

Operating	-25 to +65 °C
Storage	-30 to +70 °C

Weight 623 g



General tolerance = ±0.3 mm and all measurements in mm unless otherwise noted.

Revision	Description	By	Date
6-2024	Updated frequency range.	SK	2024-02-22
7-2026	Updated to include TS Parameters and XMAX value.	KG	2026-04-17

Warranty: For a period of one (1) year from date of shipping under normal operations conditions. This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair.

The information contained herein is believed to be correct, but no guarantee or warranty, express or implied, with respect to accuracy, completeness or results is extended and no liability is assumed. Challenge Electronics reserves the right to make changes in any specification, data or material contained herein.

# CS134-15D07-55-1

Former P/N: 5412PX

 Rev. 7-2026  
 RoHS3 & REACH  
 Coaxial Speakers


## Thiele Small Parameters

Electrical Parameters	Value	Unit	Description
$R_e$	3.87	Ohm	electrical voice coil resistance at DC
$L_e$	0.139	mH	frequency independent part of voice coil inductance
$L_2$	0.183	mH	para-inductance of voice coil
$R_2$	1.4	Ohm	electrical resistance due to eddy current losses
$C_{mes}$	408.25	$\mu$ F	electrical capacitance representing moving mass
$L_{ces}$	2.36	mH	electrical inductance representing driver compliance
$R_{es}$	20.33	Ohm	resistance due to mechanical losses
$f_s$	162.2	Hz	driver resonance frequency
Mechanical Parameters	Value	Unit	Description
$M_{ms}$	7.484	g	mechanical mass of driver diaphragm assembly including air load and voice coil
$M_{md} (S_d)$	6.349	g	mechanical mass of voice coil and diaphragm without air load
$R_{ms}$	0.902	kg/s	mechanical resistance of total-driver losses
$C_{ms}$	0.129	mm/N	mechanical compliance of driver suspension
$K_{ms}$	7.77	N/mm	mechanical stiffness of driver suspension
$Bl$	4.282	N/A	force factor (Bl product)
$\lambda_{ds}$	0.07	N/A	suspension creep factor
Loss Factors	Value	Unit	Description
$Q_{tp}$	1.36	N/A	total Q-factor considering all losses
$Q_{ms}$	8.456	N/A	mechanical Q-factor of driver in free air considering $R_{ms}$ only
$Q_{es}$	1.61	N/A	electrical Q-factor of driver in free air considering $R_e$ only
$Q_{ts}$	1.353	N/A	total Q-factor considering $R_e$ and $R_{ms}$ only
Other Parameters	Value	Unit	Description
$V_{as}$	1.8316	l	equivalent air volume of suspension
$\eta_0$	0.466	%	reference efficiency (2 pi-radiation using $R_e$ )
$L_m$	88.89	dB	characteristic sound pressure level (SPL at 1m for 1W @ $R_e$ )
$L_{nom}$	89.03	dB	nominal sensitivity (SPL at 1m for 1W @ $Z_n$ )
$rmse Z$	2.13	%	root-mean-square fitting error of driver impedance $Z(f)$
$rmse H_x$	2.42	%	root-mean-square fitting error of transfer function $H_x(f)$
<i>Series resistor</i>	0	Ohm	resistance of series resistor
$S_d$	100.29	cm <sup>2</sup>	diaphragm area
$X_{MAX}$	1.5	mm	maximum one-way linear excursion of a speaker cone before distortion increases

Revision	Description	By	Date
6-2024	Updated frequency range.	SK	2024-02-22
7-2026	Updated to include TS Parameters and XMAX value.	KG	2026-04-17

Warranty: For a period of one (1) year from date of shipping under normal operations conditions. This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair.

The information contained herein is believed to be correct, but no guarantee or warranty, express or implied, with respect to accuracy, completeness or results is extended and no liability is assumed. Challenge Electronics reserves the right to make changes in any specification, data or material contained herein.