

Ceramic Discriminators for Communications Equipment



kHz Type Ceramic Discriminators

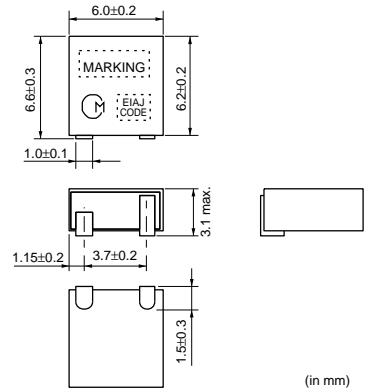
Ceramic discriminator consists of wide band piezoelectric resonator.
 It is ideal for mobile communications equipment due to its small size and light weight.
 Standard line include products for wide range of applications, from cordless telecom to cellular telephone. Practically adjustment free at the detection circuit, small size is suitable for downsizing.

■ Features

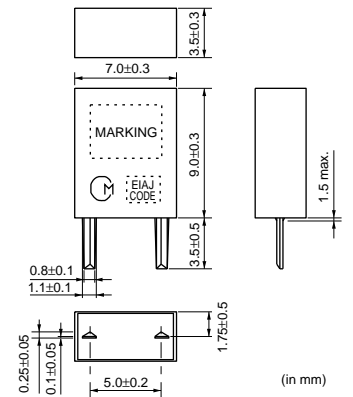
1. Small in size and light weight
2. Adjustment free at detection circuit
3. High sensitivity and stability
4. Wide range of standard products are available for various ICs.
5. Operating temperature range: -20 to +80 (degrees C)
 Storage temperature range: -40 to +85 (degrees C)



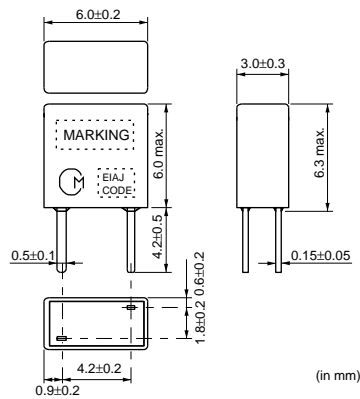
CDBKB Series



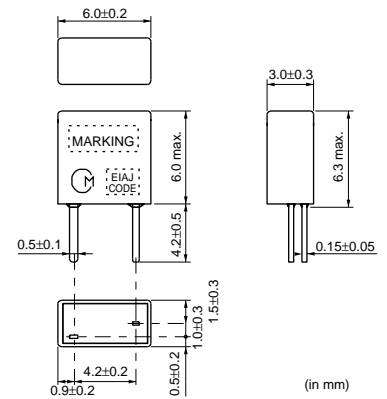
CDBLA Series



CDBLB_CAX Series



CDBLB_CAY Series

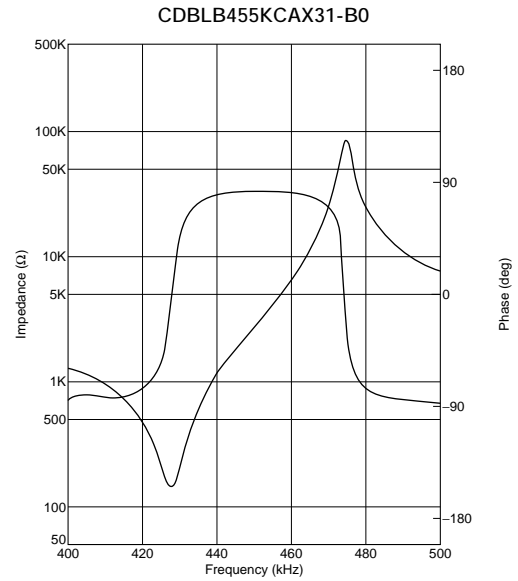
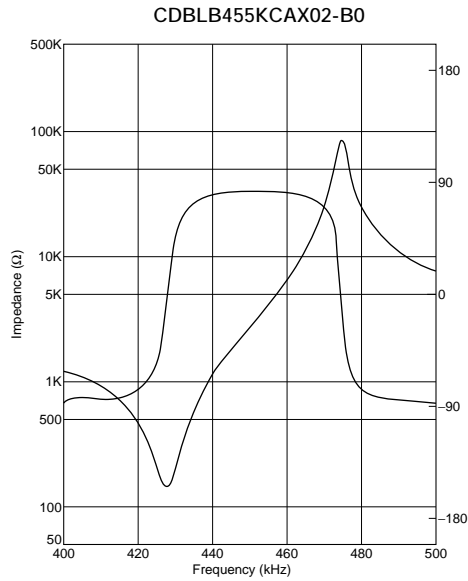


Specified by Impedance Characteristics (Type 1)

Part Number	Nominal Center Frequency (fn) (kHz)	Inclination of Impedance Curve (1)	Inclination of Impedance Curve (2)	Capacitance (C)	IC	IC Maker	Type
CDBLB455KCAX02-B0	455	447.0±1.5kHz (at Z =2.05kohm)	463.0±1.5kHz (at Z =10.0kohm)	140pF±20%	TA8104F	TOSHIBA	Lead
CDBLB455KCAX31-B0	455	447.0±1.5kHz (at Z =2.05kohm)	463.0±1.5kHz (at Z =10.0kohm)	140pF±20%	TA31141	TOSHIBA	Lead

For safety purposes, avoid applying a direct current between the terminals.
 The order quantity should be an integral multiple of the "Minimum Quantity" shown in package page in this catalog.

■ Impedance Curve

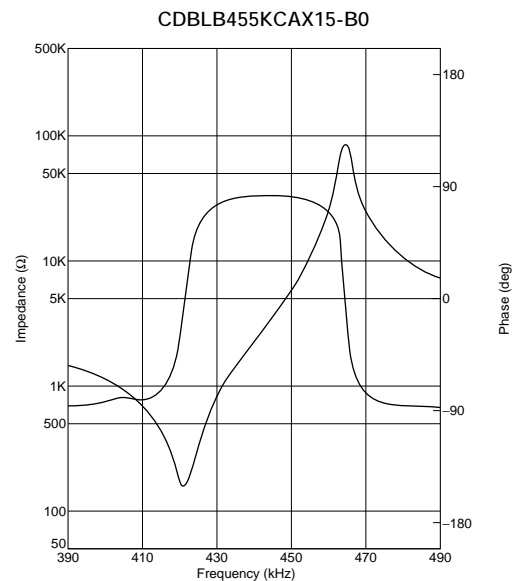
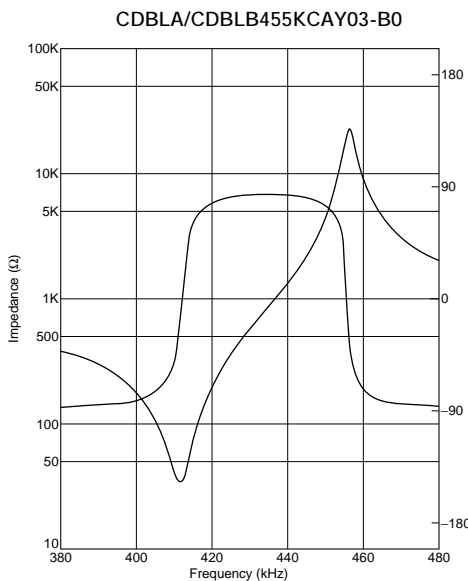


Specified by Impedance Characteristics (Type 2)

Part Number	Nominal Center Frequency (fn)	Anti-resonant Frequency (Fa)	Delta F (Fa-Fr)	Resonant Resistance (R)	Capacitance (C)	IC	IC Maker	Type
CDBKB455KCAX33-R0	-	462.0±1.5kHz	40±4.0kHz	200ohm max.	150pF±20%	CXA1474	SONY	SMD
CDBLA455KCAY03-B0	-	455.0±1.5kHz	48±5.0kHz	70ohm max.	600pF±20%	CXA1184M	SONY	Lead
CDBLB455KCAY03-B0	-	455.0±1.5kHz	46±5.0kHz	70ohm max.	550pF±20%	CXA1184M	SONY	Lead
CDBLB455KCAX15-B0	-	463.5±1.0kHz	43±2.0kHz	300ohm max.	140pF±20%	CXA1183M	SONY	Lead
CDBLB455KCAX25-B0	-	465.0±1.5kHz	45±4.0kHz	300ohm max.	135pF±20%	CXA1484	SONY	Lead
CDBLB455KCAX33-B0	-	465.0±1.5kHz	45±4.0kHz	300ohm max.	135pF±20%	CXA1474	SONY	Lead

For safety purposes, avoid applying a direct current between the terminals.
 The order quantity should be an integral multiple of the "Minimum Quantity" shown in package page in this catalog.

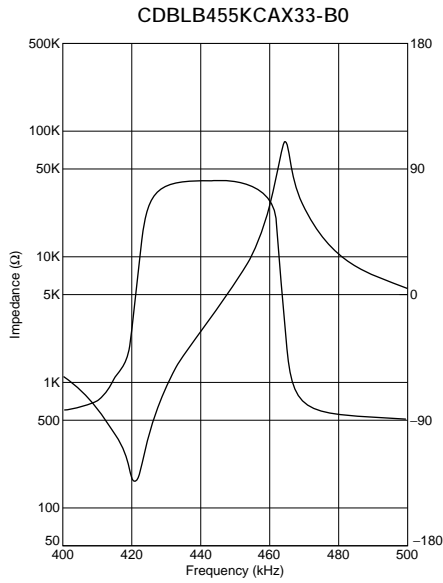
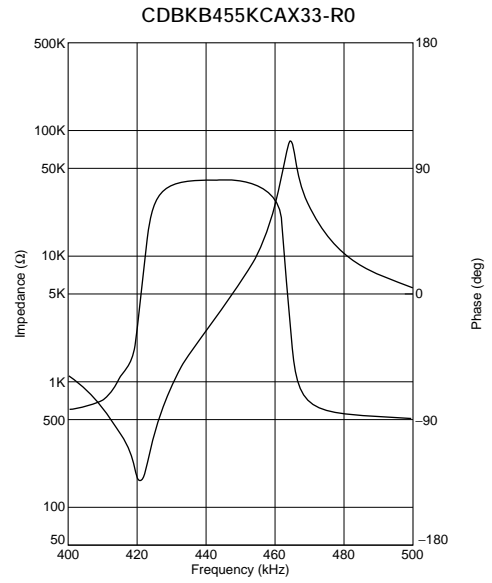
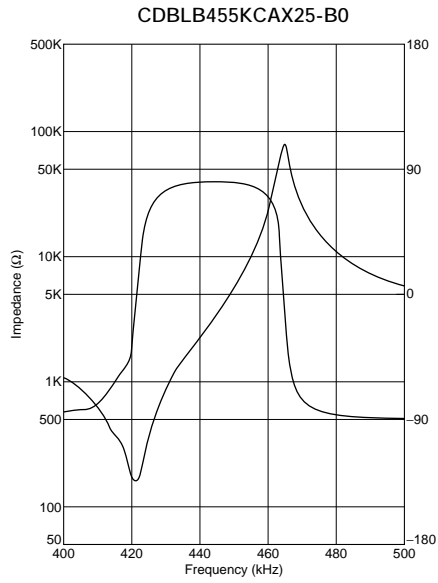
■ Impedance Curve



Continued on the following page.

Continued from the preceding page.

■ Impedance Curve



Specified by Recovered Audio Characteristics

Part Number	Nominal Center Frequency (fn) (kHz)	Recovered Audio 3dB BW (kHz)	Recovered Audio Output (mV)	Distortion (at fn) (%)	Distortion (%)	IC	IC Maker	Type
CDBKB450KCAY79-R0	450	fn±3.0 min.	145 ±40	-	-	TB32302FG	TOSHIBA	SMD
CDBKB455KCAY07-R0	455	fn±4.0 min.	350 ±60	3.0 max.	-	MC3357	MOTOROLA	SMD
CDBKB455KCAY09-R0	455	fn±4.0 min.	120 ±40	1.5 max.	-	NE604N	PHILIPS	SMD
CDBKB455KCAY13-R0	455	fn±4.0 min.	330 ±50	4.0 max.	-	CXA1003BM	SONY	SMD
CDBKB455KCAY16-R0	455	fn±4.0 min.	175 ±40	2.0 max.	-	MC3372	MOTOROLA	SMD
CDBKB455KCAY24-R0	455	fn±4.0 min.	100 ±40	2.0 max.	-	TA31136	TOSHIBA	SMD
CDBKB455KCAY27-R0	455	fn±4.0 min.	90 ±30	2.0 max.	-	TK10487	TOKO	SMD
CDBKB455KCAY28-R0	455	fn±4.0 min.	40 ±20	3.0 max.	-	TA31142F	TOSHIBA	SMD
CDBKB455KCAY29-R0	455	fn±4.0 min.	100 ±30	2.5 max.	-	NE605	PHILIPS	SMD
CDBKB455KCAY35-R0	455	fn±4.0 min.	100 ±40	2.5 max.	-	TK10930	TOKO	SMD
CDBKB455KCAY40-R0	455	fn±4.0 min.	40 ±20	3.5 max.	-	TA31145	TOSHIBA	SMD
CDBKB455KCAY49-R0	455	fn±4.0 min.	45 ±10	3.0 max.	-	MC3361	MOTOROLA	SMD
CDBKB455KCAY50-R0	455	fn±4.0 min.	64 ±6.4	4.0 max.	-	CXA3117N	SONY	SMD
CDBKB455KCAY66-R0	455	fn±4.2 min.	40 ±10	4.0 max.	-	NJM2590	JRC	SMD
CDBKB455KCLX36-R0	455	fn±13.0 min.	90 ±30	2.5 max.	5.0 max. [within fn ±6kHz]	NE(SA)606 /NE(SA)616	PHILIPS	SMD
CDBKB455KCLX39-R0	455	fn±11.0 min.	130 ±20	2.5 max.	7.0 max. [within fn ±8kHz]	NE607 /NE617	PHILIPS	SMD
CDBKB455KCLY13-R0	455	fn±13.0 min.	120 ±30	1.5 max.	5.0 max. [within fn ±8kHz]	CXA1003BM	SONY	SMD
CDBLA455KCAY07-B0	455	fn±4.0 min.	340 ±60	2.5 max.	-	MC3357	MOTOROLA	Lead
CDBLA455KCAY09-B0	455	fn±5.0 min.	100 min.	1.5 max.	-	NE604N	PHILIPS	Lead
CDBLA455KCAY13A-B0	455	fn±4.0 min.	350 ±50	3.0 max.	-	CXA1003BM	SONY	Lead
CDBLA455KCAY16-B0	455	fn±4.0 min.	185 ±40	2.0 max.	-	MC3372	MOTOROLA	Lead
CDBLA455KCAY24-B0	455	fn±4.0 min.	100 ±40	2.0 max.	-	TA31136	TOSHIBA	Lead
CDBLA455KCAY28-B0	455	fn±4.0 min.	40 ±20	3.0 max.	-	TA31142	TOSHIBA	Lead
CDBLA455KCAY34-B0	455	fn±4.0 min.	65 ±20	2.5 max.	-	MC13136	MOTOROLA	Lead
CDBLA455KCLY09-B0	455	fn±15.0 min.	70 ±20	1.5 max.	3.5 max. [within fn ±8kHz]	NE604N	PHILIPS	Lead
CDBLA455KCLY13-B0	455	fn±15.0 min.	110 ±30	1.5 max.	5.0 max. [within fn ±8kHz]	CXA1003BM	SONY	Lead
CDBLB455KCAY07-B0	455	fn±4.0 min.	340 ±60	3.0 max.	-	MC3357	MOTOROLA	Lead

Continued on the following page.

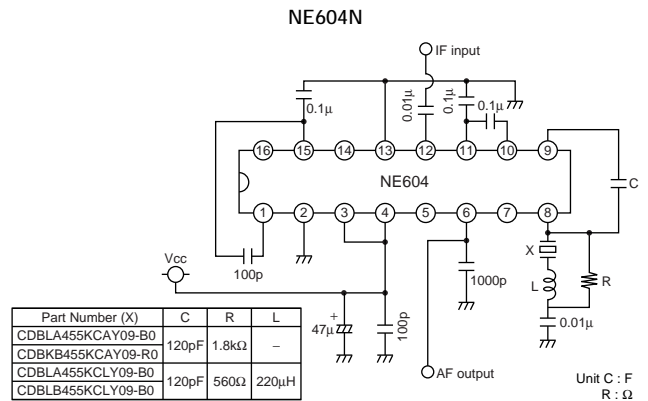
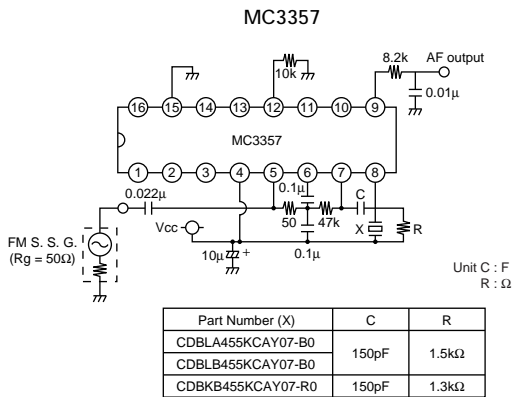
Continued from the preceding page.

Part Number	Nominal Center Frequency (fn) (kHz)	Recovered Audio 3dB BW (kHz)	Recovered Audio Output (mV)	Distortion (at fn) (%)	Distortion (%)	IC	IC Maker	Type
CDBLB455KCAY13A-B0	455	fn±4.0 min.	350 ±50	3.0 max.	-	CXA1003BM	SONY	Lead
CDBLB455KCAY24-B0	455	fn±4.0 min.	100 ±40	2.0 max.	-	TA31136	TOSHIBA	Lead
CDBLB455KCAY28-B0	455	fn±4.0 min.	40 ±20	3.0 max.	-	TA31142FN	TOSHIBA	Lead
CDBLB455KCAY34-B0	455	fn±4.0 min.	65 ±20	2.5 max.	-	MC13136	MOTOROLA	Lead
CDBLB455KCAY40-B0	455	fn±4.0 min.	40 ±20	3.0 max.	-	TA31145	TOSHIBA	Lead
CDBLB455KCAY42-B0	455	fn±4.0 min.	40 ±15	3.0 max.	-	TK14590 /TK14591	TOKO	Lead
CDBLB455KCAY49-B0	455	fn±4.0 min.	45 ±10	3.0 max.	-	MC3361	MOTOROLA	Lead
CDBLB455KCAY50-B0	455	fn±4.0 min.	64 ±6.4	4.0 max.	-	CXA3117N	SONY	Lead
CDBLB455KCLY09-B0	455	fn±15.0 min.	70 ±20	1.5 max.	3.5 max. [within fn ±8kHz]	NE604N	PHILIPS	Lead
CDBLB455KCLY13-B0	455	fn±15.0 min.	110 ±30	1.5 max.	5.0 max. [within fn ±8kHz]	CXA1003BM	SONY	Lead
CDBLB455KCAX16-B0	455	fn±4.0 min.	185 ±40	2.0 max.	-	MC3372	MOTOROLA	Lead
CDBLB455KCAX18-B0	455	fn±3.0 min.	180 ±40	2.0 max.	-	MC3371	MOTOROLA	Lead
CDBLB455KCAX36-B0	455	fn±3.5 min.	100 ±25	3.5 max.	-	NE606 /NE616	PHILIPS	Lead

For safety purposes, avoid applying a direct current between the terminals.

The order quantity should be an integral multiple of the "Minimum Quantity" shown in package page in this catalog.

Test Circuit

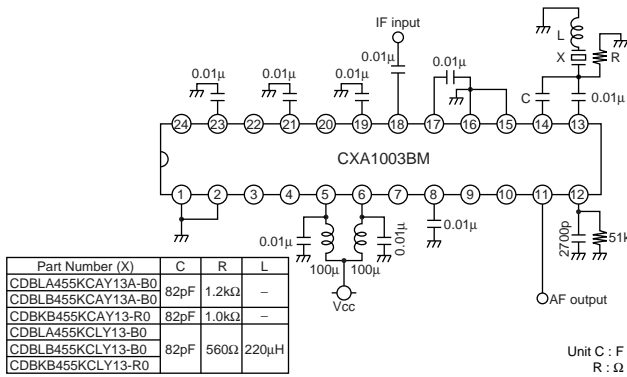


Continued on the following page.

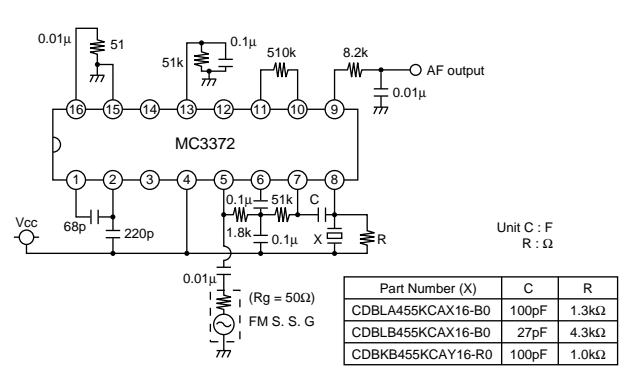
Continued from the preceding page.

Test Circuit

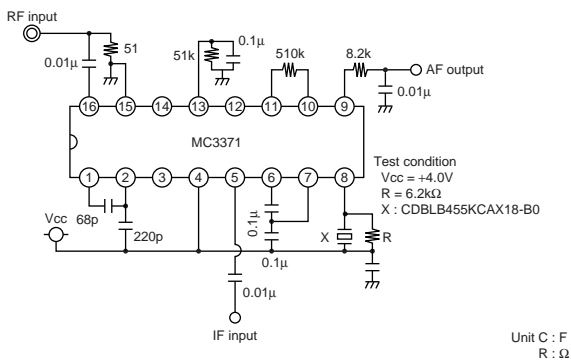
CXA1003BM



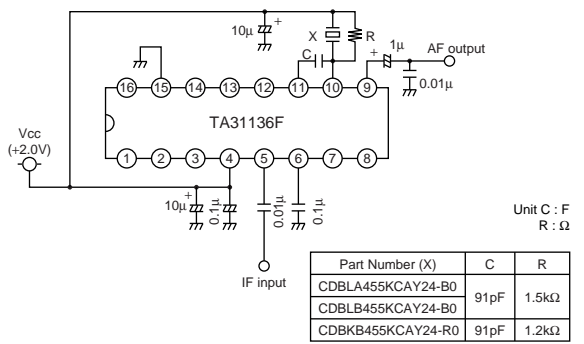
MC3372



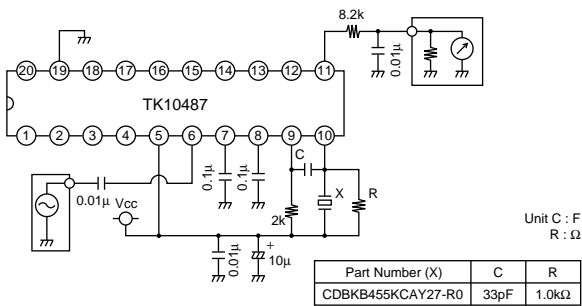
MC3371



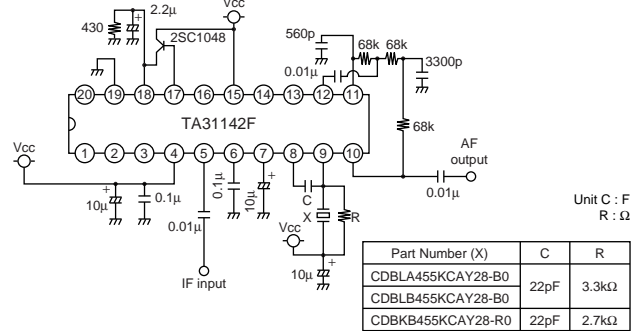
TA31136



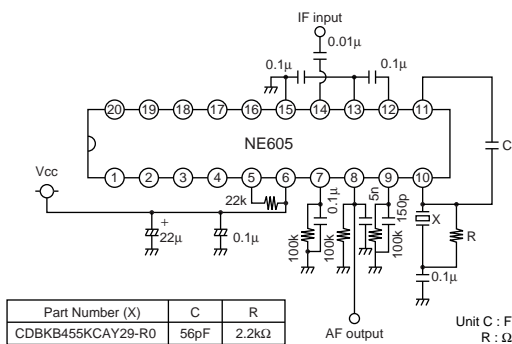
TK10487



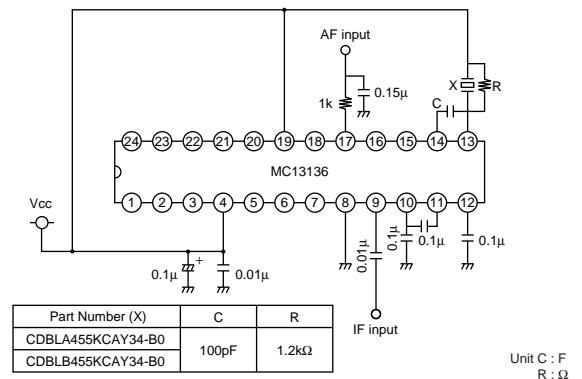
TA31142



NE605



MC13136

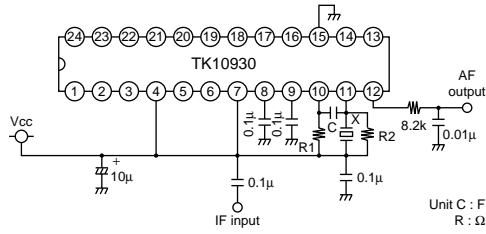


Continued on the following page.

Continued from the preceding page.

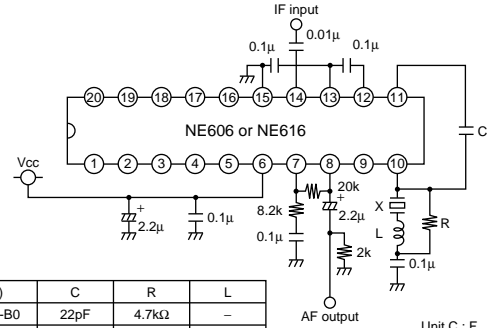
Test Circuit

TK10930



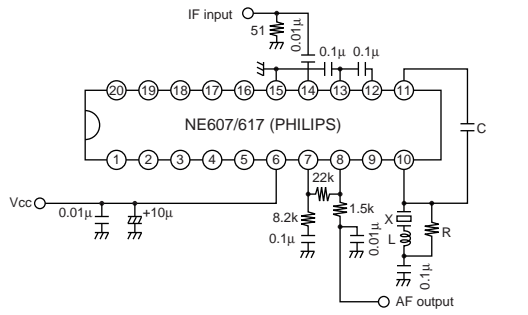
Part Number (X)	C	R1	R2
CDBKB455KCAY35-R0	33pF	2.0kΩ	1.0kΩ

NE(SA)606/616



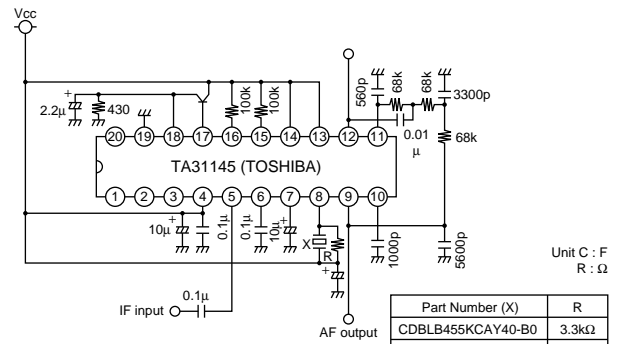
Part Number (X)	C	R	L
CDBLB455KCAX36-B0	22pF	4.7kΩ	-
CDBKB455KCLX36-R0	27pF	2.2kΩ	1mH

NE(SA)607/617



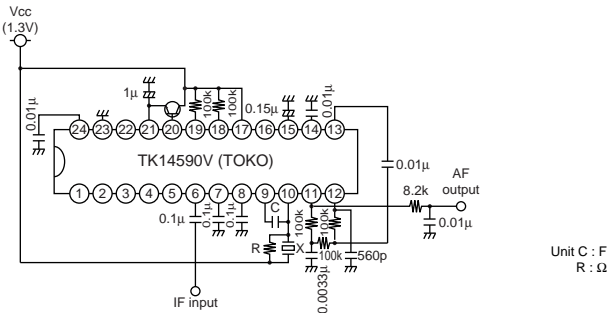
Part Number (X)	C	R	L
CDBKB455KCLX39-R0	22pF	2.7kΩ	1mH

TA31145



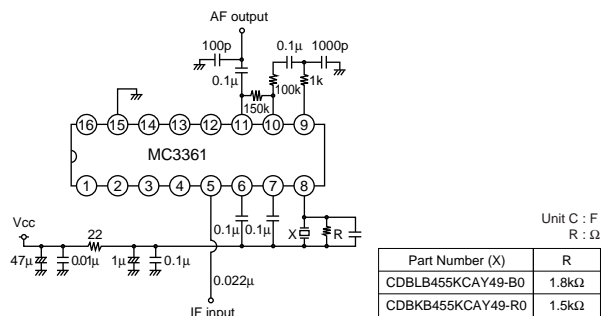
Part Number (X)	R
CDBLB455KCAY40-B0	3.3kΩ
CDBKB455KCAY40-R0	2.7kΩ

TK14590/14591



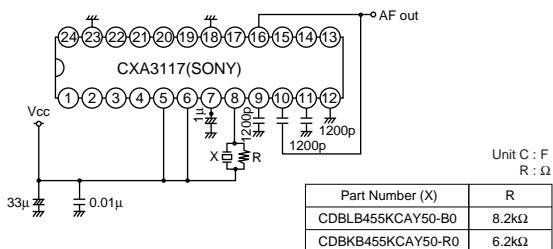
Part Number (X)	C	R
CDBLB455KCAY42-B0	22pF	3.3kΩ

MC3361



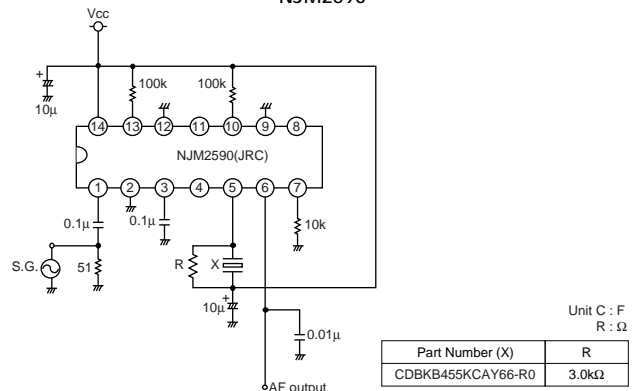
Part Number (X)	R
CDBLB455KCAY49-B0	1.8kΩ
CDBKB455KCAY49-R0	1.5kΩ

CXA3117



Part Number (X)	R
CDBLB455KCAY50-B0	8.2kΩ
CDBKB455KCAY50-R0	6.2kΩ

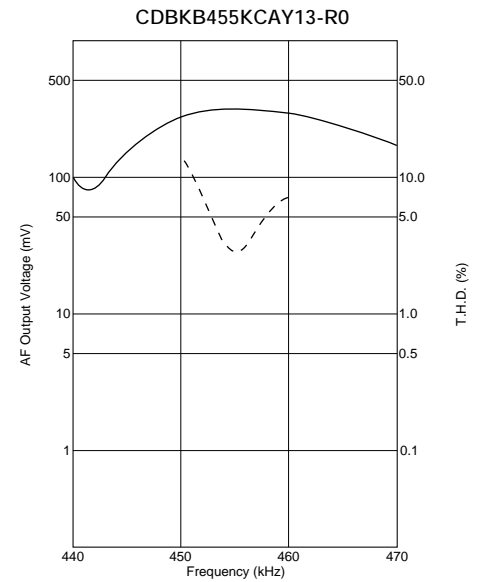
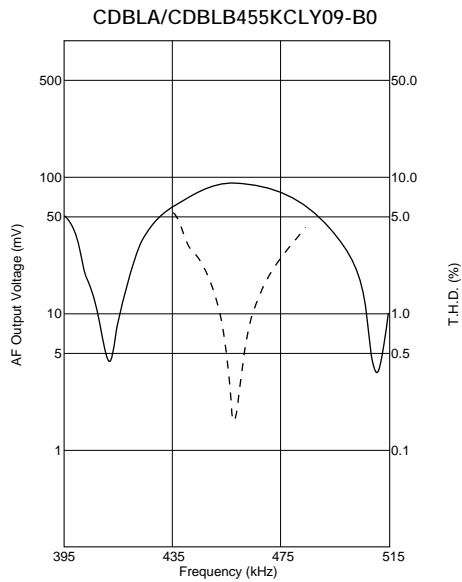
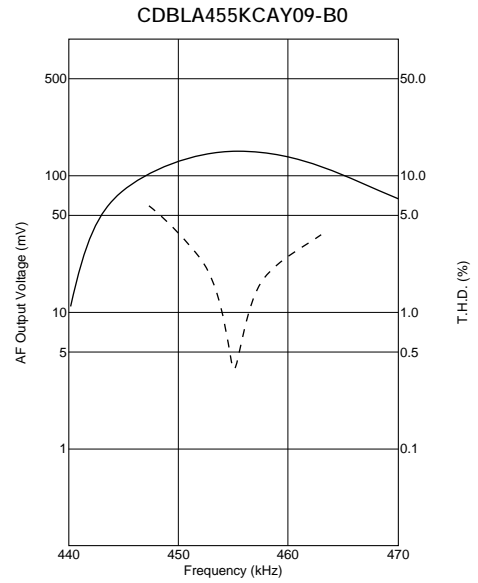
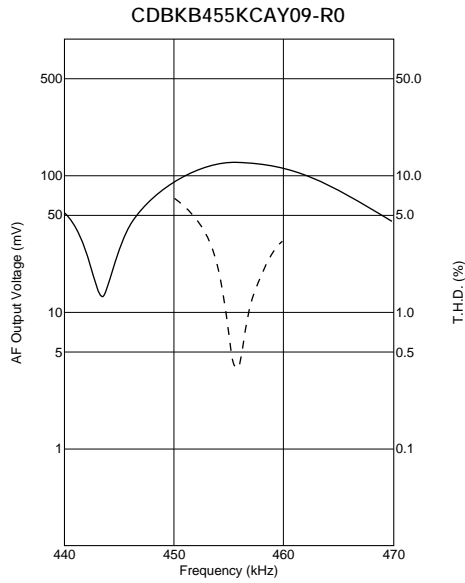
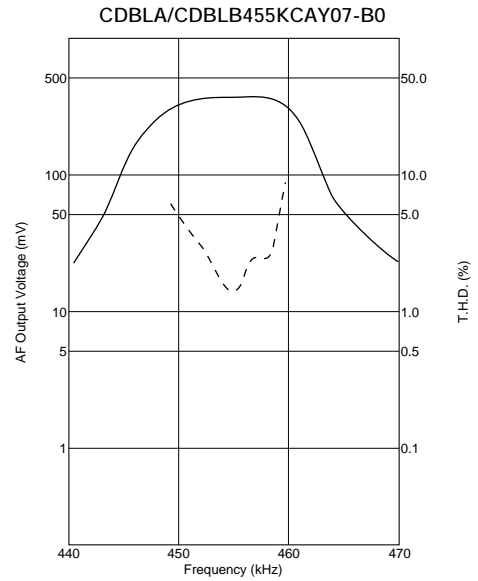
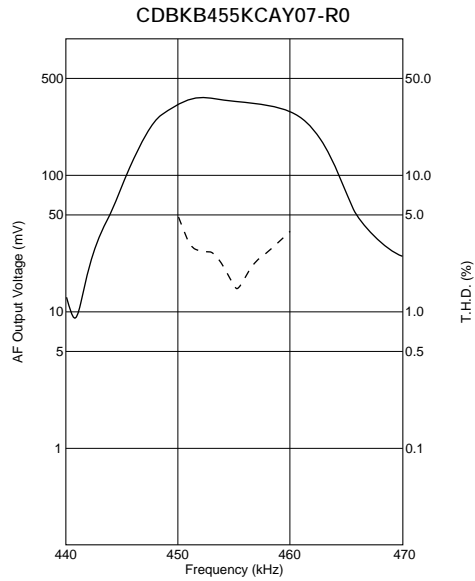
NJM2590



Part Number (X)	R
CDBKB455KCAY66-R0	3.0kΩ

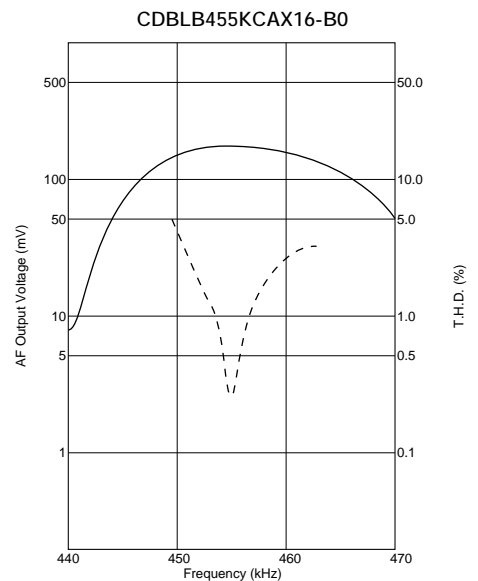
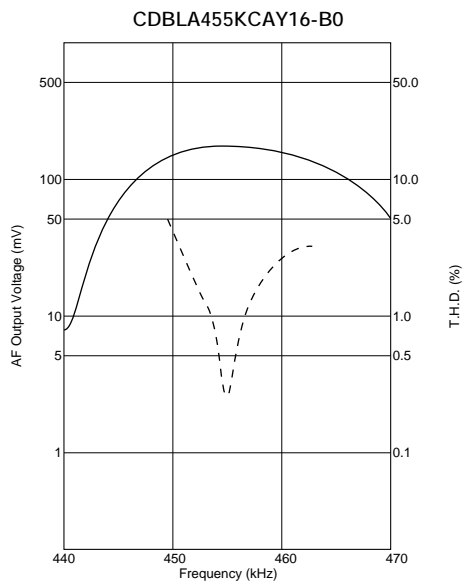
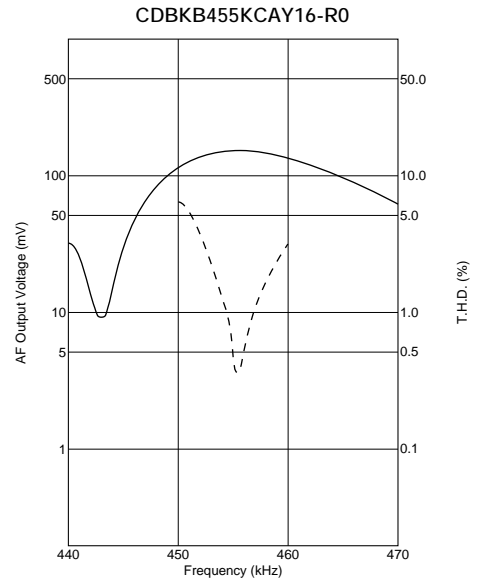
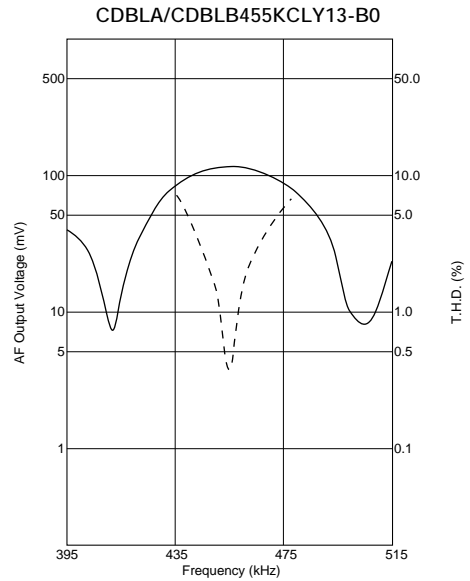
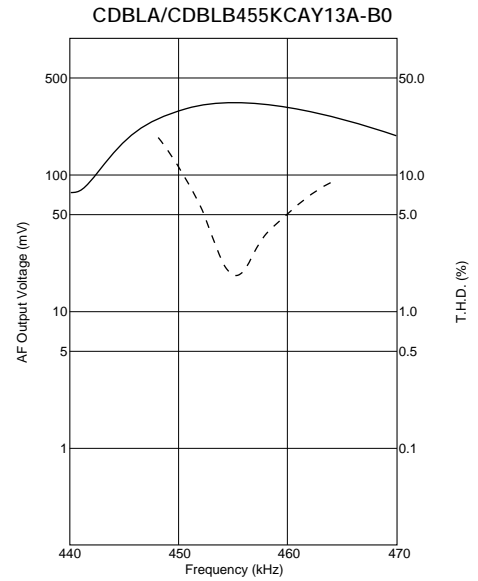
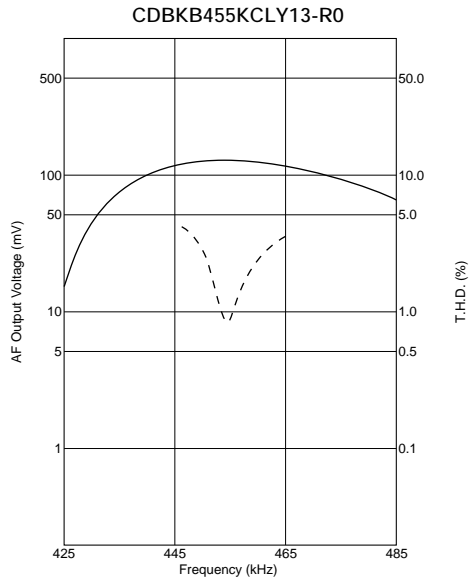
17

■ Recovered Audio Curve



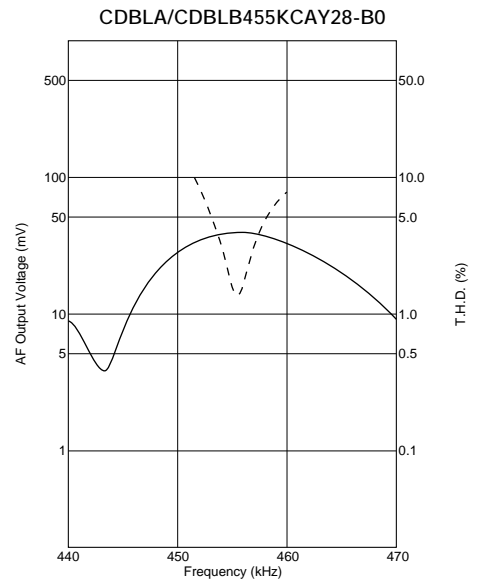
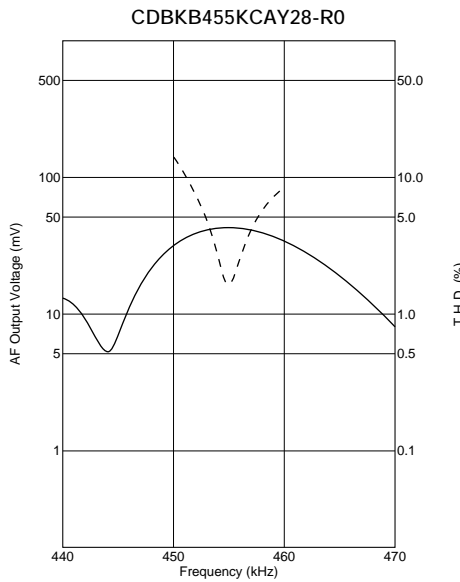
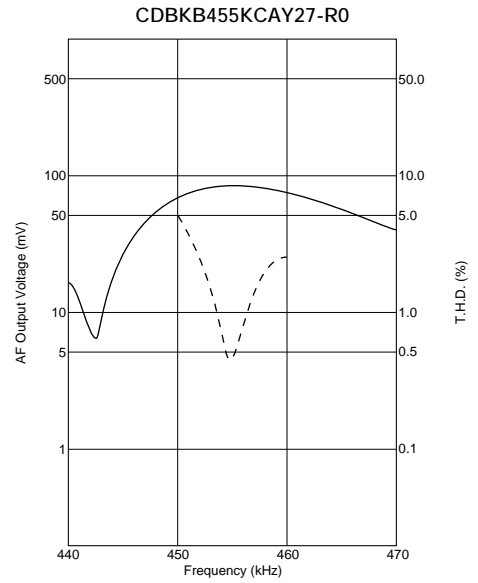
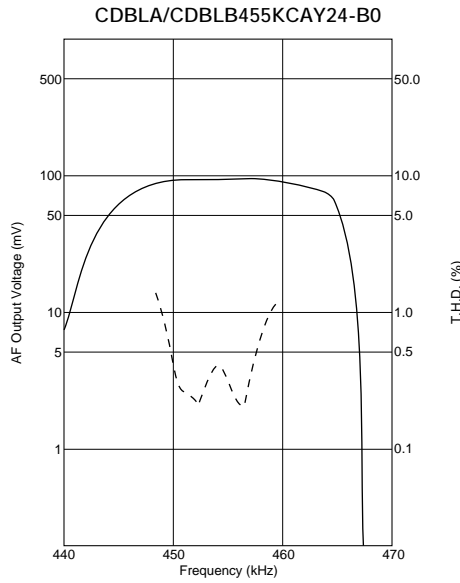
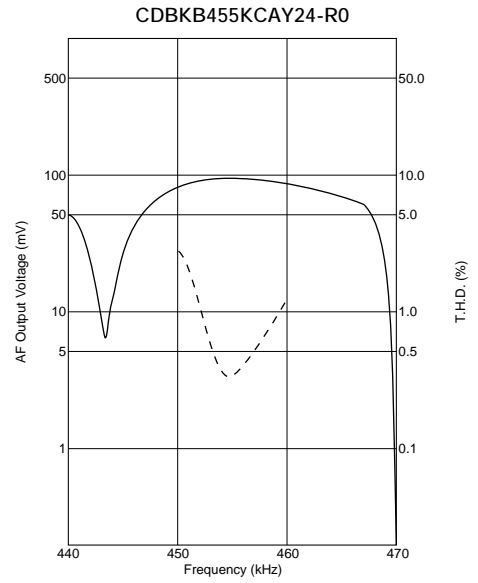
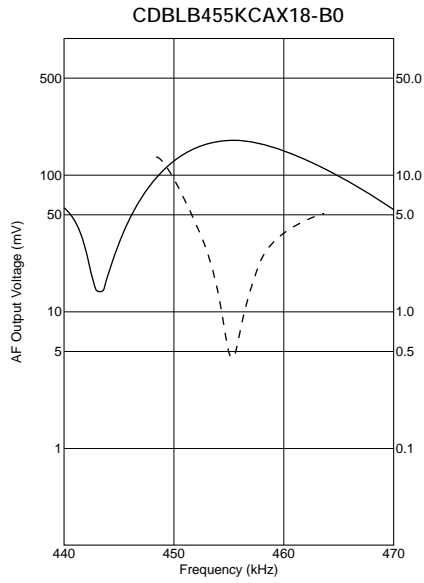
Continued from the preceding page.

■ Recovered Audio Curve



Continued from the preceding page.

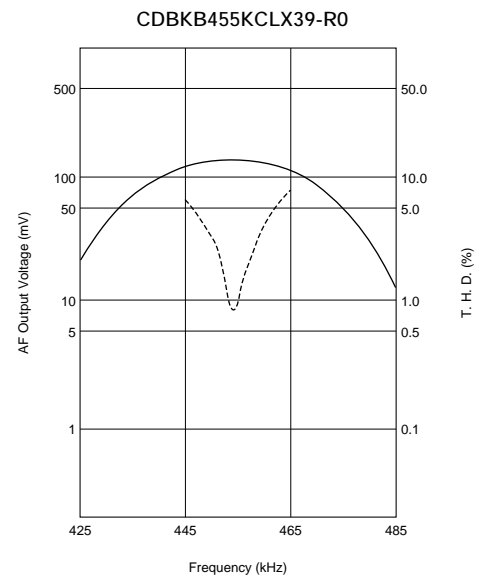
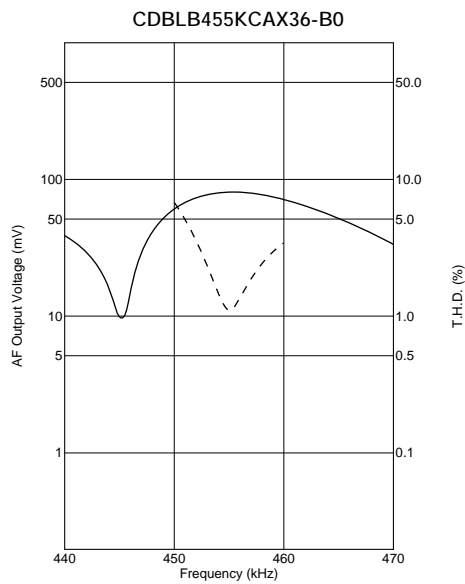
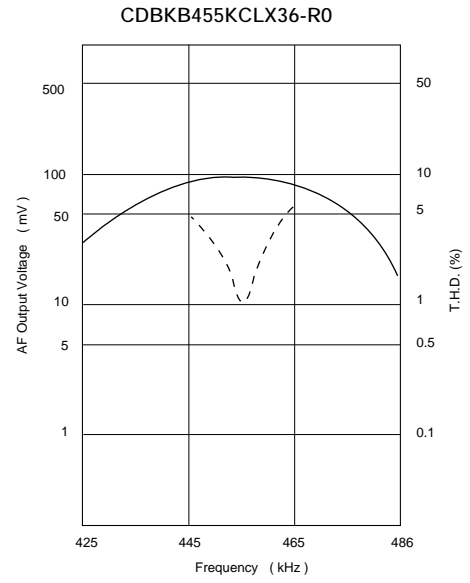
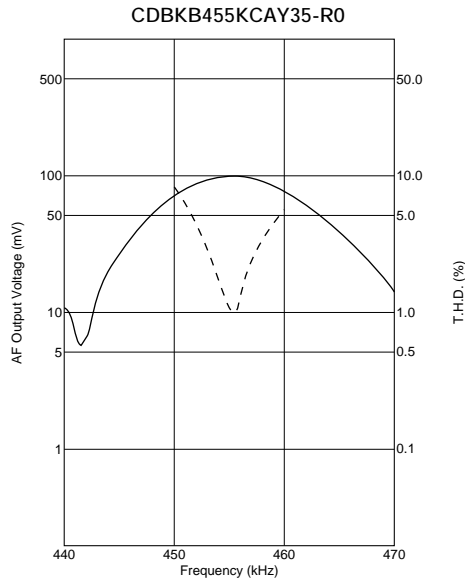
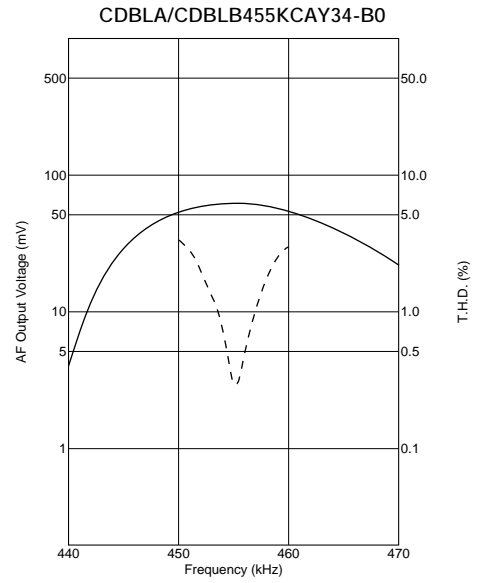
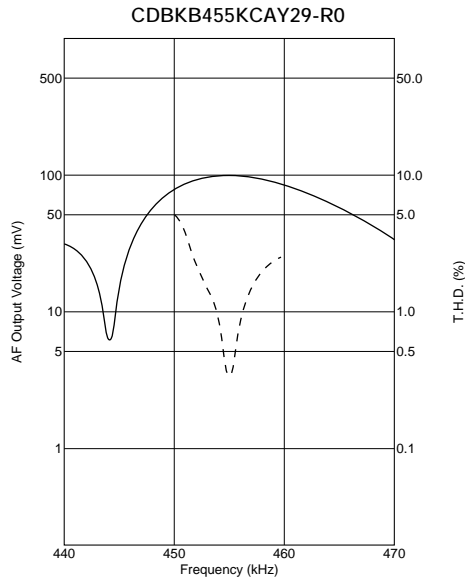
Recovered Audio Curve



Continued on the following page.

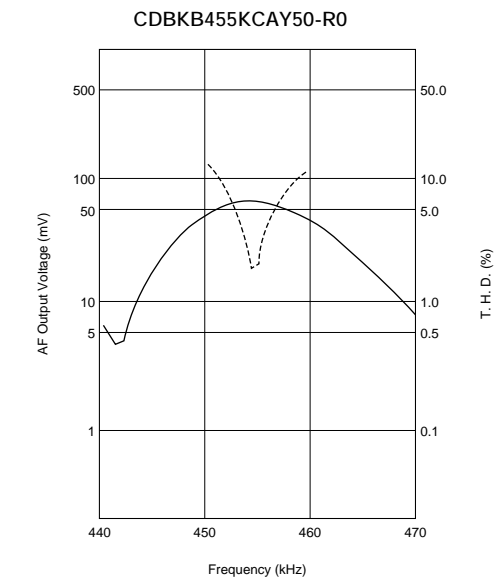
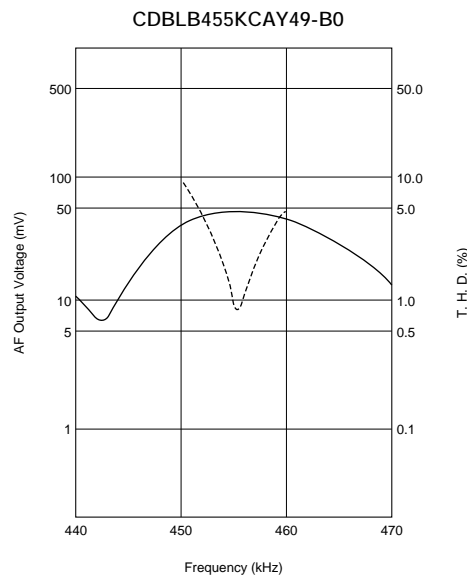
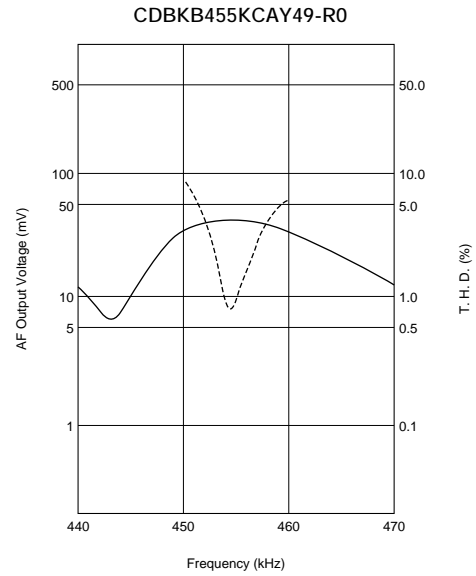
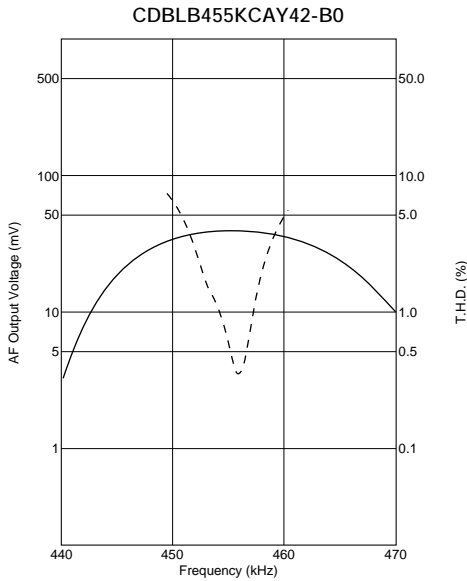
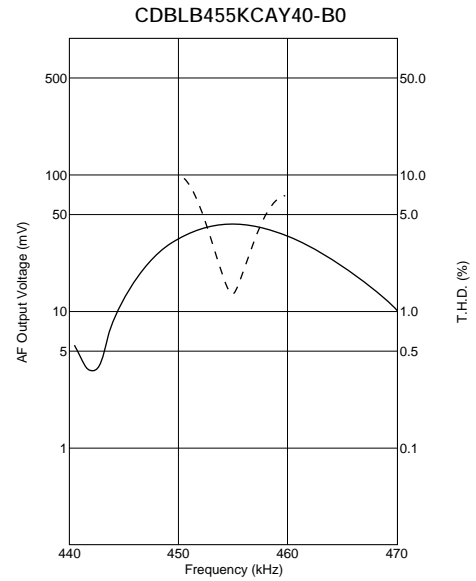
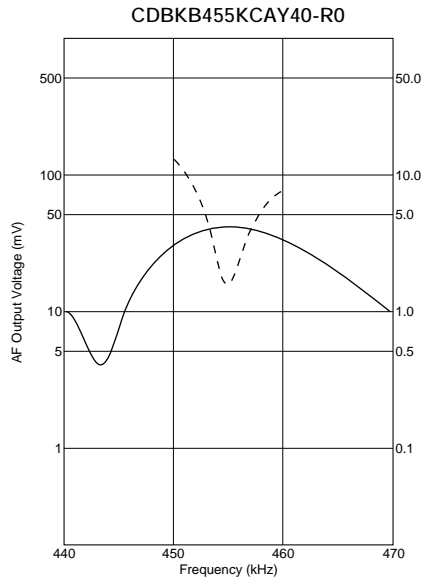
Continued from the preceding page.

■ Recovered Audio Curve



Continued from the preceding page.

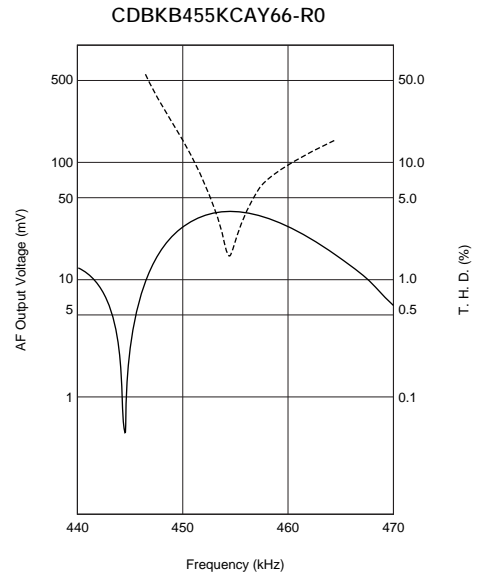
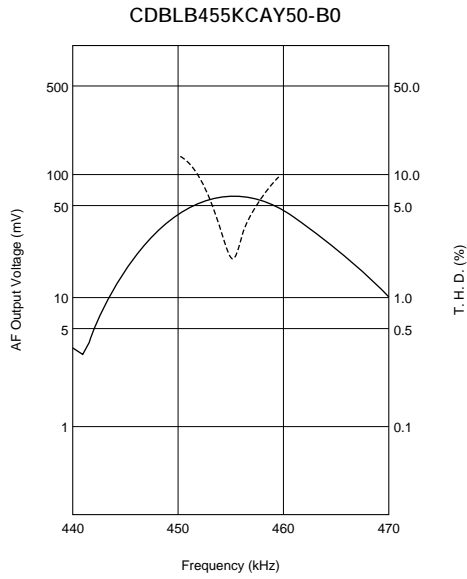
■ Recovered Audio Curve



Continued on the following page.

Continued from the preceding page.

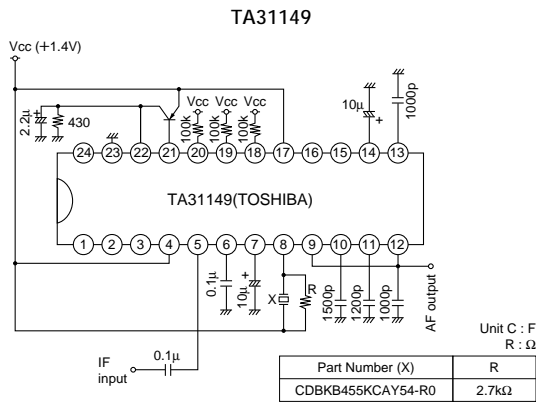
■ Recovered Audio Curve



Specified by S Curve Characteristics

Part Number	Nominal Center Frequency (fn) (kHz)	S Curve (1) Output Volt. at fn (mV)	S Curve (2) at fn±4.8kHz (mV)	IC	IC Maker	Type
CDBKB455KCAY54-R0	455	165 ±20	170 ±20	TA31149	TOSHIBA	SMD

■ Test Circuit



■ S Curve

