



DISCRIMINATOR



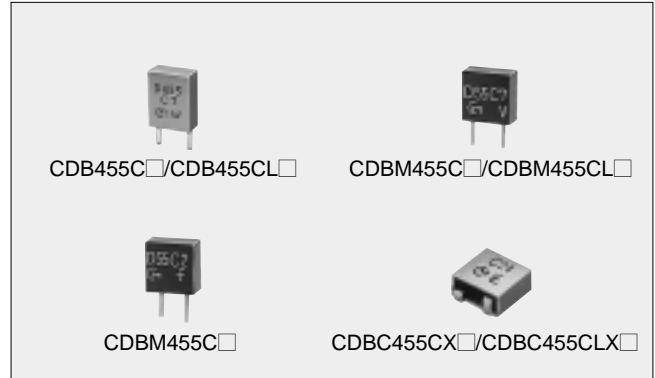
Ceramic Discriminator for Communications Equipment

High Performance Ceramic Discriminator for Various Mobile Communication Equipment

Ceramic discriminator consists of wide band piezoelectric resonator. It is ideal for mobile communication equipments due to its small size and light weight. Standard line include products for wide range of application, from cordless telephone to cellular telephone, making non-adjustment and shrinking of the detection circuit possible.

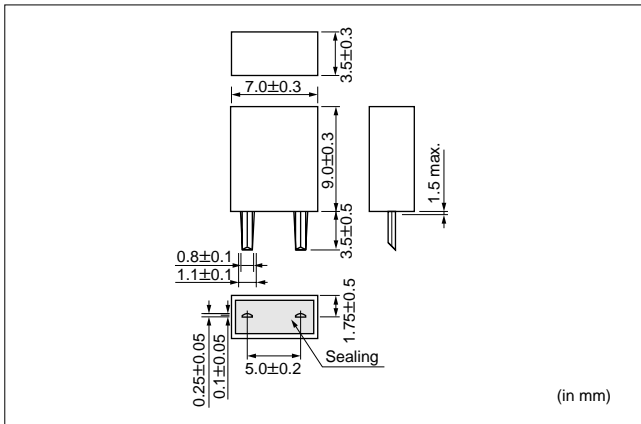
FEATURES

1. Small in size and light weight.
2. Realize non-adjustment in detection circuit.
3. High sensitivity and stability.
4. Wide range of standard products are available for various ICs.
5. Operating temperature range : -20°C to $+80^{\circ}\text{C}$
Storage temperature range : -40°C to $+85^{\circ}\text{C}$

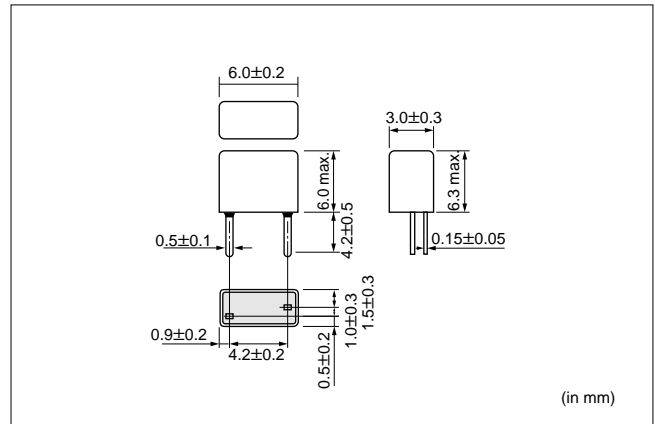


DIMENSIONS

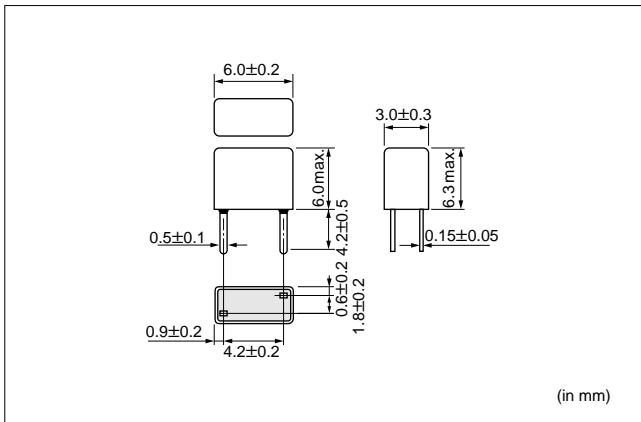
● CDB455C□/CDB455CL□



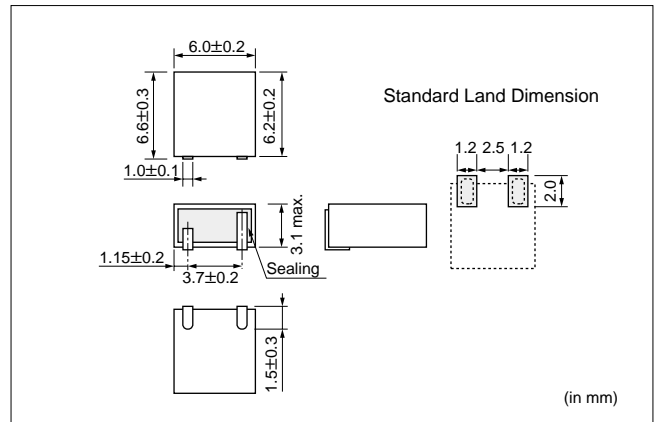
● CDBM455C□/CDBM455CL□



● CDBM455C□



● CDBC455CX□/CDBC455CLX□



*Refer to the IC list in the next page for suffix number in □.

■ ELECTRICAL CHARACTERISTICS

● Impedance Curve Specification

Character-istics Part Number	Resonant Frequency (Fr)	Antiresonant Frequency (Fa)	$\Delta F(Fa-Fr)$	Resonant Resistance (R1)	Capacitance (C)	I C	Application
CDBM455C2	447±1.5kHz (Z =2.05kΩ)		463±1.5kHz (Z =10.0kΩ)		140pF±20%	TA8104	Pager
CDBC455CX2	447±1.5kHz (Z =0.80kΩ)		463±1.5kHz (Z =3.65kΩ)		280pF±20%		
CDB455C3	—	455 ±1.5kHz	48±5.0kHz	70Ωmax.	600pF±20%	CXA1184M	Pager
CDBM455C3	—	455 ±1.5kHz	46±5.0kHz	70Ωmax.	550pF±20%		
CDBM455C4	—	470 ±1.0kHz	43±2.0kHz	300Ωmax.	140pF±20%	LA8610	Pager
CDB455C10	429±2kHz	—	51±5.0kHz	70Ωmax.	580pF±20%	TA8103F	Cordless Telephone
CDBM455C10	429±2kHz	—	51±5.0kHz	70Ωmax.	580pF±20%		
CDBM455C15	—	463.5±1kHz	43±2.0kHz	300Ωmax.	140pF±20%	CXA1183M	Cordless Telephone
CDBM455C25	—	465 ±1.5kHz	45±4.0kHz	300Ωmax.	135pF±20%	CXA1484	Pager
CDBM455C31	447±1.5kHz (Z =2.05kΩ)		463±1.5kHz (Z =10.0kΩ)		140pF±20%	TA31141	Pager
CDBC455CX31	447±1.5kHz (Z =0.80kΩ)		463±1.5kHz (Z =3.65kΩ)		280pF±20%		
CDBM455C33	—	465±1.5kHz	45±4.0kHz	300Ωmax.	135pF±20%	CXA1474	Pager

● Recovered Audio Curve Specification

Character-istics Part Number	Recovered Audio 3dB Bandwidth (from 455kHz)	Recovered Audio Output (at 455kHz)	Distortion		I C	Application
			at 455kHz	within 455±8kHz		
CDB455C7	±4.0kHzmin.	340±60mV	2.5%max.	—	MC3357	Cordless Telephone, Communications Equipment
CDBM455C7	±4.0kHzmin.	340±60mV	3.0%max.	—		
CDBC455CX7	±4.0kHzmin.	350±60mV	3.0%max.	—		
CDB455C9	±5.0kHzmin.	100mVmin.	1.5%max.	—	NE604N	Cordless Telephone, Cellular Phone, Communications Equipment
CDBM455C9	±5.0kHzmin.	100mVmin.	1.5%max.	—		
CDBC455CX9	±4.0kHzmin.	120±40mV	1.5%max.	—		
CDB455CL9	±15.0kHzmin.	70±20mV	1.5%max.	3.5%max.		
CDBM455CL9	±15.0kHzmin.	70±20mV	1.5%max.	3.5%max.	CXA1003BM	Cellular Phone, Communications Equipment
CDB455C13A	±4.0kHzmin.	350±50mV	3.0%max.	—		
CDBM455C13A	±4.0kHzmin.	350±50mV	3.0%max.	—		
CDBC455CX13	±4.0kHzmin.	330±50mV	4.0%max.	—		
CDB455CL13	±15.0kHzmin.	110±30mV	1.5%max.	5.0%max.		
CDBM455CL13	±15.0kHzmin.	110±30mV	1.5%max.	5.0%max.	MC3372	Cellular Phone, Cordless Telephone, Communications Equipment
CDBC455CLX13	±13.0kHzmin.	120±30mV	1.5%max.	5.0%max.		
CDB455C16	±4.0kHzmin.	185±40mV	2.0%max.	—		
CDBM455C16	±4.0kHzmin.	185±40mV	2.0%max.	—	MC3371	Cordless Telephone, Communications Equipment
CDBC455CX16	±4.0kHzmin.	175±40mV	2.0%max.	—		
CDBM455C18	±3.0kHzmin.	180±40mV	2.0%max.	—	TA31132	Cordless Telephone, Cellular Phone, Communications Equipment
CDB455C21	±4.0kHzmin.	55±20mV	2.0%max.	—		
CDBM455C21	±4.0kHzmin.	55±20mV	2.0%max.	—		
CDBC455CX21	±4.0kHzmin.	55±20mV	2.0%max.	—		
CDB455CL21	±13.0kHzmin.	65±20mV	2.5%max.	5.0%max.		
CDBM455CL21	±13.0kHzmin.	65±20mV	2.5%max.	5.0%max.		
CDBC455CLX21	±11.0kHzmin.	75±25mV	2.5%max.	5.0%max.	TA31136	Cordless Telephone, Communications Equipment
CDB455C24	±4.0kHzmin.	100±40mV	2.0%max.	—		
CDBM455C24	±4.0kHzmin.	100±40mV	2.0%max.	—		
CDBC455CX24	±4.0kHzmin.	100±40mV	2.0%max.	—	TK10487	Cordless Telephone, Communications Equipment
CDB455C27	±4.0kHzmin.	100±40mV	2.0%max.	—		
CDBM455C27	±4.0kHzmin.	100±40mV	2.0%max.	—		
CDBC455CX27	±4.0kHzmin.	90±30mV	2.0%max.	—	TA31142	Pager
CDB455C28	±4.0kHzmin.	40±20mV	3.0%max.	—		
CDBM455C28	±4.0kHzmin.	40±20mV	3.0%max.	—		
CDBC455CX28	±4.0kHzmin.	40±20mV	3.0%max.	—		

Character- istics Part Number	Recovered Audio 3dB Bandwidth (from 455kHz)	Recovered Audio Output (at 455kHz)	Distortion		I C	Application
			at 455kHz	within 455±8kHz		
CDB455C29	±4.0kHzmin.	125±30mV	2.5%max.	—	NE605	Cordless Telephone, Communications Equipment
CDBM455C29	±4.0kHzmin.	125±30mV	2.5%max.	—		
CDBC455CX29	±4.0kHzmin.	100±30mV	2.5%max.	—		
CDB455C30	±4.0kHzmin.	90±30mV	2.0%max.	—	TK14501	Telephone, Communications Equipment
CDBM455C30	±4.0kHzmin.	90±30mV	2.0%max.	—		
CDBC455CX30	±4.0kHzmin.	80±20mV	2.0%max.	—		
CDB455C32	±4.0kHzmin.	40±20mV	3.0%max.	—	TA31143	Pager
CDBM455C32	±4.0kHzmin.	40±20mV	3.0%max.	—		
CDBC455CX32	±4.0kHzmin.	40±20mV	3.0%max.	—		
CDB455C34	±4.0kHzmin.	65±20mV	2.5%max.	—	MC13136	Cordless Telephone, Communications Equipment
CDBM455C34	±4.0kHzmin.	65±20mV	2.5%max.	—		
CDB455C35	±4.0kHzmin.	100±40mV	2.5%max.	—	TK10930	Cordless Telephone, Communications Equipment
CDBM455C35	±4.0kHzmin.	100±40mV	2.5%max.	—		
CDBC455CX35	±4.0kHzmin.	100±40mV	2.5%max.	—		
CDBM455C36	±3.5kHzmin.	100±25mV	3.5%max.	—	NE (SA) 606	Cordless Telephone, Cellular Phone
CDBC455CLX36	±13.0kHzmin.	90±30mV	2.5%max.	5.0%max.	NE (SA) 616	
CDBM455C39	±4.0kHzmin.	85±20mV	2.5%max.	—	NE (SA) 607/617	Cordless Telephone
CDBC455CLX39	±11.0kHzmin.	130±20mV	2.5%max.	7.0%max.	NE607/617	
CDBM455C40	±4.0kHzmin.	40±20mV	3.0%max.	—	TA31145	Pager
CDBC455CX40	±4.0kHzmin.	40±20mV	3.5%max.	—		
CDB455C42	±4.0kHzmin.	40±15mV	3.0%max.	—	TK14590/14591	Pager
CDBM455C42	±4.0kHzmin.	40±15mV	3.0%max.	—		
CDBM455C49	±4.0kHzmin.	45±10mV	3.0%max.	—	MC3361	Cordless Telephone
CDBC455CX49	±4.0kHzmin.	45±10mV	3.0%max.	—		
CDBM455C50	±4.0kHzmin.	64±6.4mV	4.0%max.	—	CXA3117	Pager
CDBC455CX50	±4.0kHzmin.	64±6.4mV	4.0%max.	—		

● S Curve Specification

Character- istics Part Number	Nominal Center Frequency	S Curve Characteristics i) Output Voltage at 450kHz	S Curve Characteristics ii) Difference Voltage Between at 450-4.8kHz and at 450+4.8kHz	I C	Application
CDBM455C47	455kHz	140±20mV	150±15mV	TA31147	Pager
CDBC455CX47	455kHz	130±20mV	150±15mV		
CDBM455C54	455kHz	165±20mV	170±20mV	TA31149	Pager
CDBC455CX54	455kHz	165±20mV	170±20mV		

TEST CIRCUIT

MC3357

Part Number (X)	C	R
CDB455C7	150pF	1.5kΩ
CDBM455C7		
CDBC455CX7	150pF	1.3kΩ

NE604N

Part Number (X)	C	R	L
CDB455C9			
CDBM455C9	120pF	1.8kΩ	
CDBC455CX9			
CDB455CL9	120pF	560Ω	20μH
CDBM455CL9			

CXA1003BM

Part Number (X)	C	R	L
CDB455C13A	82pF	1.2kΩ	
CDBM455C13A			
CDBC455CX13	82pF	1.0kΩ	
CDB455CL13			
CDBM455CL13	82pF	560Ω	220μH
CDBC455CLX13			

MC3372

Part Number (X)	C	R
CDB455C16	100pF	1.3kΩ
CDBM455C16	27pF	4.3kΩ
CDBC455CX16	100pF	1.0kΩ

MC3371

Part Number (X)	R
CDBM455C18	6.2kΩ

TA31132

Part Number (X)	C	R	L
CDB455C21	100pF	1.5kΩ	
CDBM455C21			
CDBC455CX21	100pF	1.2kΩ	
CDB455CL21			
CDBM455CL21	100pF	680Ω	220μH
CDBC455CLX21			

TA31136

Part Number (X)	C	R
CDB455C24	91pF	1.5kΩ
CDBM455C24		
CDBC455CX24	91pF	1.2kΩ

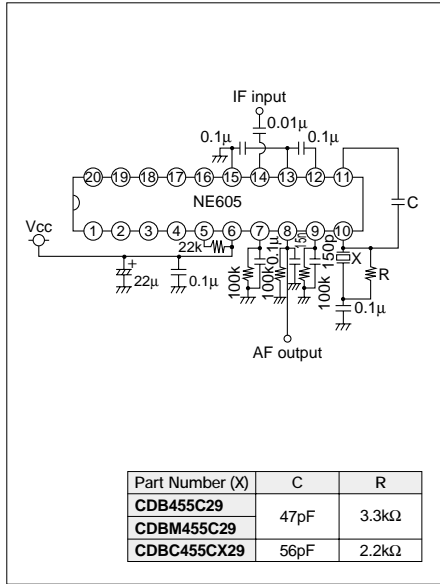
TK10487

Part Number (X)	C	R
CDB455C27	33pF	1.2kΩ
CDBM455C27		
CDBC455CX27	33pF	1.0kΩ

TA31142

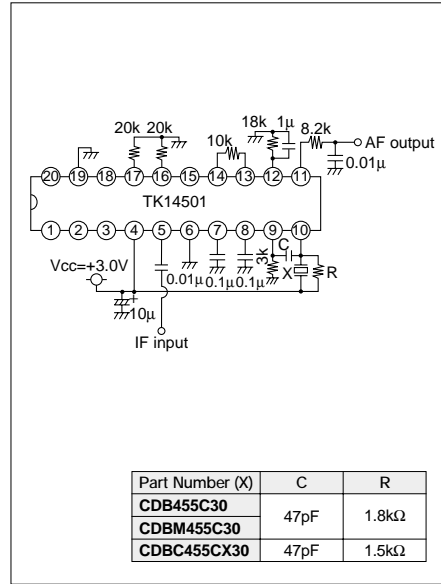
Part Number (X)	C	R
CDB455C28	22pF	3.3kΩ
CDBM455C28		
CDBC455CX28	22pF	2.7kΩ

NE605



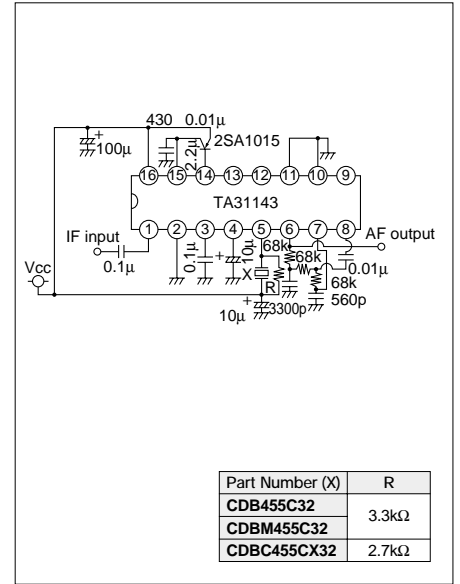
Part Number (X)	C	R
CDB455C29	47pF	3.3kΩ
CDBM455C29		
CDBC455CX29	56pF	2.2kΩ

TK14501



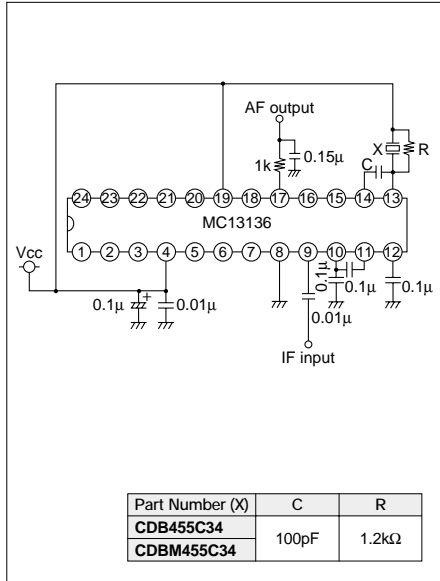
Part Number (X)	C	R
CDB455C30	47pF	1.8kΩ
CDBM455C30		
CDBC455CX30	47pF	1.5kΩ

TA31143



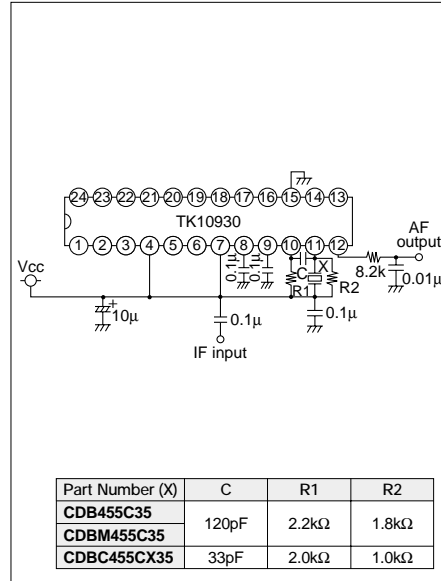
Part Number (X)	R
CDB455C32	3.3kΩ
CDBM455C32	
CDBC455CX32	2.7kΩ

MC13136



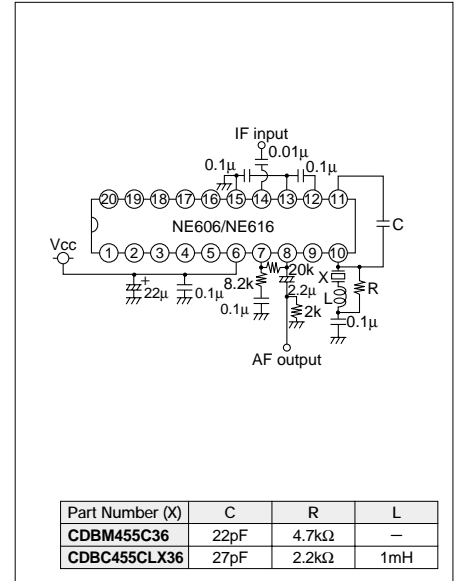
Part Number (X)	C	R
CDB455C34	100pF	1.2kΩ
CDBM455C34		

TK10930



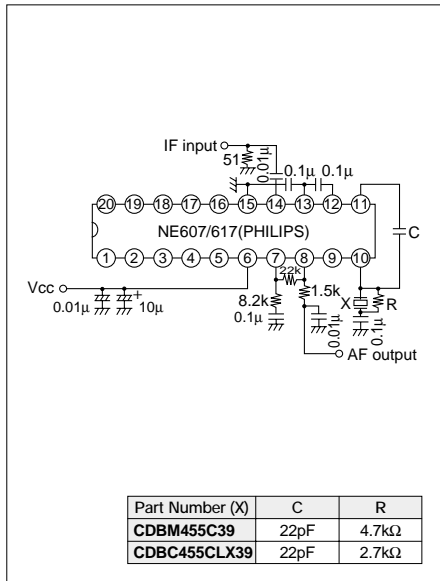
Part Number (X)	C	R1	R2
CDB455C35	120pF	2.2kΩ	1.8kΩ
CDBM455C35			
CDBC455CX35	33pF	2.0kΩ	1.0kΩ

NE (SA) 606/616



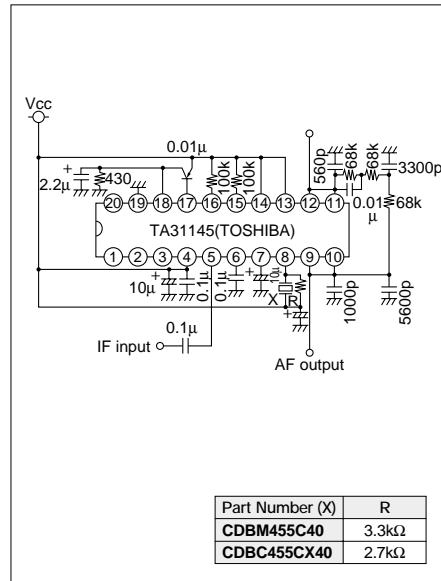
Part Number (X)	C	R	L
CDBM455C36	22pF	4.7kΩ	-
CDBC455CLX36	27pF	2.2kΩ	1mH

NE (SA) 607/617



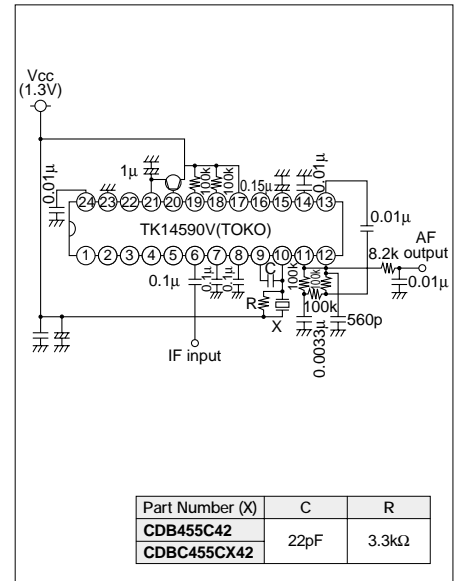
Part Number (X)	C	R
CDBM455C39	22pF	4.7kΩ
CDBC455CLX39	22pF	2.7kΩ

TA31145



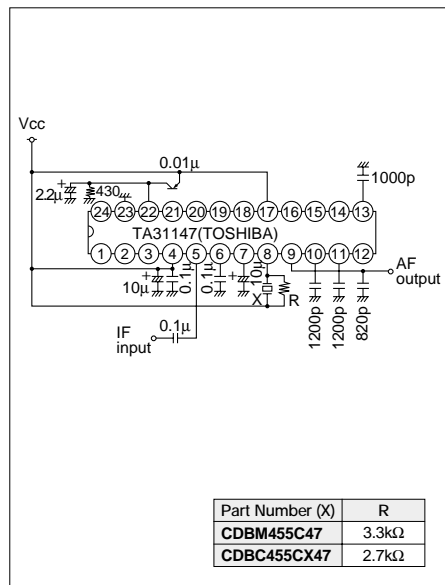
Part Number (X)	R
CDBM455C40	3.3kΩ
CDBC455CX40	2.7kΩ

TK14590/14591

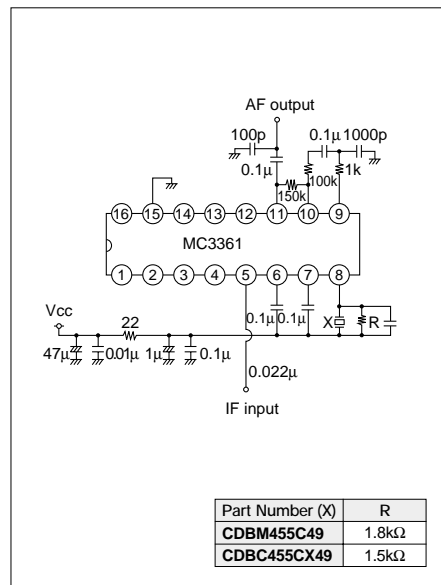


Part Number (X)	C	R
CDB455C42	22pF	3.3kΩ
CDBC455CX42		

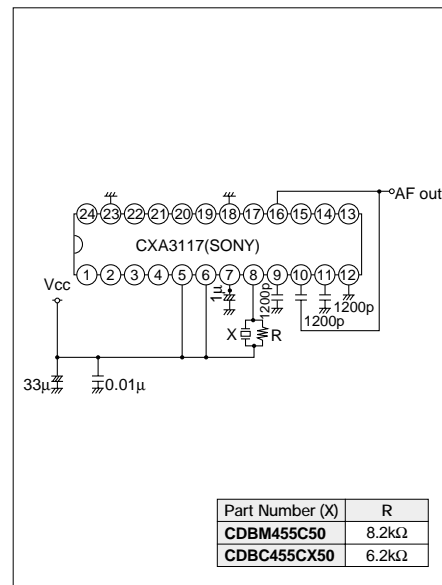
TA31147



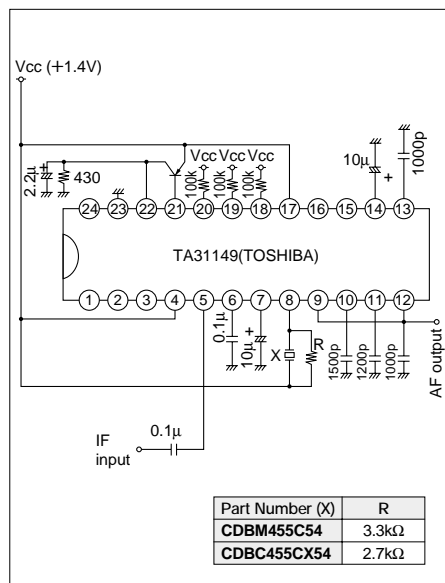
MC3361



CXA3117



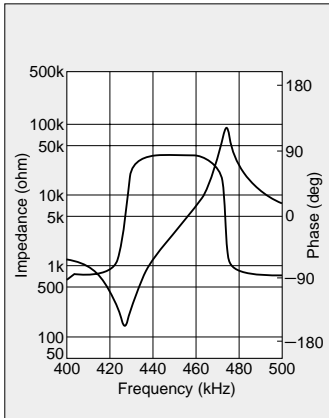
TA31149



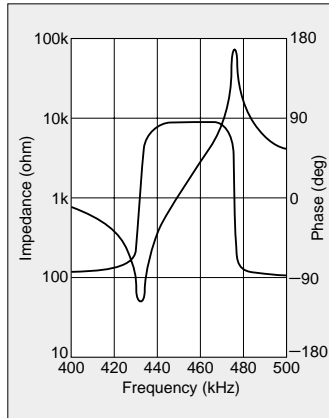
■ FREQUENCY CHARACTERISTICS

● Impedance Curve Specification

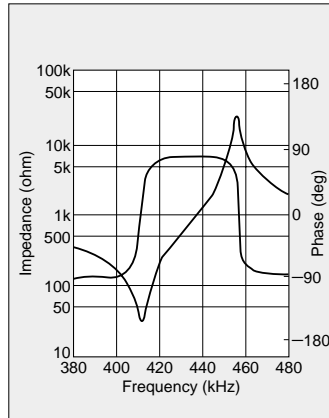
CDBM455C2



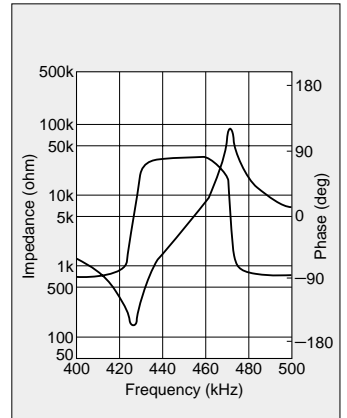
CDBC455CX2



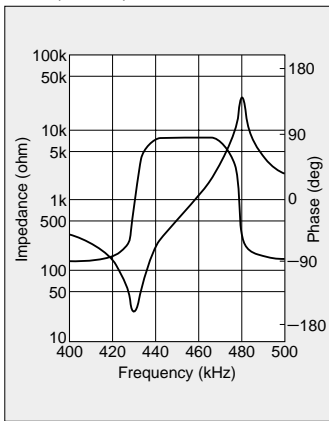
CDB (CDBM) 455C3



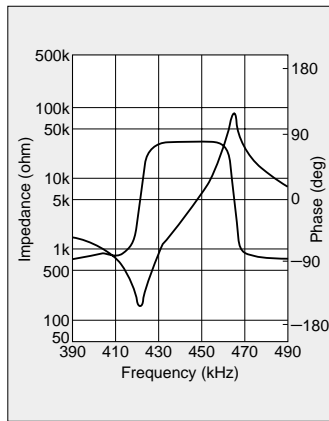
CDBM455C4



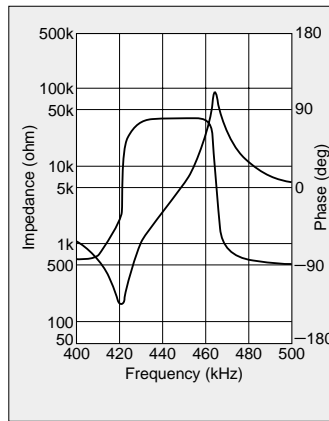
CDB (CDBM) 455C10



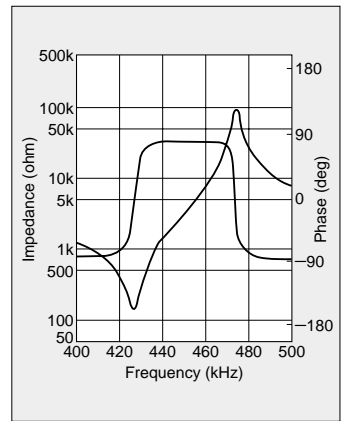
CDBM455C15



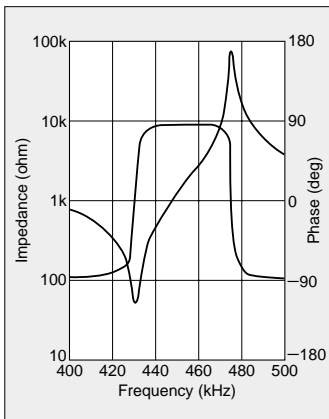
CDBM455C25



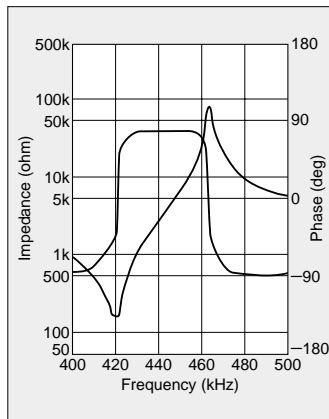
CDBM455C31



CDBC455CX31

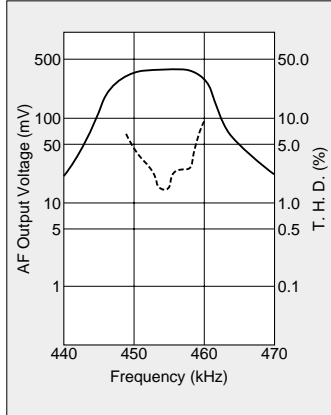


CDBM455C33

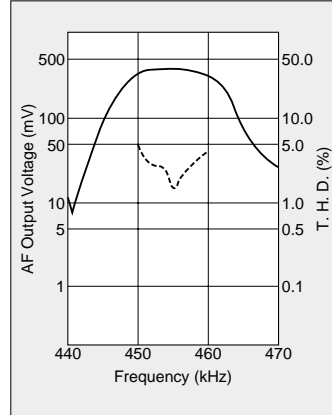


● Recovered Audio Curve Specification

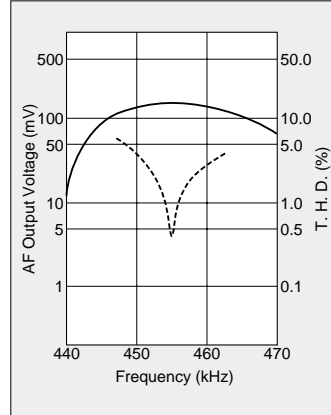
CDB (CDBM) 455C7/MC3357



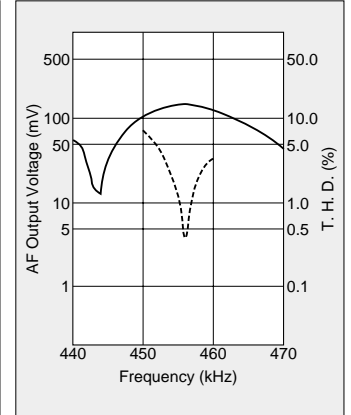
CDBC455CX7/MC3357



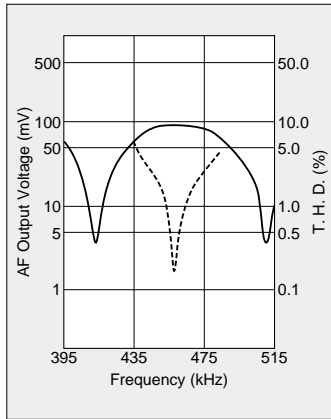
CDB (CDBM) 455C9/NE604



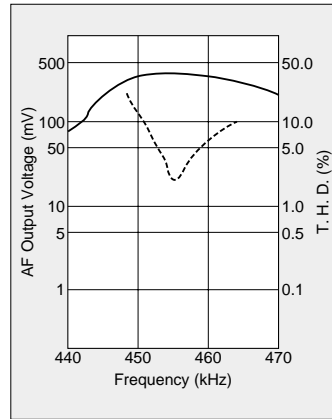
CDBC455CX9/NE604



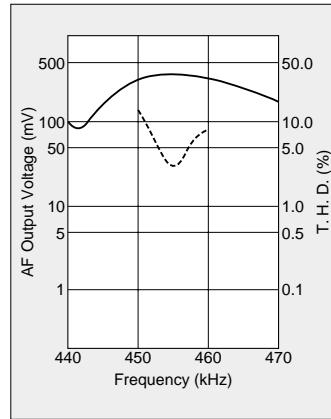
CDB (CDBM) 455CL9/NE604



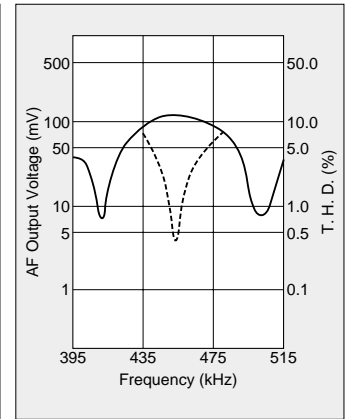
CDB (CDBM) 455C13A/CXA1003BM



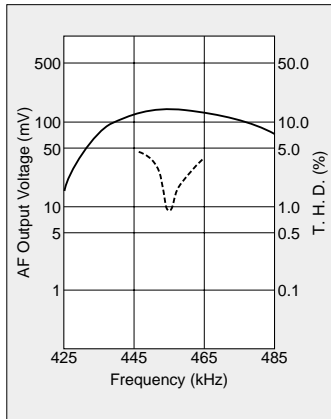
CDBC455CX13/CXA1003BM



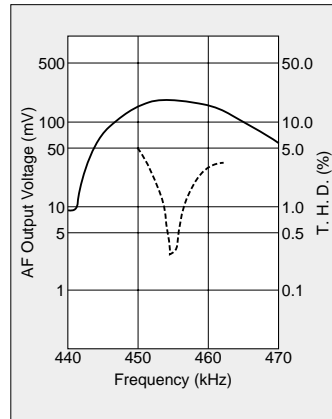
CDB (CDBM) 455CL13/CXA1003BM



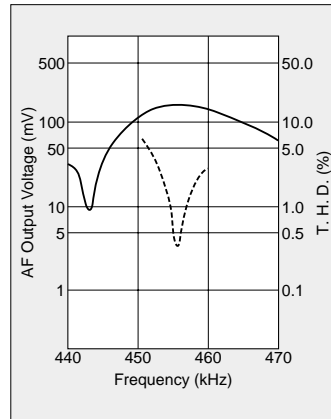
CDBC455CLX13/CXA1003BM



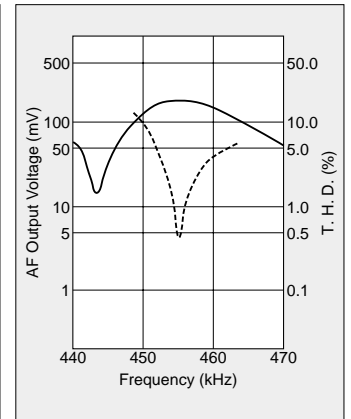
CDB (CDBM) 455C16/MC3372



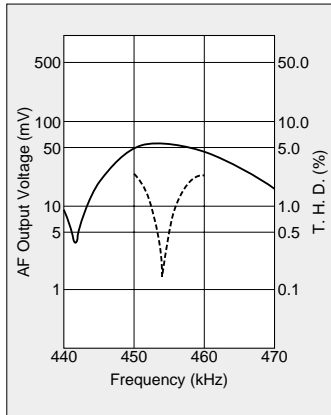
CDBC455CX16/MC3372



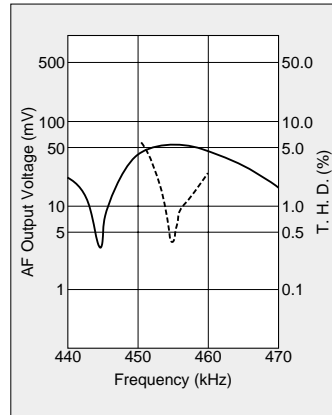
CDBM455C18/MC3371



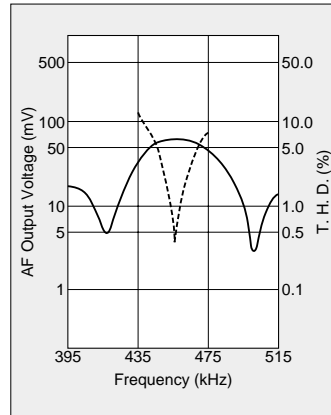
CDB (CDBM) 455C21/TA31132



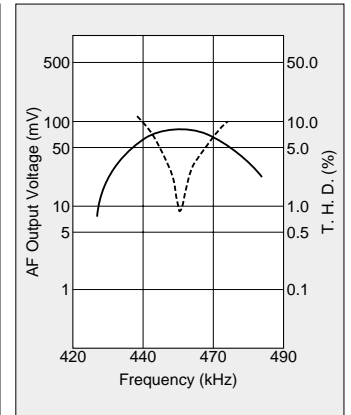
CDBC455CX21/TA31132



CDB (CDBM) 455CL21/TA31132

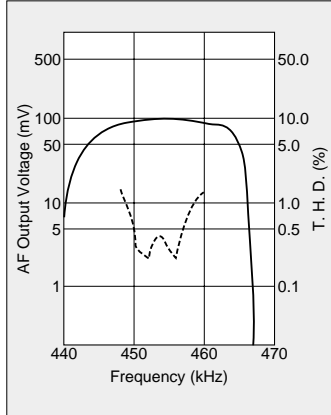


CDBC455CLX21/TA31132

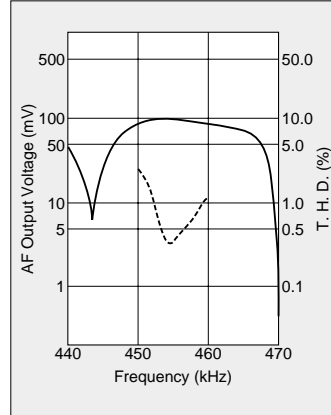


● Recovered Audio Curve Specification

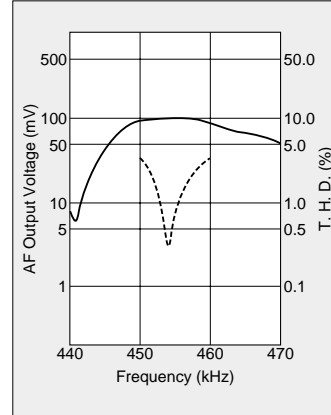
CDB (CDBM) 455C24/TA31136



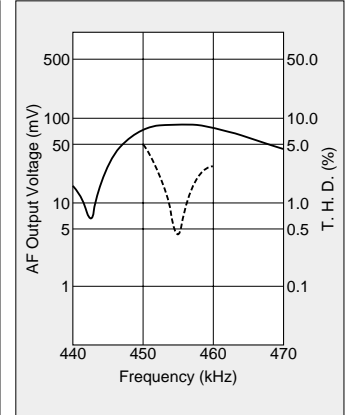
CDBC455CX24/TA31136



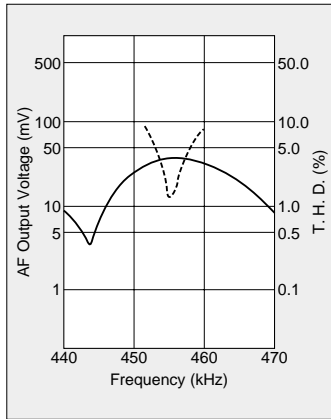
CDB (CDBM) 455C27/TK10487



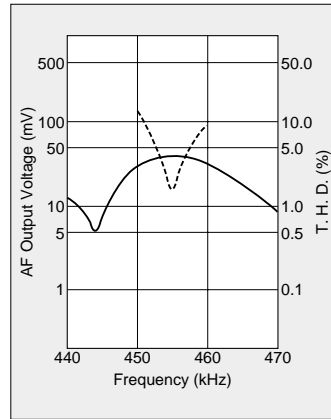
CDBC455CX27/TK10487



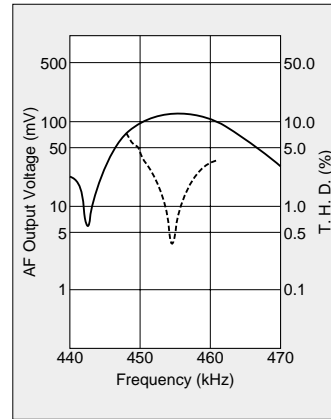
CDB (CDBM) 455C28/TA31142



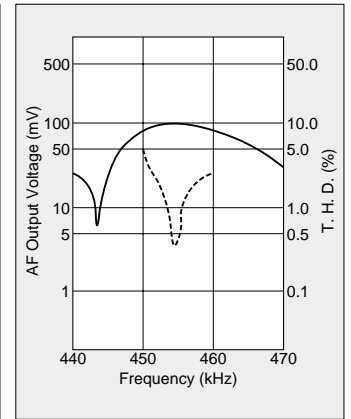
CDBC455CX28/TA31142



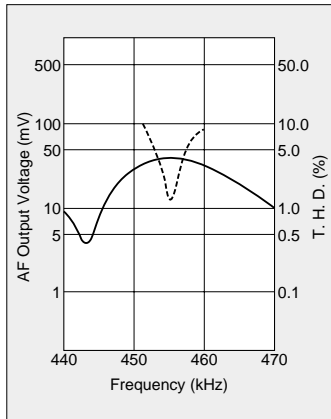
CDB (CDBM) 455C29/NE605



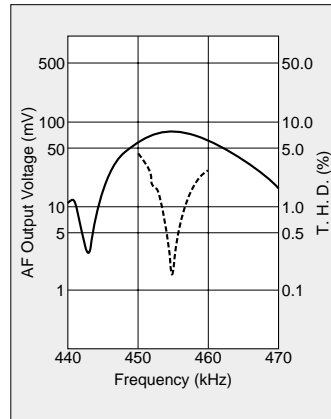
CDBC455CX29/NE605



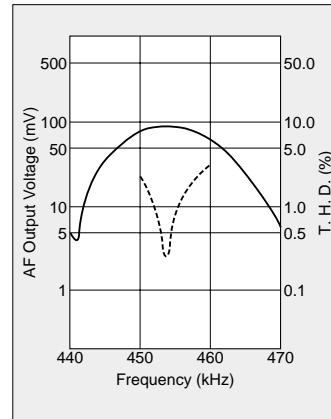
CDB (CDBM) 455C30/TK14501



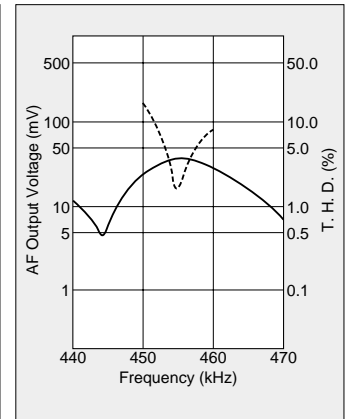
CDBC455CX30/TK14501



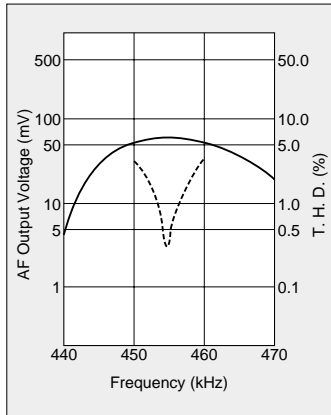
CDB (CDBM) 455C32/TA31143



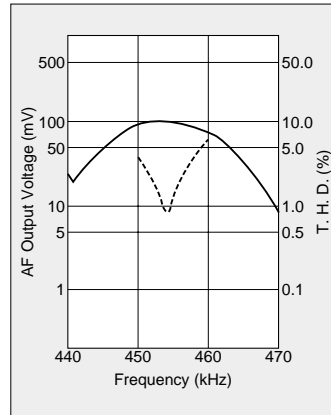
CDBC455CX32/TA31143



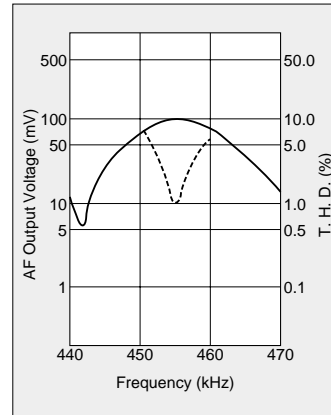
CDB (CDBM) 455C34/MC13136



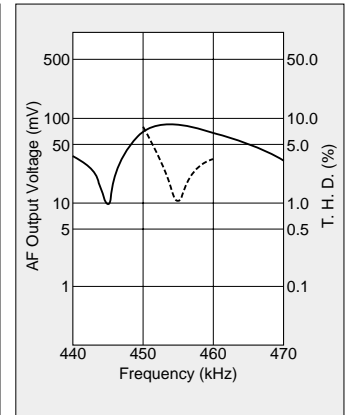
CDB (CDBM) 455C35/TK10930



CDBC455CX35/TK10930

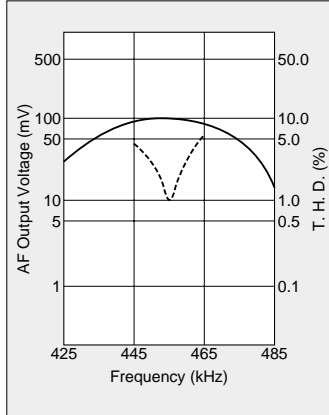


CDBM455C36/NE (SA) 606/616

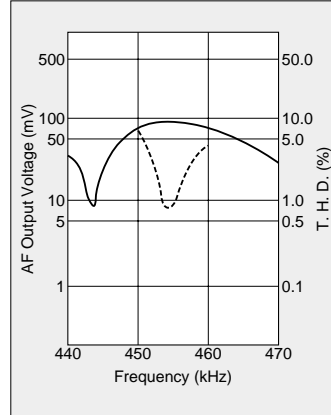


● Recovered Audio Curve Specification

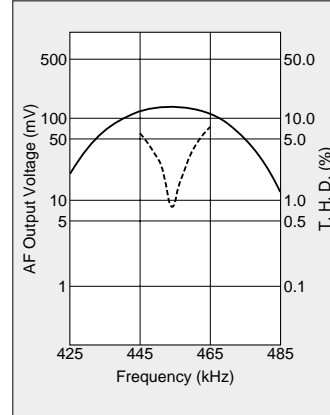
CDBC455CLX36/NE (SA) 606/616



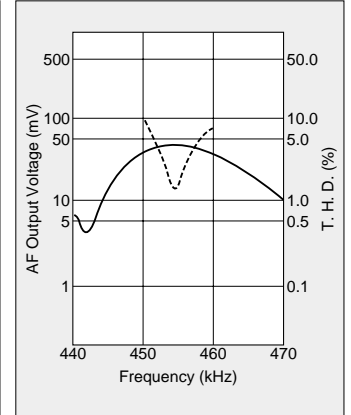
CDBM455C39/NE (SA) 607/617



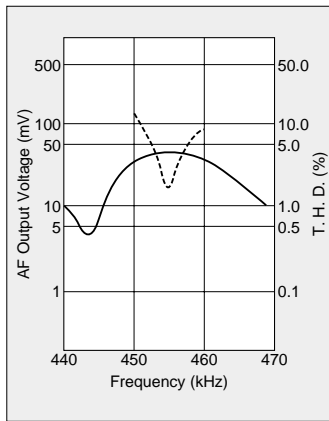
CDBC455CLX39/NE (SA) 607/617



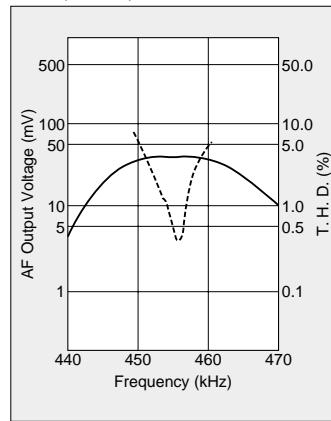
CDBM455C40/TA31145



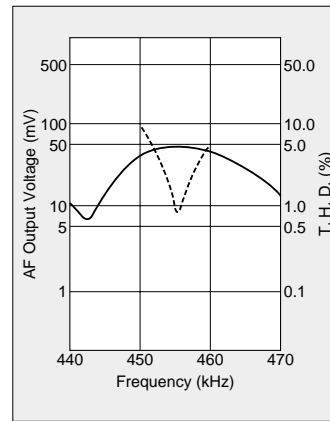
CDBC455CX40/TA31145



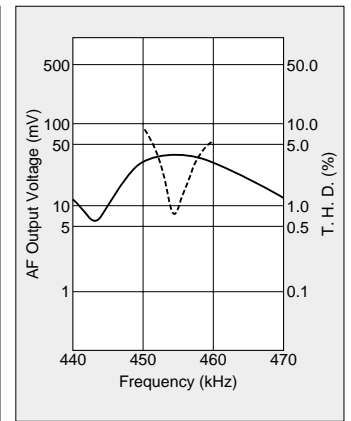
CDB (CDBM) 455C42/TK14590



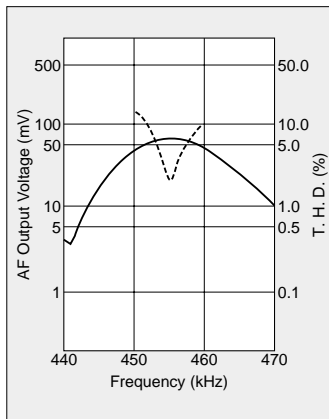
CDBM455C49/MC3361



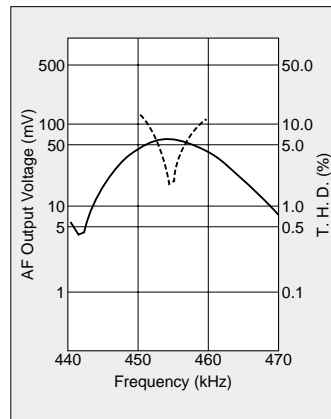
CDBC455CX49/MC3361



CDBM455C50/CXA3117

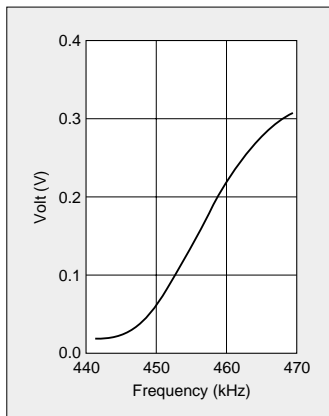


CDBC455CX50/CXA3117

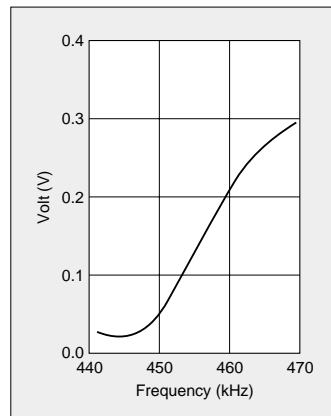


● S Curve Specification

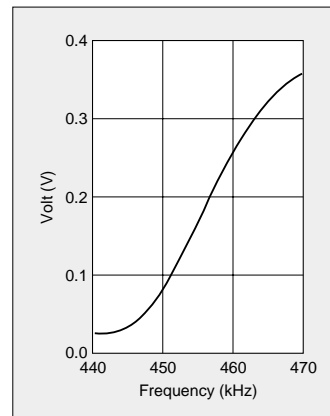
CDBM455C47/TA31147



CDBC455CX47/TA31147



CDBM455C54/TA31149



CDBC455CX54/TA31149

