



DISCRIMINATOR



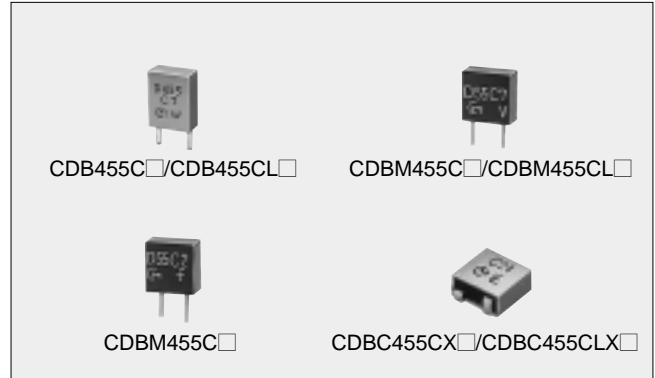
Ceramic Discriminator for Communications Equipment

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.

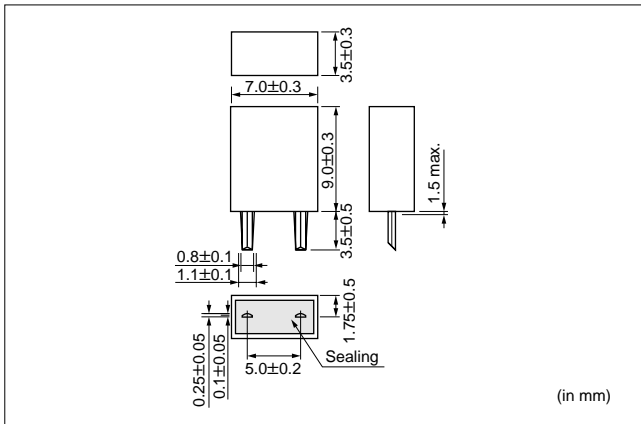
FEATURES

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 $+85^{\circ}\text{C}$

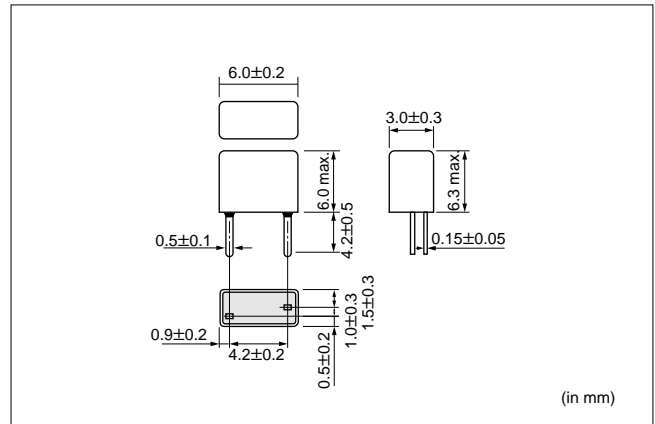


DIMENSIONS

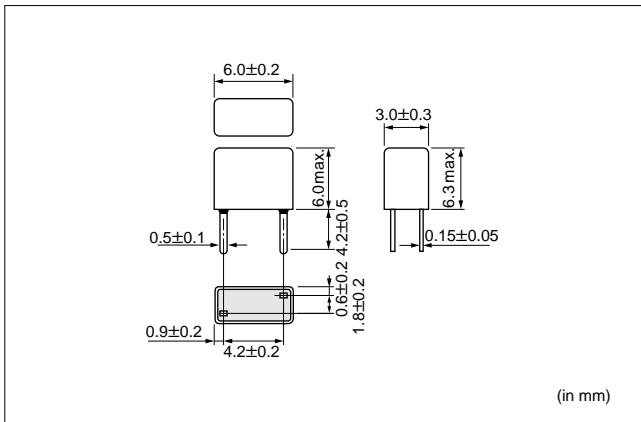
● CDB455C□/CDB455CL□



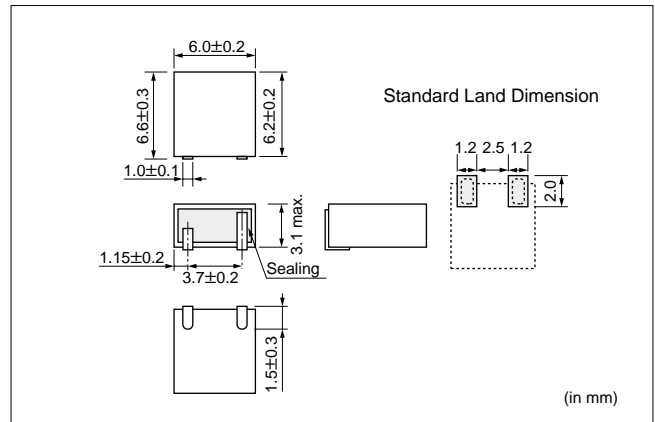
● CDBM455C□/CDBM455CL□



● 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.	—		

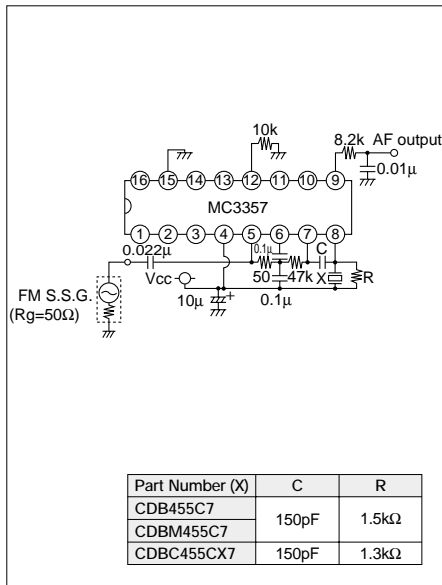
Part Number	Character-istics Recovered Audio 3dB Bandwidth (from 455kHz)	Recovered Audio Output (at 455kHz)	Distortion		I C	Application
			at 455kHz	within 455±8kHz		
CDB455C29	±4.0kHzmin.	125±30mV	2.5%max.	—	NE605	Cordless Telephone, Communications Equipment
CDBM455C29	±4.0kHzmin.	125±30mV	2.5%max.	—		
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

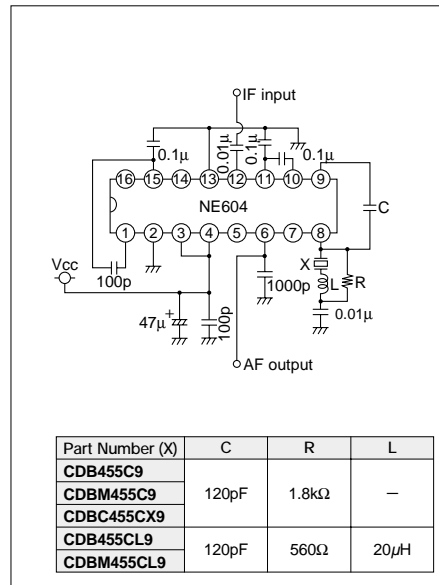
Part Number	Character-istics Nominal Center Frequency	S Curve Characteristics i) Output Voltage at 450kHz	S Curve Characteristics ii) Difference Voltage Between at 450-4.8kHz and at 450+4.8kHz	I C	Application
CDBC455CX47	455kHz	130±20mV	150±15mV		
CDBM455C54	455kHz	165±20mV	170±20mV	TA31149	Pager
CDBC455CX54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

TEST CIRCUIT

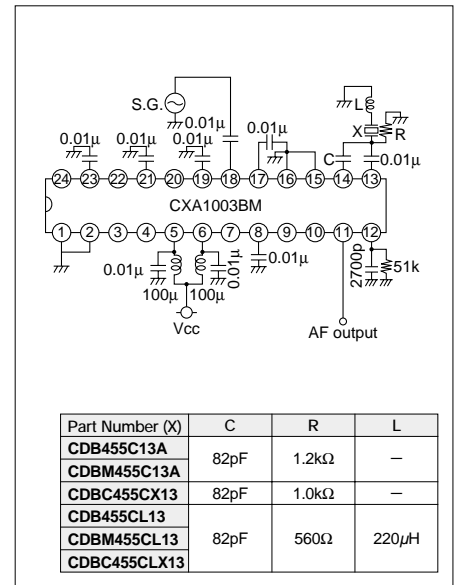
MC3357



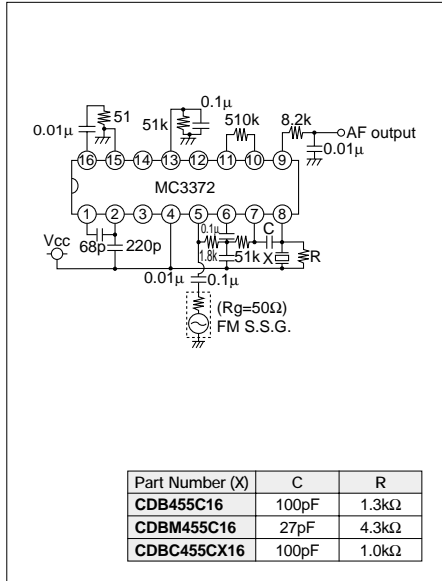
NE604N



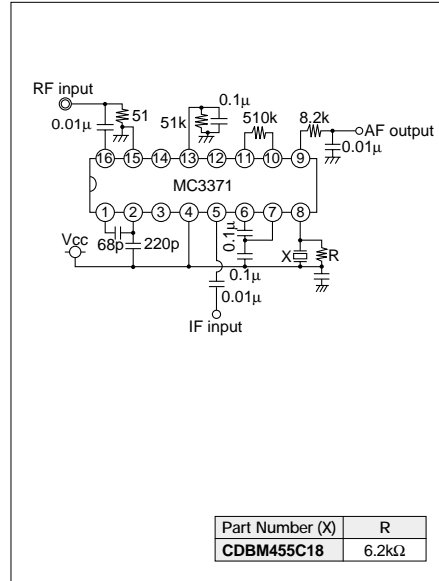
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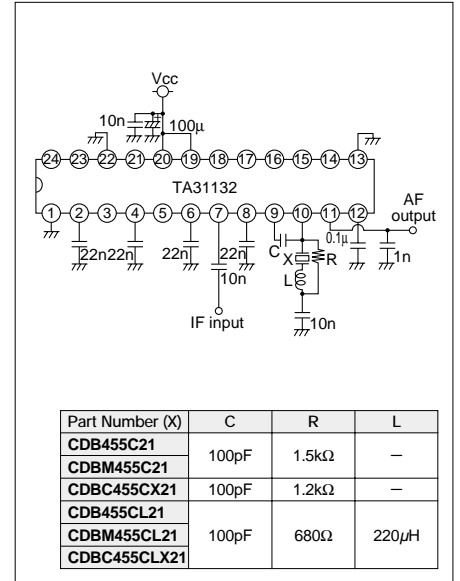
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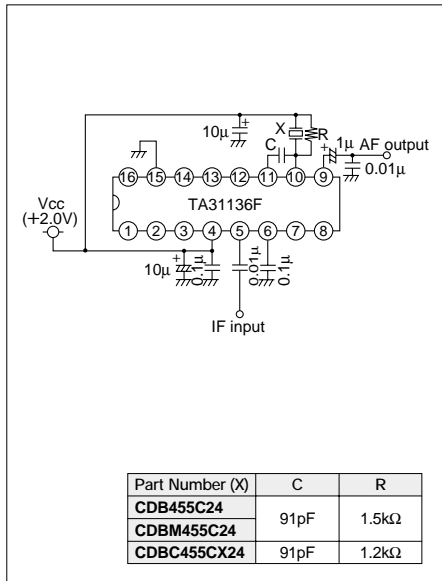
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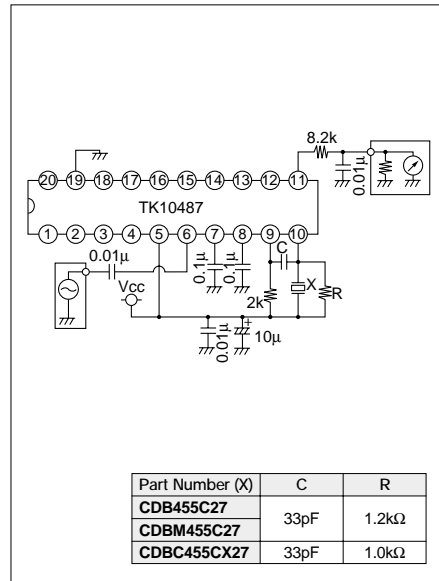
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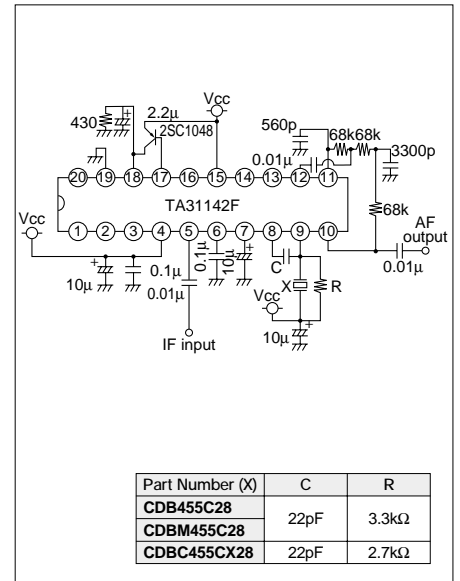
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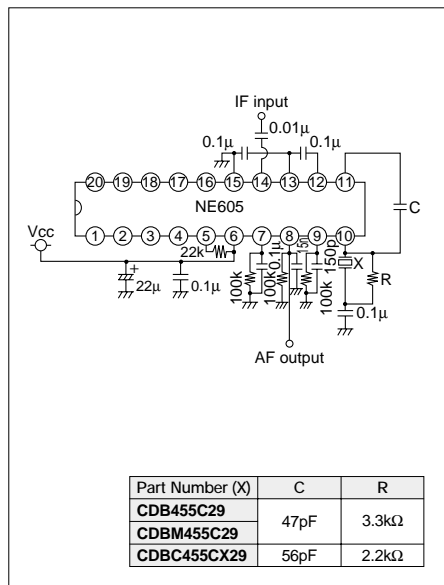
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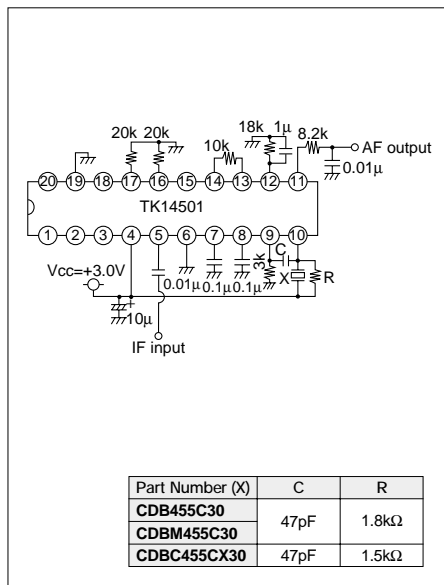
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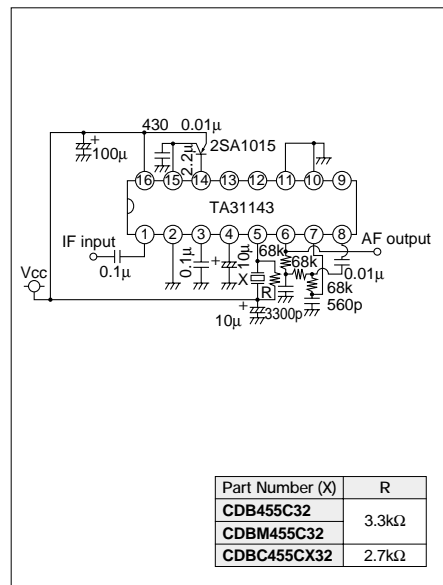
NE605



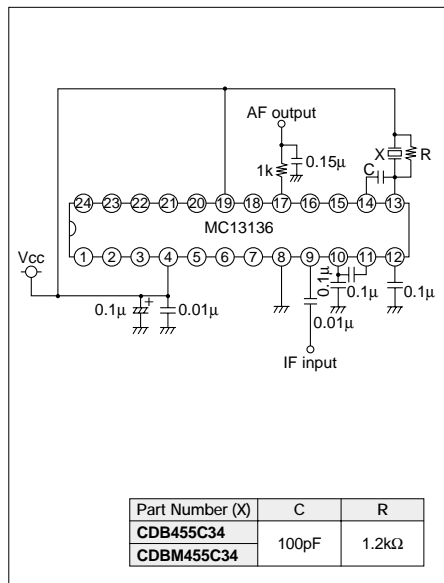
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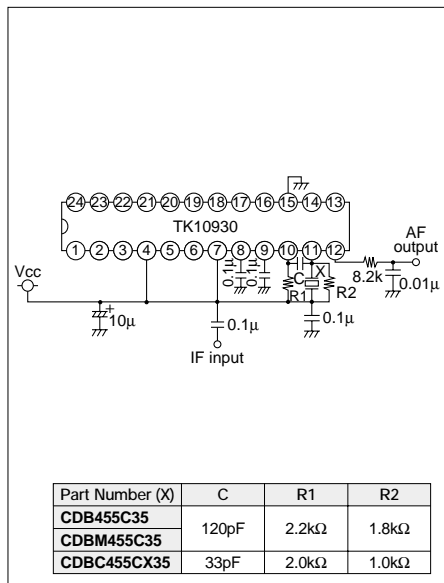
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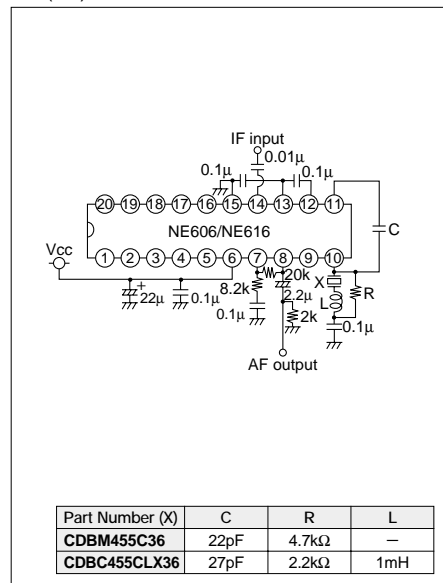
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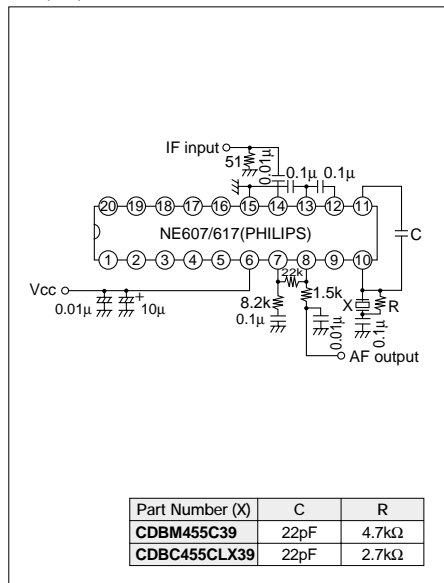
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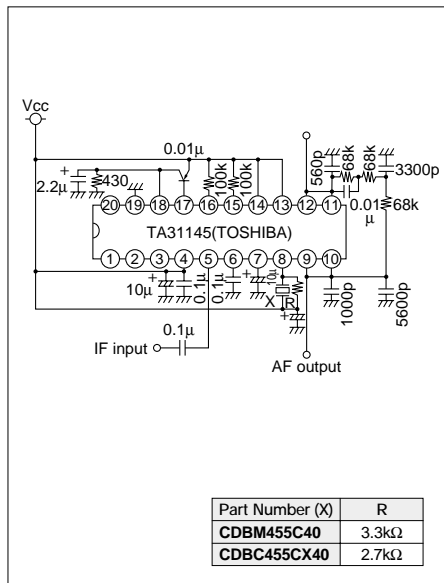
NE (SA) 606/616



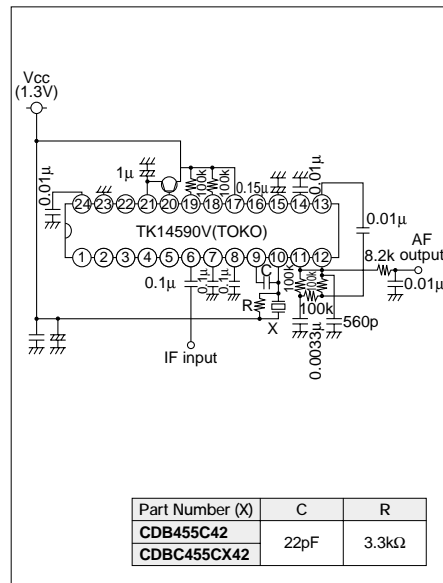
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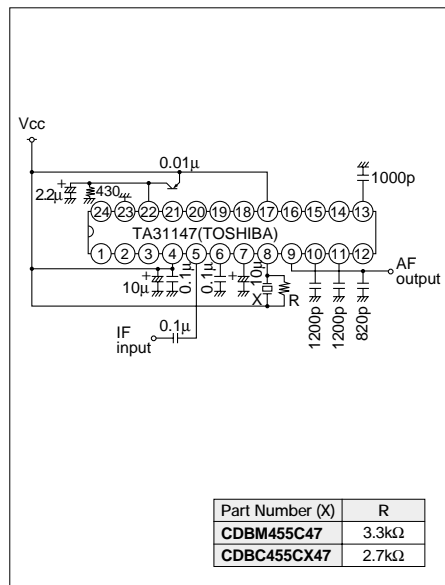
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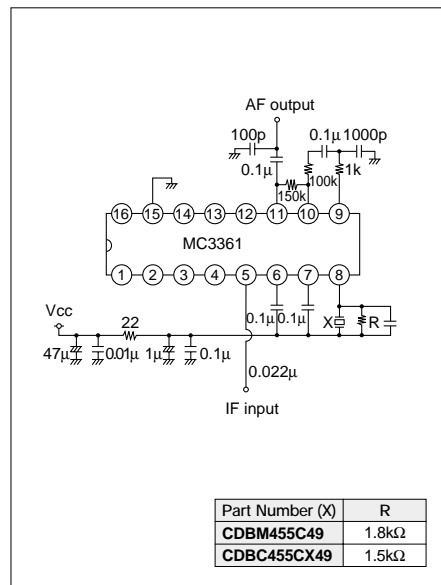
TK14590/14591



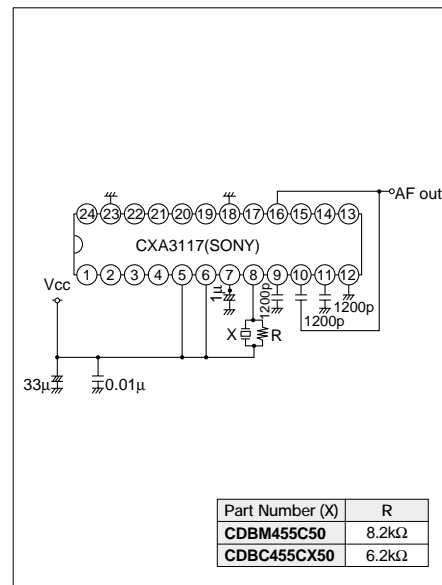
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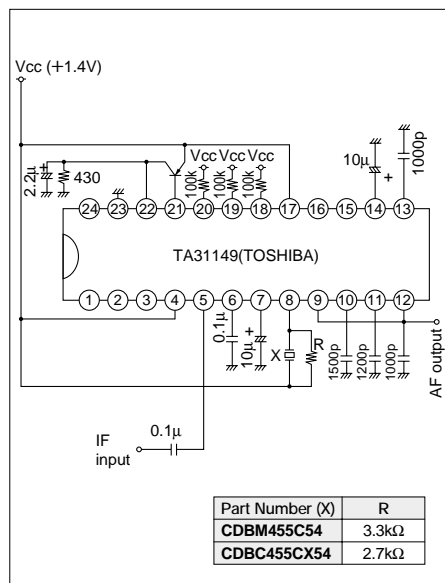
MC3361



CXA3117



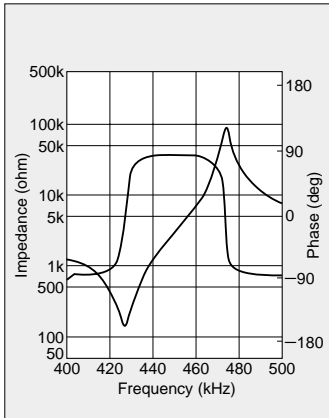
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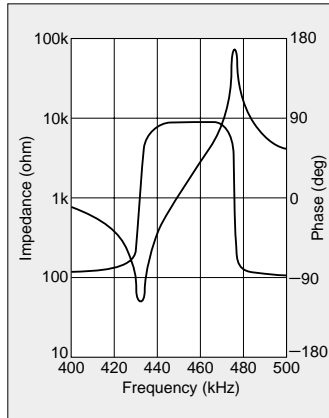
■ FREQUENCY CHARACTERISTICS

● Impedance Curve Specification

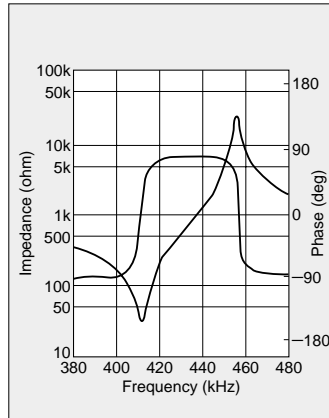
CDBM455C2



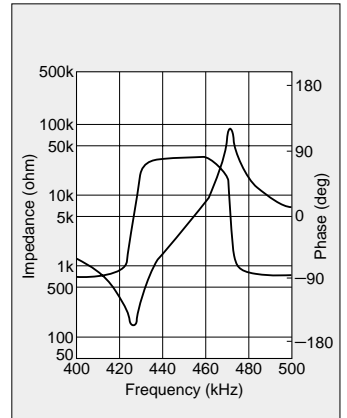
CDBC455CX2



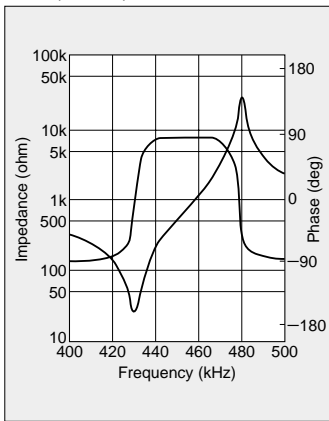
CDB (CDBM) 455C3



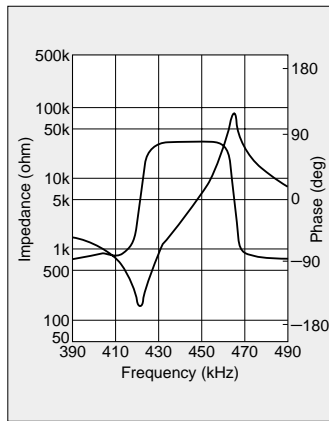
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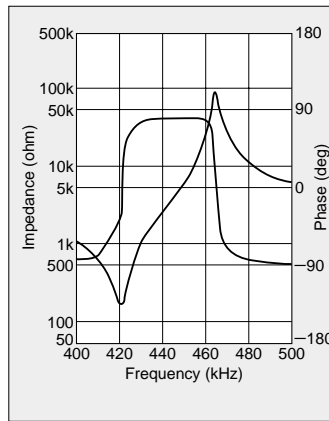
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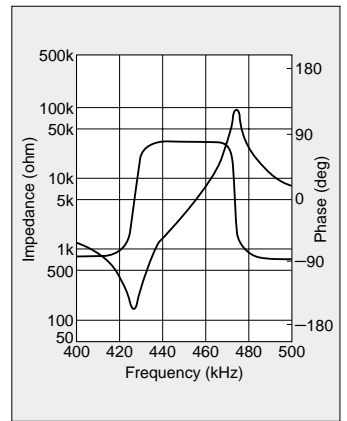
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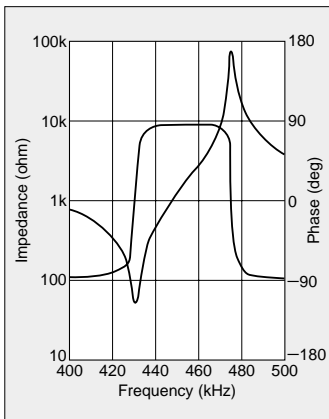
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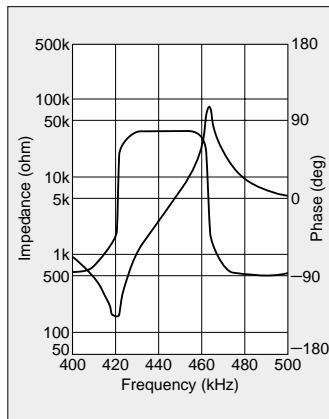
CDBM455C31



CDBC455CX31

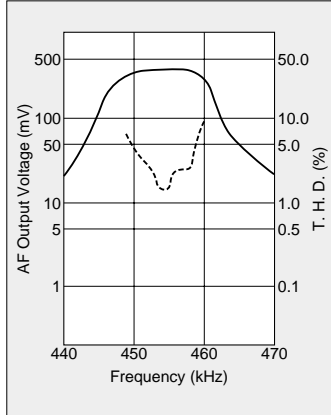


CDBM455C33

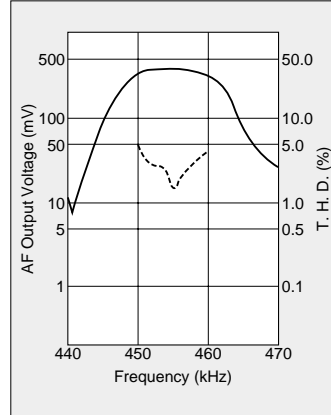


● Recovered Audio Curve Specification

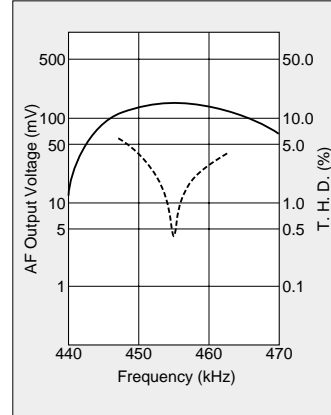
CDB (CDBM) 455C7/MC3357



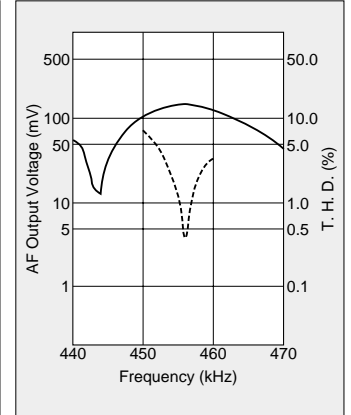
CDBC455CX7/MC3357



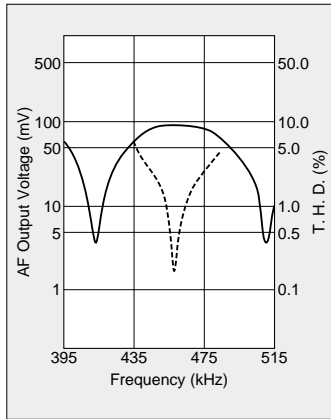
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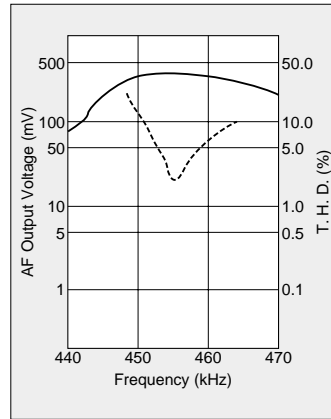
CDBC455CX9/NE604



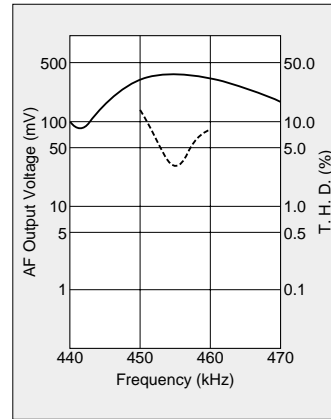
CDB (CDBM) 455CL9/NE604



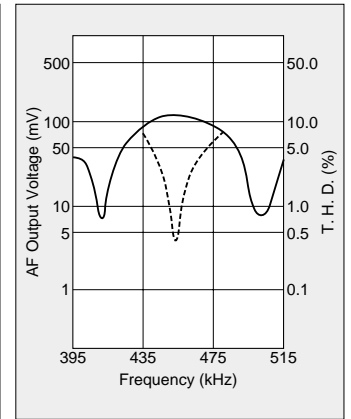
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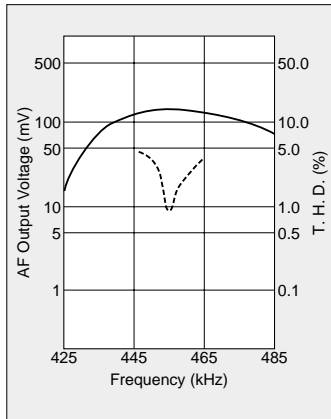
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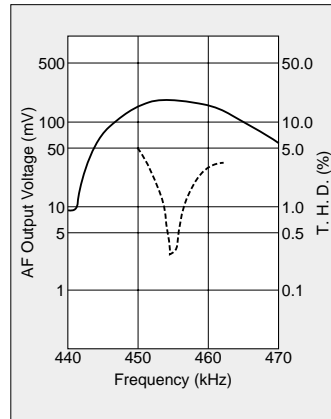
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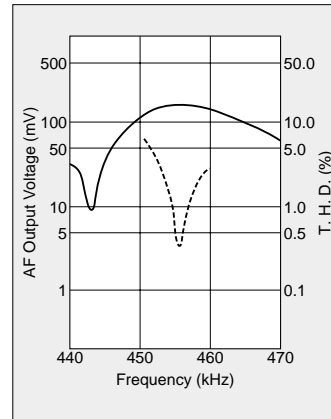
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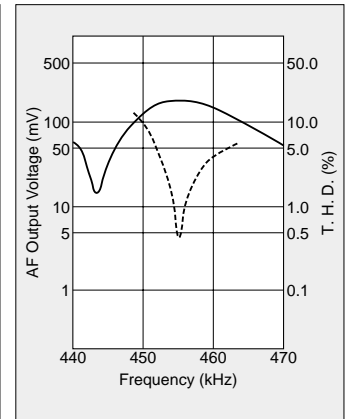
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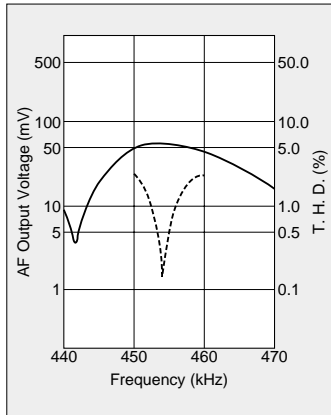
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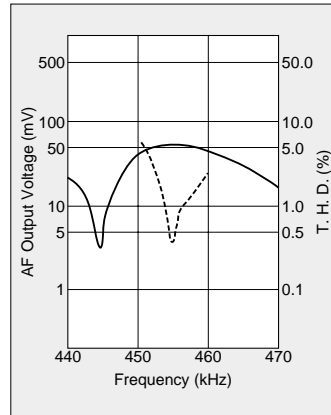
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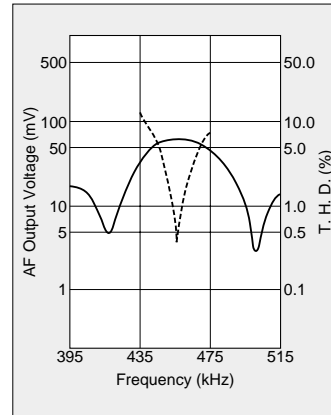
CDB (CDBM) 455C21/TA31132



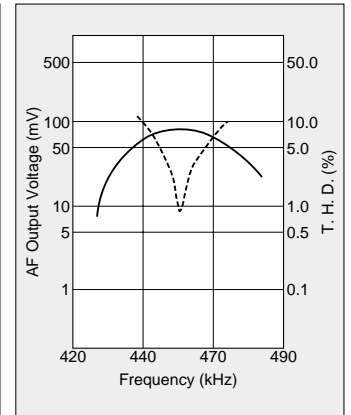
CDBC455CX21/TA31132



CDB (CDBM) 455CL21/TA31132

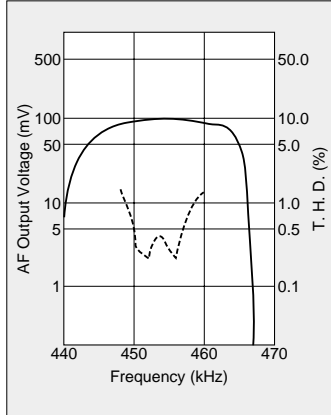


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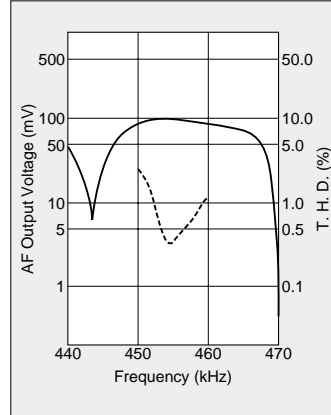


● Recovered Audio Curve Specification

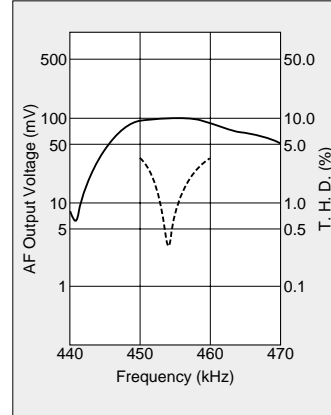
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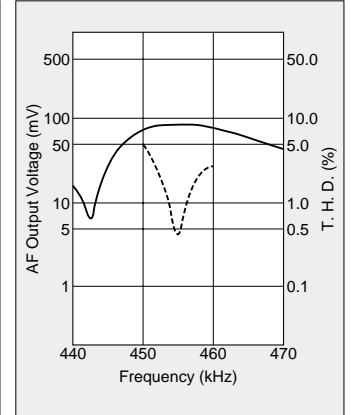
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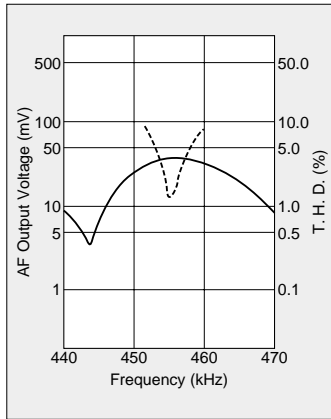
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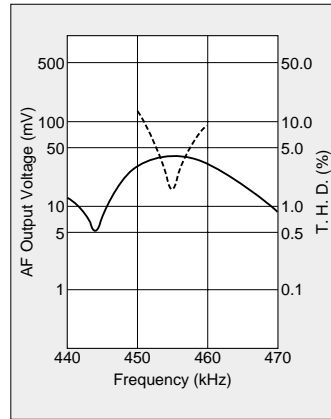
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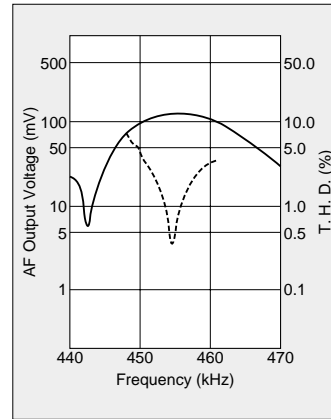
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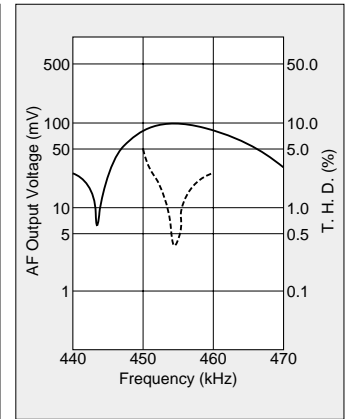
CDBC455CX28/TA31142



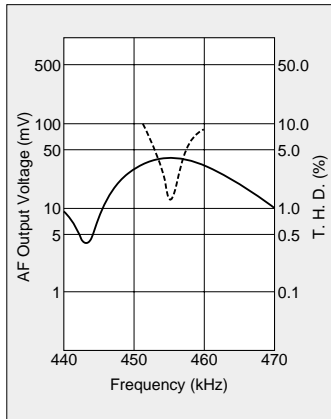
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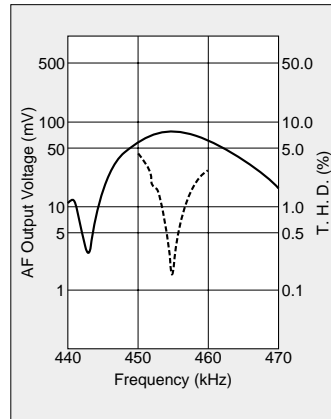
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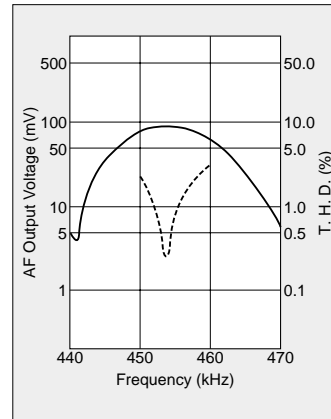
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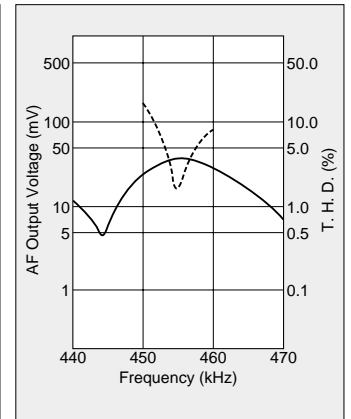
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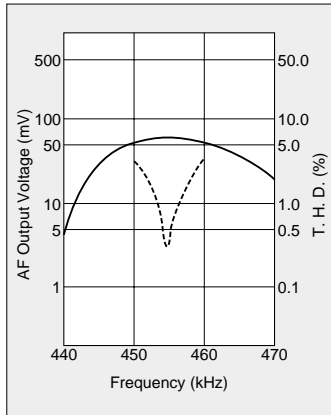
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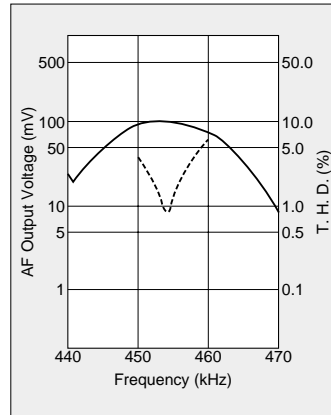
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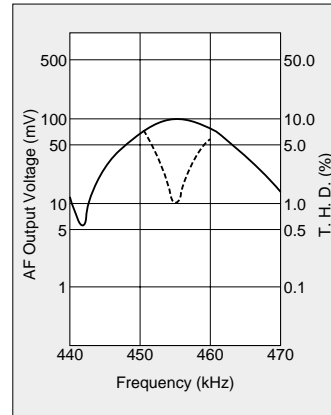
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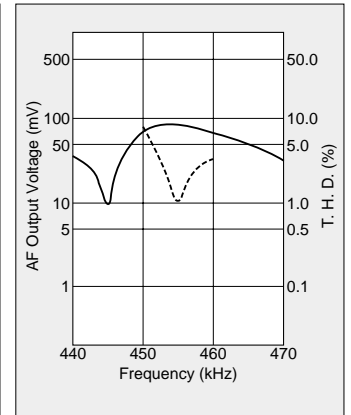
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CDBC455CX35/TK10930

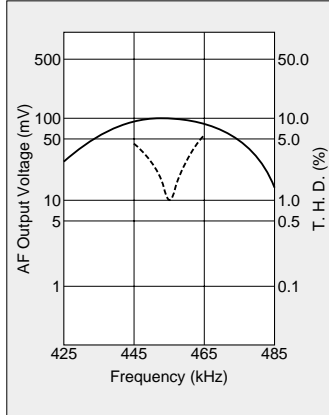


CDBM455C36/NE (SA) 606/616

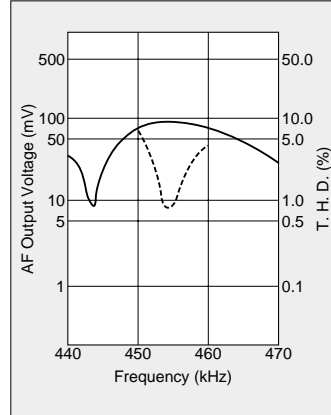


● Recovered Audio Curve Specification

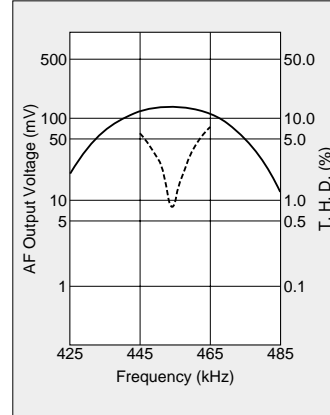
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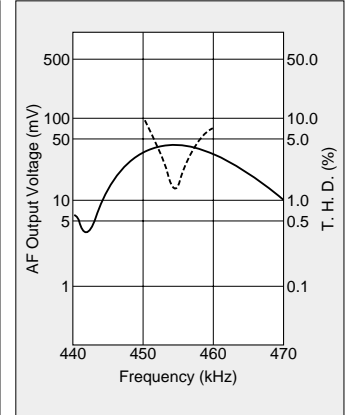
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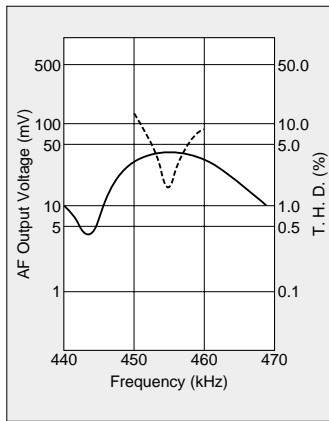
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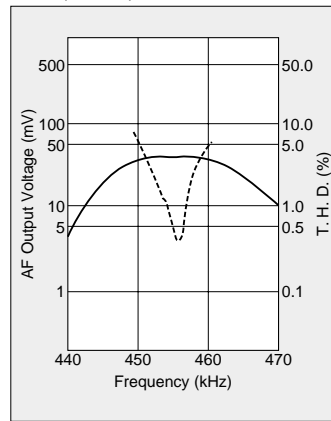
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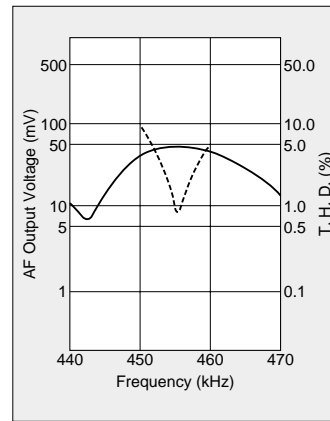
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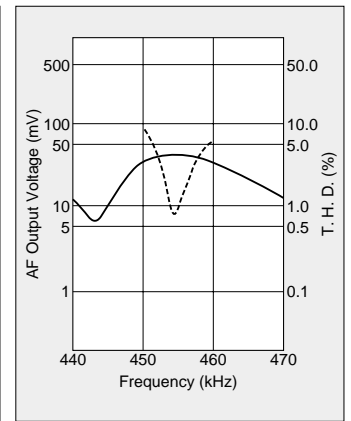
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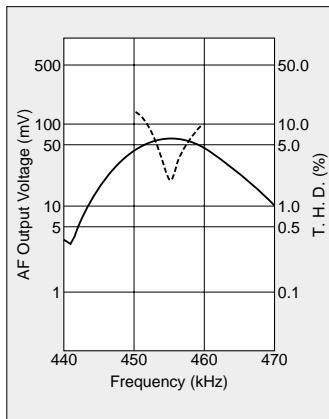
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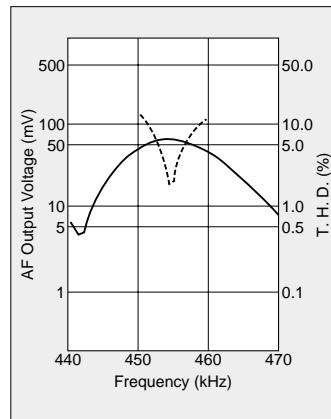
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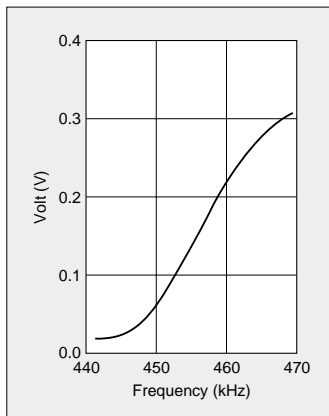


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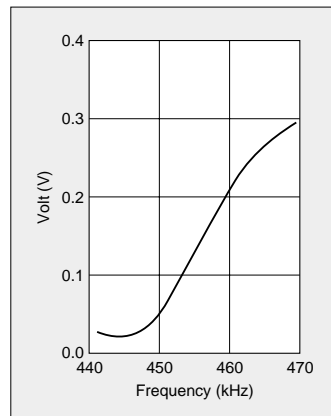


● S Curve Specification

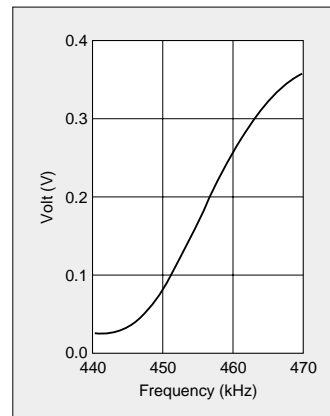
CDBM455C47/TA31147



CDBC455CX47/TA31147



CDBM455C54/TA31149



CDBC455CX54/TA31149

