

REV. Status
REVISION - 12/12/95 TS
REVISION A ADDED RoHS 12/01/05 MP
REVISION B ADDED TEMP RATING 4/28/15 MP

AUDIO COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 10mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 200KΩCT WITH 1KΩCT LOAD ON SECONDARY.

MODEL NUMBER
MET-01

A. Electrical Specifications (@ 20 ° C)

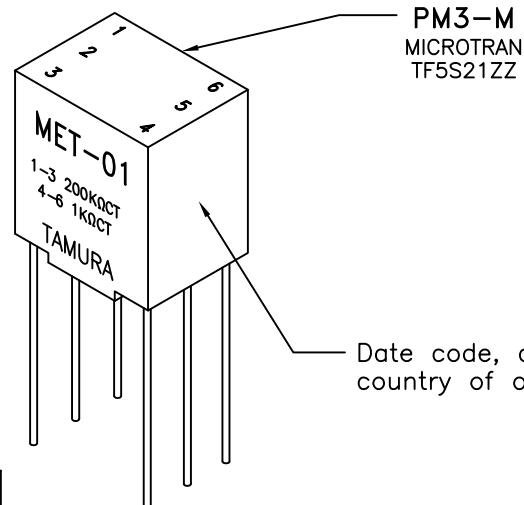
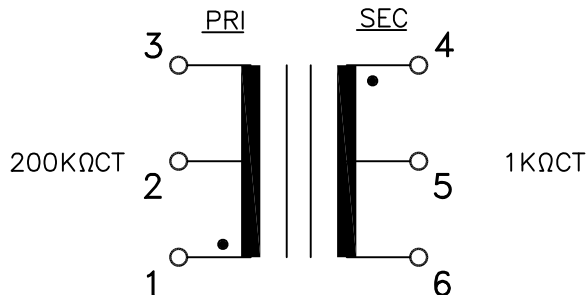
1. Pri Source Impedance; 200K Ω CT
2. Sec Load Impedance; 1KΩ CT
3. Pri DC Current; 0 mA MAX
4. Operating Level; 10mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
6. Longitudinal Balance; 60 dB MIN @ 1 KHz
7. DC Resistance;
 - (1-3) 5300 Ω ±20%
 - (4-6) 120 Ω ±20%
8. Turns Ratio; (1-3) : (4-6) = 14.1 : 1 ±2%
9. Dielectric Strength; 500 Vrms 0.5 minute @ Pri - Sec



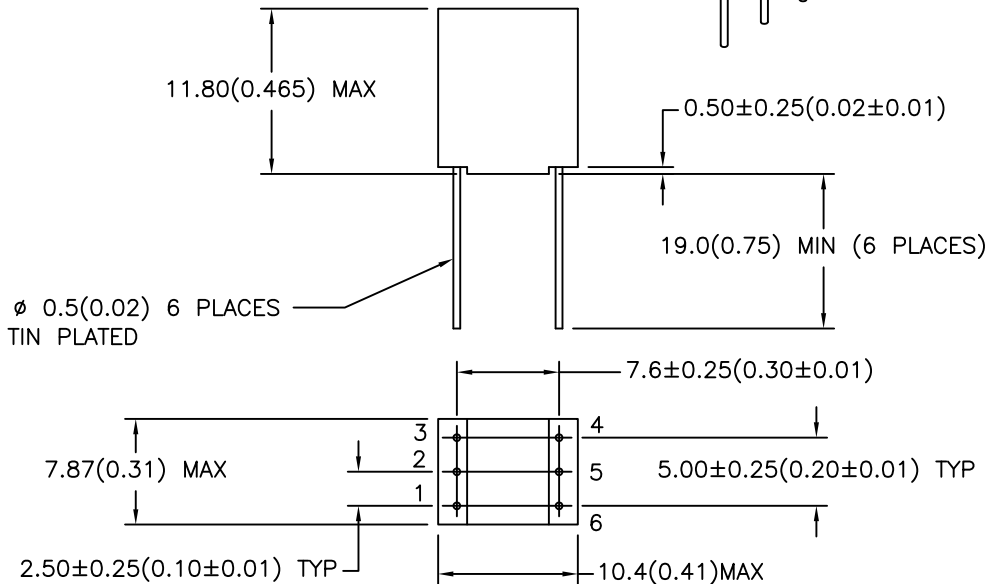
B. Marking; MET-01, TAMURA, Primary and Secondary Impedance, PM3-M, MICROTRAN, TF5S21ZZ, date code and country of origin

- C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER:

MATHI P.

SAFETY ENGINEER

DRAWING CONTROL NO. P-A1-11490	REV B	MODEL DESCRIPTION AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MODEL SPECIFICATION MET-01
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE		TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536	DIM: mm[In] SCL: 2/1 SH: 1 OF 1

APPROVED:

M. PITCHAI

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REV. Status

REVISION -
02/29/96 TS

REVISION A
ADDED RoHS
12/01/05 MP

REVISION B
NOTE 7 WAS ±20%
04/19/06 MP

REVISION C
ADDED TEMP
RATING
4/29/15 MP

AUDIO COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 30mW MAX IN SECONDARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 25KΩCT WITH 1KΩCT LOAD ON SECONDARY.

A. Electrical Specifications (@ 20 ° C)

1. Pri Source Impedance; 25KΩCT
2. Sec Load Impedance; 1KΩCT
3. Pri DC Current; 0.5 mA MAX
4. Operating Level; 30 mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
6. Longitudinal Balance; 60 dB MIN @ 1 KHz
7. DC Resistance; (1-3) 1600Ω ±20% (4-6) 95Ω -20%, +30%
8. Turns Ratio; (1-3) : (4-6) = 5.00 : 1 ±2%
9. Dielectric Strength; 60Hz 500Vrms 0.5 minute @ Pri - Sec



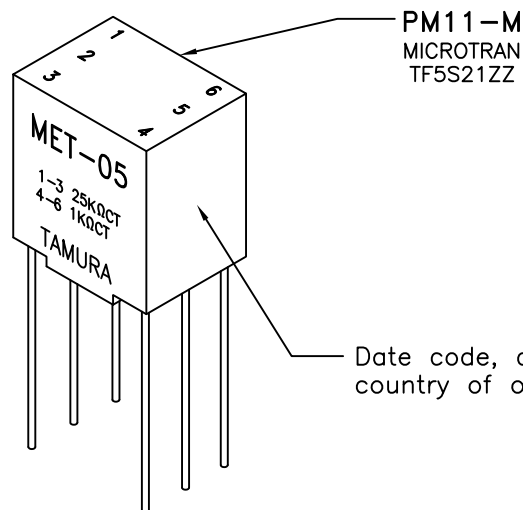
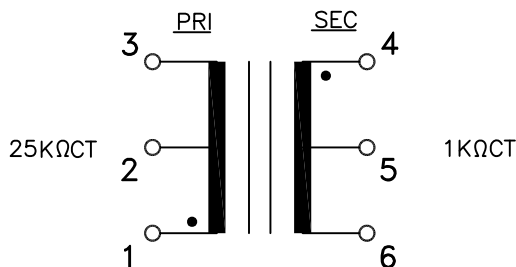
MODEL NUMBER

MET-05

B. Marking; MET-05, TAMURA, Primary and Secondary Impedance, PM11-M, MICROTRAN, TF5S21ZZ, date code and country of origin

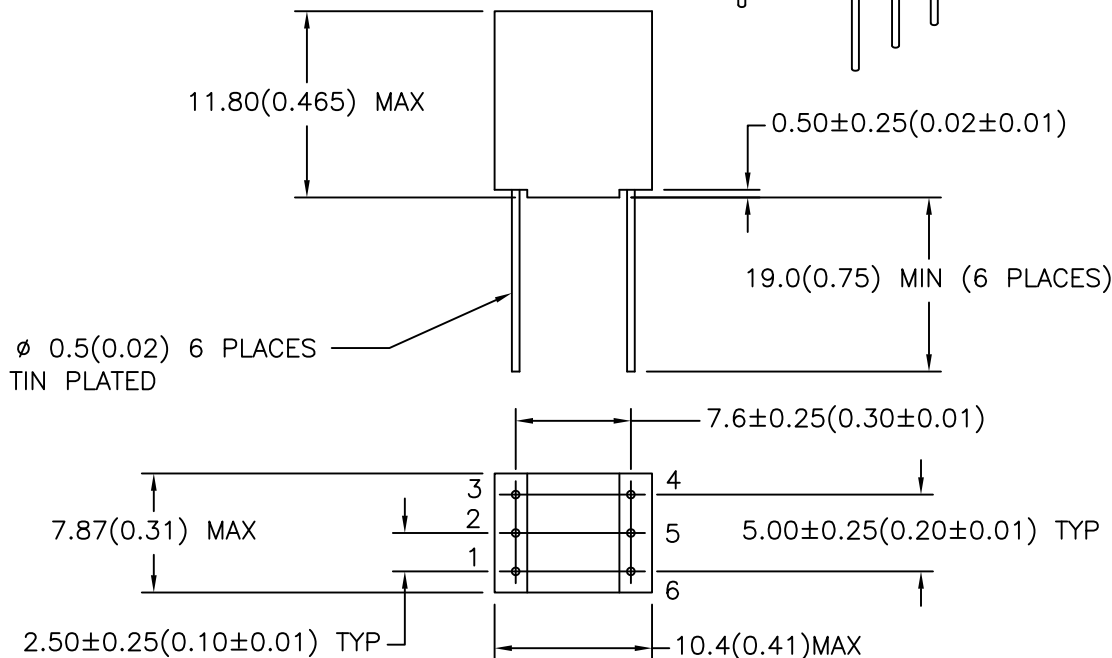
C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



Date code, and country of origin

E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER:

MATHI P.

SAFETY ENGINEER

DRAWING CONTROL NO.	REV	MODEL DESCRIPTION	MODEL SPECIFICATION
P-A1-11577	C	AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MET-05
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE		TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536	DIM: mm[In] SCL: 2/1 SH: 1 OF 1
APPROVED: M. PITCHAI			
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REV. Status
REVISION - 12/24/94 TS
REVISION A DCR (4-6) 1300Ω WAS 13000Ω 9/5/95 TS
REVISION B ADDED PM17-M MICROTRAN 10/03/95 TS
REVISION C ADDED RoHS 12/02/05 MP
REVISION D ADDED TEMP RATING 4/29/15 MP

TELECOMMUNICATION COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 40mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 10KΩCT WITH 10KΩCT LOAD ON SECONDARY.

MODEL NUMBER
MET-09

A. Electrical Specifications (@ 20 ° C)

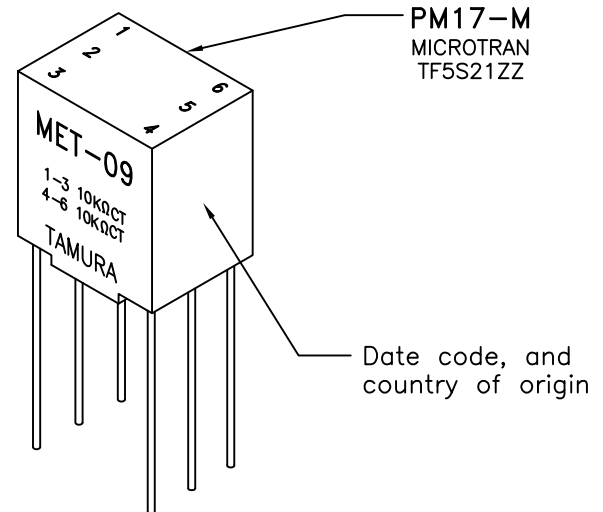
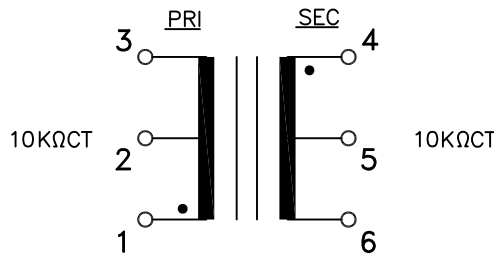
1. Pri Source Impedance; 10KΩ CT
2. Sec Load Impedance; 10KΩ CT
3. Pri DC Current; 1 mA MAX
4. Operating Level; 40 mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
6. Longitudinal Balance; 60 dB MIN @ 1 KHz
7. DC Resistance; (1-3) 1000Ω ±20% (4-6) 1300Ω ±20%
8. Turns Ratio; (1-3) : (4-6) = 1 : 1.00 ±2%
9. Dielectric Strength; 500 Vrms 0.5 minute @ Pri - Sec



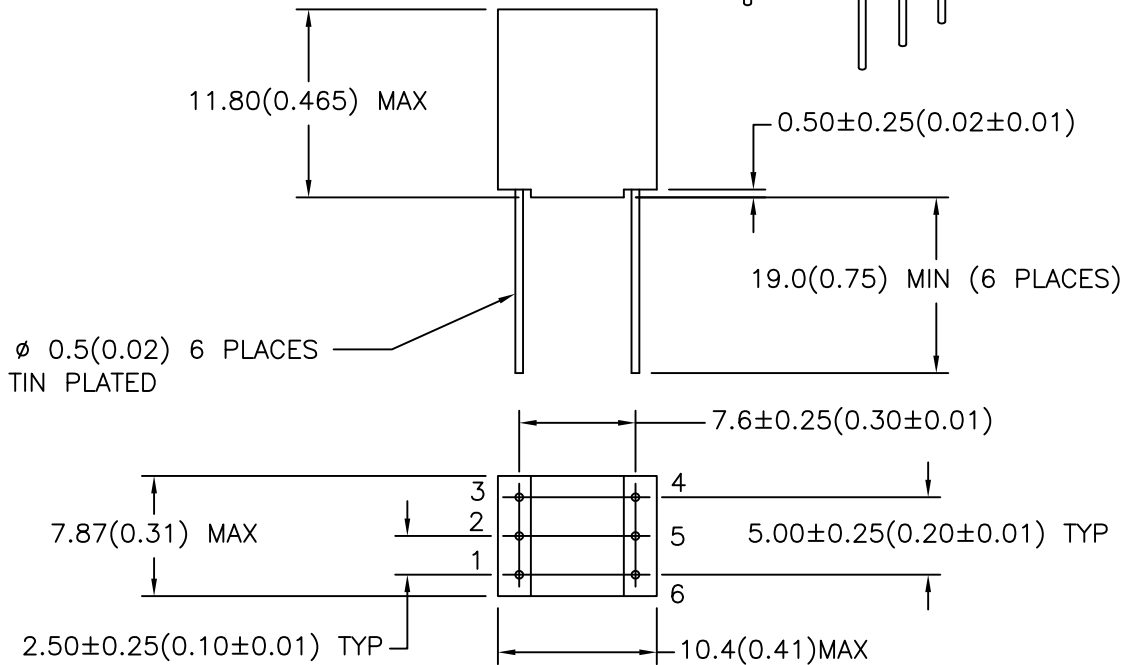
B. Marking; MET-09, TAMURA, Primary and Secondary Impedance, PM17-M, MICROTRAN, TF5S21ZZ, date code and country of origin

C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER:

MATHI P.

SAFETY ENGINEER

DRAWING CONTROL NO. P-A1-11225	REV D	MODEL DESCRIPTION AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MODEL SPECIFICATION MET-09
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE		TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536	DIM: mm [In] SCL: 2/1 SH: 1 OF 1

APPROVED:

M. PITCHAI

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REV. Status

REVISION - 09/09/97 TS
REVISION A REVISED AND REDRAWN ON CAD 9/9/97 TS
REVISION B ADDED RoHS 12/02/05 MP
REVISION C ADDED TEMP RATING 4/30/15 MP

TELECOMMUNICATION COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 40mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 10KΩCT WITH 2KΩCT LOAD ON SECONDARY.

MODEL NUMBER
MET-11

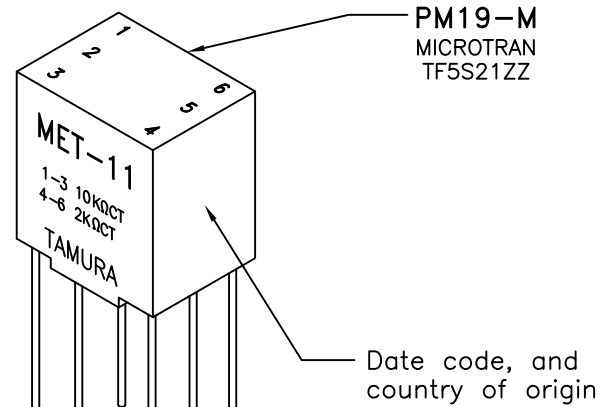
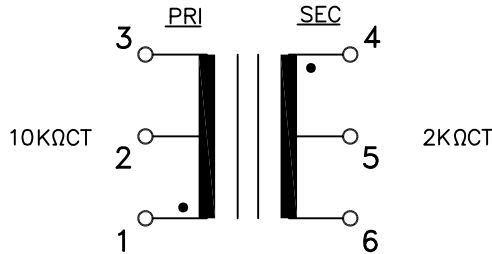


- A. Electrical Specifications (@ 20 ° C)
1. Pri Source Impedance; 10KΩ CT
 2. Sec Load Impedance; 2KΩ CT
 3. Pri DC Current; 1 mA MAX
 4. Operating Level; 40 mW MAX @ 300 Hz
 5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
 6. Longitudinal Balance; 60 dB MIN @ 1 KHz
 7. DC Resistance;
 - (1-3) 1000 Ω ±20%
 - (4-6) 300Ω ±20%
 8. Turns Ratio; (1-3) : (4-6) = 2.23 : 1 ±2%
 9. Dielectric Strength;
 - 500 Vrms 0.5 minute @ Pri - Sec

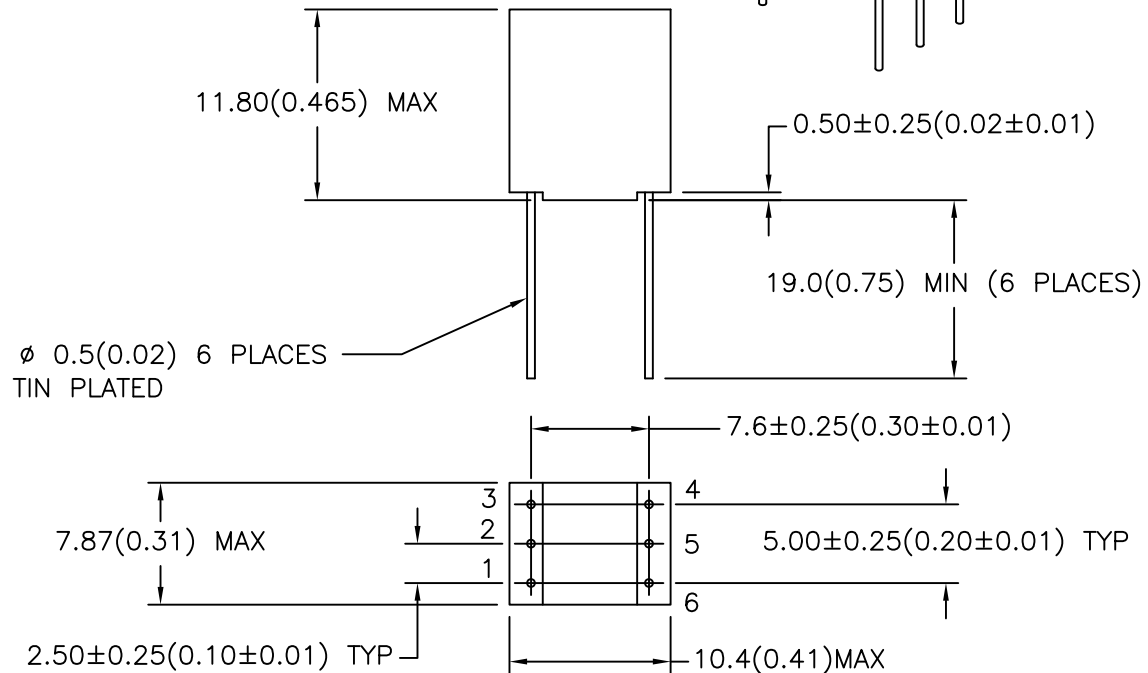
B. Marking; MET-11, TAMURA, Primary and Secondary Impedence, PM19-M, MICROTRAN, TF5S21ZZ, Date code, and Country of origin

C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER: MATHI P.	DRAWING CONTROL NO. P-A1-10285	REV C	MODEL DESCRIPTION AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MODEL SPECIFICATION MET-11
SAFETY ENGINEER			DIM: mm[In] SCL: 2/1 SH: 1 OF 1	
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE			TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536	
APPROVED: M. PITCHAI				
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REV. Status

REVISION - 19/01/95 TS
REVISION A REV'D MARKING ADDED PM29-M 12/17/96 TS
REVISION B ADDED RoHS 12/02/05 MP
REVISION C ADDED TEMP RATING 5/4/15 MP

TELECOMMUNICATION COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 40mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 10KΩCT WITH 500ΩCT LOAD ON SECONDARY.

MODEL NUMBER
MET-17

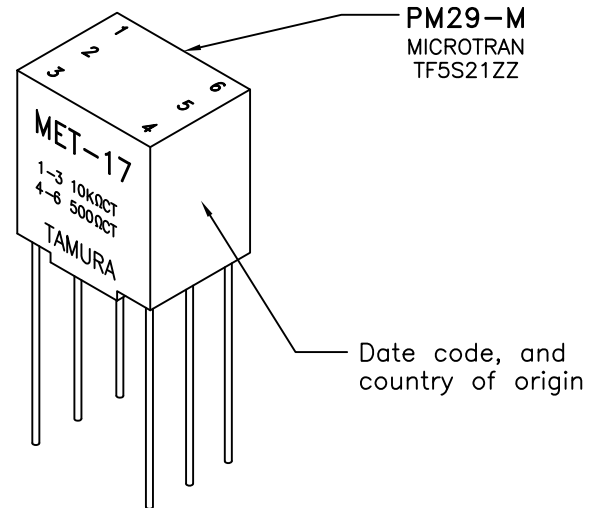
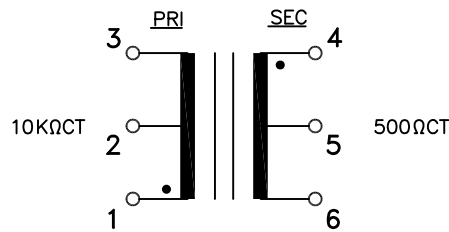


- A. Electrical Specifications (@ 20 ° C)
1. Pri Source Impedance; 10KΩ CT
 2. Sec Load Impedance; 500Ω CT
 3. Pri DC Current; 1 mA MAX
 4. Operating Level; 40 mW MAX @ 300 Hz
 5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
 6. Longitudinal Balance; 60 dB MIN @ 1 KHz
 7. DC Resistance;
 - (1-3) 1000Ω ±20%
 - (4-6) 80Ω ±20%
 8. Turns Ratio; (1-3) : (4-6) = 4.47 : 1 ±2%
 9. Dielectric Strength; 500 Vrms 0.5 minute @ Pri - Sec

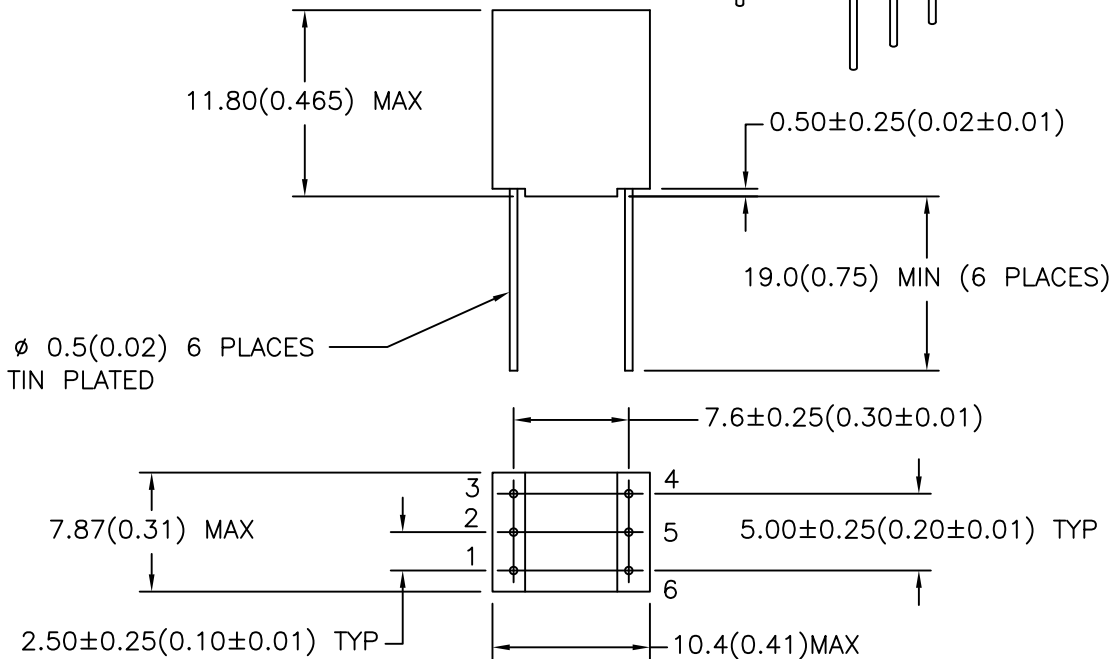
B. Marking; MET-17, TAMURA, Primary and Secondary Impedance, pin numbers, PM29-M, MICROTRAN, TF5S21ZZ, 196-date code and country of origin

C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)	
≤ 4	± 0.2
4 ≤ 20	± 0.3
20 ≤ 50	± 0.4

PREPARED BY:

C. POPPE

ENGINEER: MATHI P.	DRAWING CONTROL NO. P-A1-11406	REV C	MODEL DESCRIPTION AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MODEL SPECIFICATION MET-17
SAFETY ENGINEER	CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE			DIM: mm[In] SCL: 2/1 SH: 1 OF 1
APPROVED: M. PITCHAI	<p>TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536</p> <p>PROPRIETARY NOTICE: THIS DRAWING PRINT OR DOCUMENT AND SUBJECT MATTER DISCLOSED HEREIN ARE PROPRIETARY ITEMS TO WHICH TAMURA RETAINS THE EXCLUSIVE RIGHT OF DISSEMINATION, REPRODUCTION, MANUFACTURE AND SALE. THIS DRAWING, PRINT OR DOCUMENT IS SUBMITTED IN CONFIDENCE FOR CONSIDERATION BY THE RECIPIENT ALONE UNLESS PERMISSION FOR FURTHER DISCLOSURE IS EXPRESSLY GRANTED IN WRITING.</p>			

REV. Status

REVISION -
04/06/98 TS

REVISION A
ADDED RoHS
12/02/05 MP

REVISION B
ADDED TEMP
RATING
5/4/15 MP

AUDIO COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 65mW MAX IN SECONDARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 1.6KΩCT WITH 3.2Ω LOAD ON SECONDARY.

MODEL NUMBER
MET-23



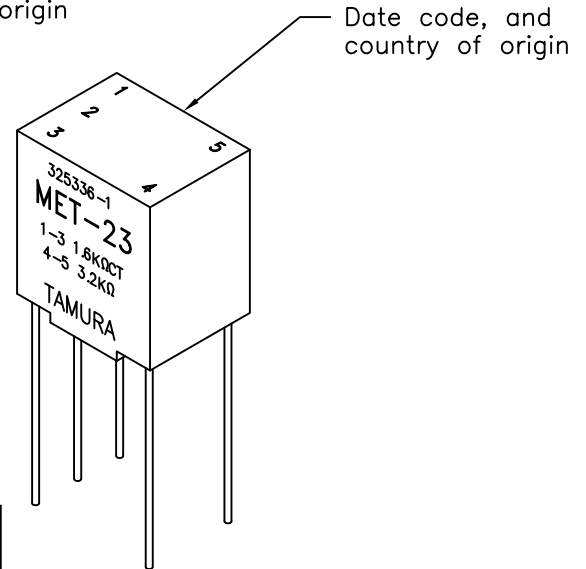
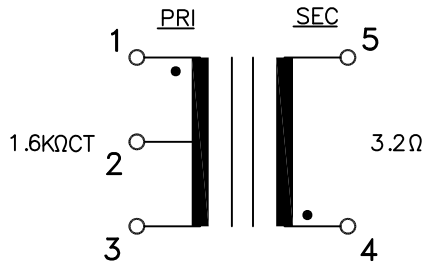
A. Electrical Specifications (@ 20°C)

1. Pri Source Impedance; 1.6KΩCT
2. Sec Load Impedance; 3.2Ω
3. Pri DC Current; 2.5mA MAX
4. Operating Level; 65mW MAX @ 300Hz
5. Frequency Response (relative to 1KHz); ±3.0dB, @ 300Hz to 100KHz
6. Longitudinal Balance; 60dB MIN @ 1KHz
7. DC Resistance;
 - (1-3) 230Ω MAX
 - (4-5) 1.0Ω MAX
8. Turns Ratio; (1-3) : (4-5) = 22.4 : 1 ±2%
9. Dielectric Strength; 60Hz 500Vrms 0.5 minute @ Pri - Sec

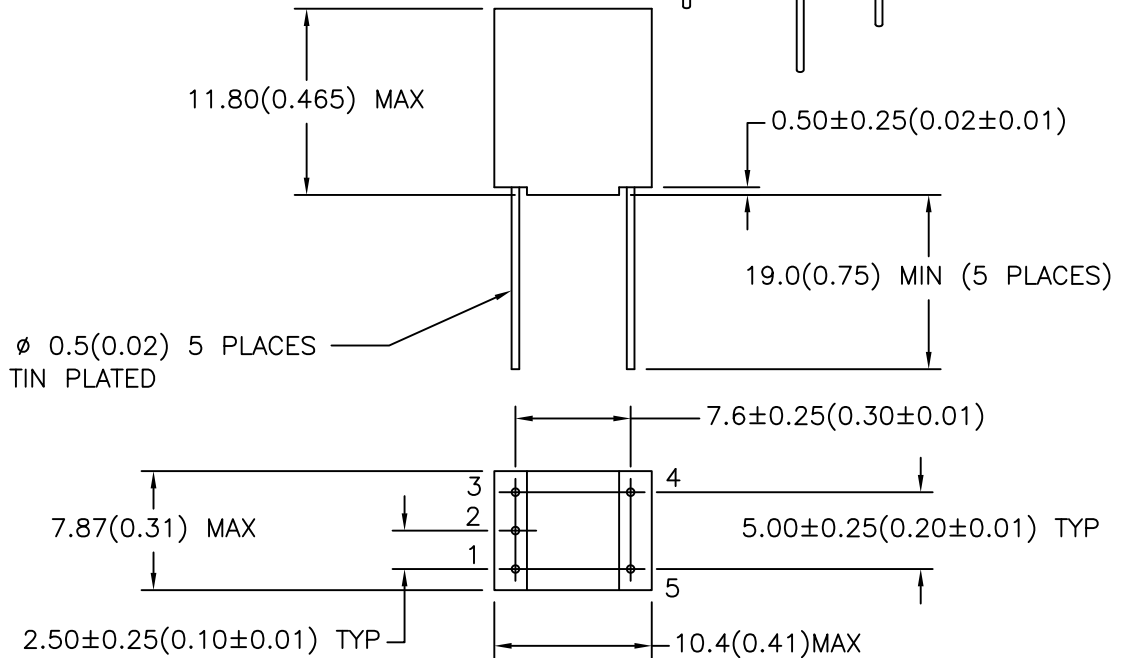
B. Marking; MET-23, TAMURA, Primary and Secondary Impedance, 325336-1, date code and country of origin

- C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER:	DRAWING CONTROL NO.	REV	MODEL DESCRIPTION	MODEL SPECIFICATION
MATHI P.	P-A1-12008	B	AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MET-23
SAFETY ENGINEER	CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536			DIM: mm[In] SCL: 2/1 SH: 1 OF 1

APPROVED:

M. PITCHAI

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REV. Status

REVISION -
02/28/92 TS

REVISION B
SCHEM REV
06/03/92 TS

REVISION C
NEW FORMAT
TEMECULA
WAS CARSON
ADDED PM33-M
07/08/96 TS

REVISION D
ADDED RoHS
12/02/05 MP

REVISION E
NOTE 10 WAS ±20%
04/19/06 MP

REVISION F
NOTE 6 WAS ±1.0dB
@ 300Hz TO 3.5KHz
05/05/06 MP

REVISION G
ADDED TEMP
RATING
5/4/15 MP

A. Electrical Specifications (@ 20 ° C)

1. Pri Source Impedance; 1.5K Ω
2. Sec Load Impedance; 600 Ω
3. Pri DC Current; 3 mA MAX
4. Operating Level; 50 mW MAX @ 300 Hz
5. Insertion Loss;
2.0 dB MAX @ 1 KHz, 0 dBm
6. Frequency Response (relative to 1 KHz);
±2.0 dB, @ 300 Hz to 100 KHz, 0 dBm
7. Pri Impedance; 1.5K Ω +20%, -10% @ 1 KHz, 0 dBm, DC3mA
8. Longitudinal Balance; 60 dB MIN @ 1 KHz
9. Total Harmonic Distortion; 10% MAX @ 300 Hz, 50mW
10. DC Resistance;
(1-2) 160Ω ±20%
(3-4) 95 Ω -20%, +30%
12. Turns Ratio; (1-2) : (3-4) = 1.58 : 1.00 ±2%
13. Dielectric Strength;
500 Vrms (10 mA peak MAX) 1 minute @ Pri - Sec



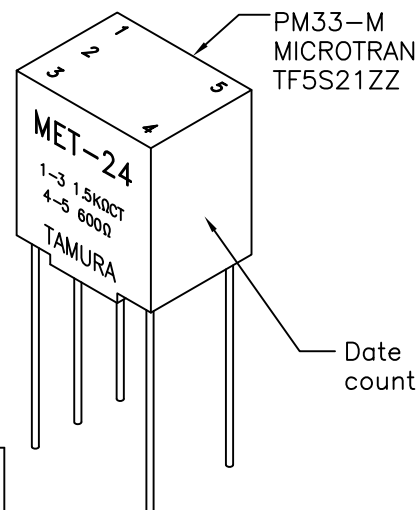
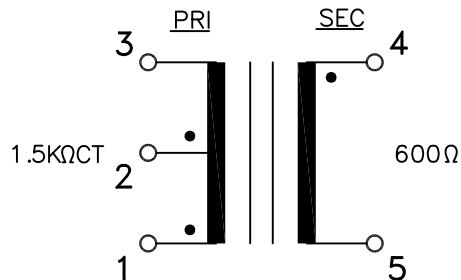
MODEL NUMBER

MET-24

B. Marking; MET-24, TAMURA, Primary and Secondary Impedance, pin numbers, PM33-M, MICROTRAN, TF5S21ZZ, 196-date code and country of origin

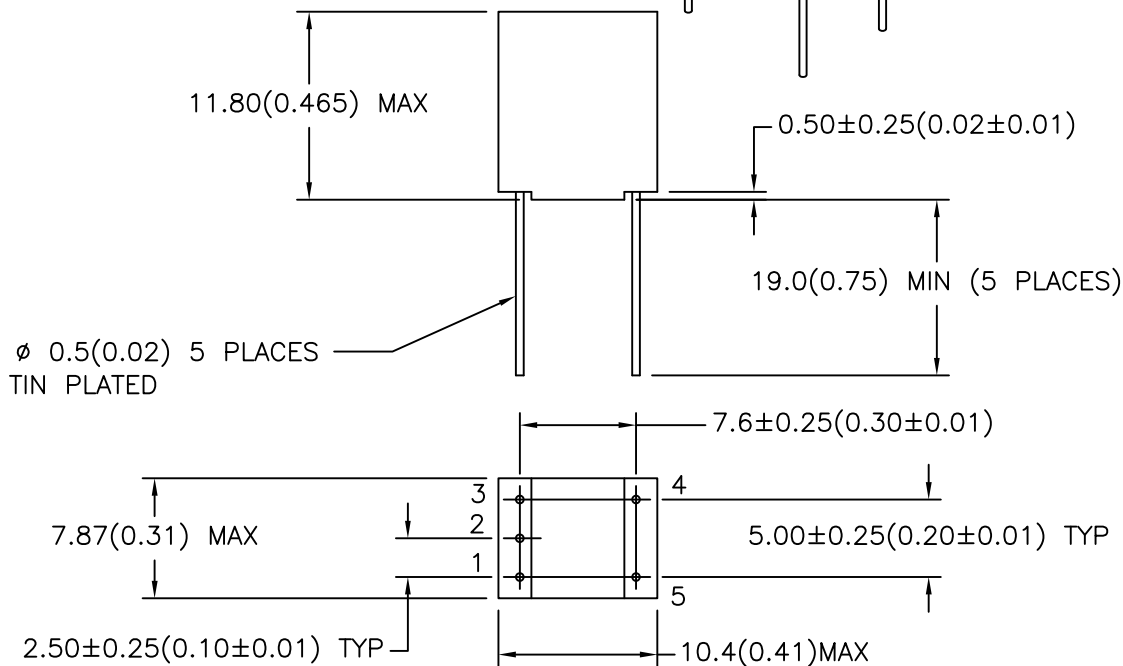
C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



Date code and country of origin

E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER:

MATHI P.

SAFETY ENGINEER

DRAWING CONTROL NO.	REV	MODEL DESCRIPTION	MODEL SPECIFICATION
P-A1-10344	G	AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MET-24
<p>CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE</p> <p>TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536</p>			<p>DIM: mm [In] SCL: 2/1 SH: 1 OF 1</p>

APPROVED:

M. PITCHAI

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REV. Status

REVISION - 04/06/98 TS
REVISION A ADDED RoHS 12/05/05 MP
REVISION B ADDED TEMP RATING 5/5/15 MP

AUDIO COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 50mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 1KΩ WITH 50Ω LOAD ON SECONDARY.

MODEL NUMBER
MET-28



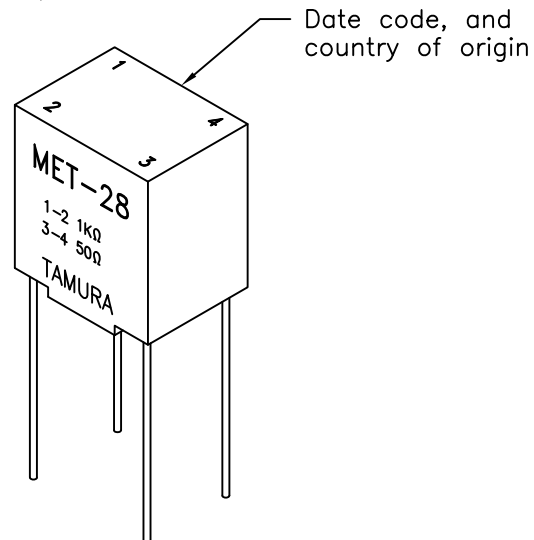
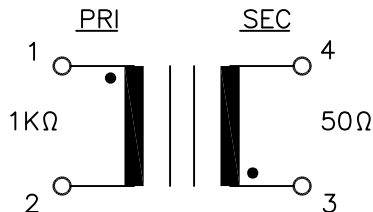
A. Electrical Specifications (@ 20° C)

1. Pri Source Impedance; 1KΩ
2. Sec Load Impedance; 50Ω
3. Pri DC Current; 3mA MAX
4. Operating Level; 50mW MAX @ 300Hz
5. Frequency Response (relative to 1KHz); ±2.0dB, @ 300Hz to 100KHz
6. Longitudinal Balance; 60dB MIN @ 1KHz
7. DC Resistance;
 - (1-2) 110Ω ±20%
 - (3-4) 8.0Ω ±20%
8. Turns Ratio; (1-2) : (3-4) = 4.47 : 1 ±2%
9. Dielectric Strength; 500 Vrms 0.5 minute @ Pri - Sec

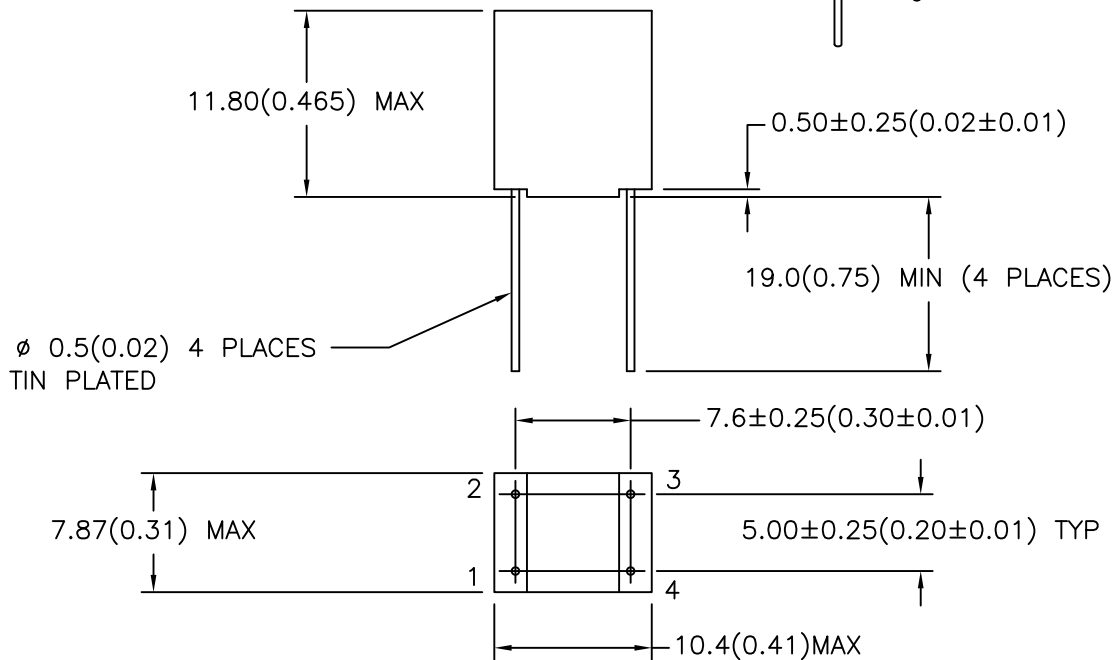
B. Marking; MET-28, TAMURA, Primary and Secondary Impedance, date code and country of origin

- C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER:	DRAWING CONTROL NO.	REV	MODEL DESCRIPTION	MODEL SPECIFICATION
MATHI P.	P-A1-12010	B	AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MET-28
SAFETY ENGINEER	CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE			DIM: mm[In] SCL: 2/1 SH: 1 OF 1

TAMURA CORPORATION OF AMERICA
1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029
(951) 699-1270 FAX 7607400536

APPROVED:

M. PITCHAI

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REV. Status

REVISION B
REVISED AND
REDRAWN ON
CAD/CAM
05/23/95 TS

REVISION C
ADDED PM34-M
& MICROTRAN
01/24/96 TS

REVISION D
ADDED RoHS
12/05/05 MP

REVISION E
ADD OPERATING
AND STORAGE
TEMP.
02/28/11 MP

REVISION F
REVISED TEMP
RATING
5/5/15 MP

TELECOMMUNICATION COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 50mW MAX IN SECONDARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 600ΩCT WITH 600ΩCT LOAD ON SECONDARY.

A. Electrical Specifications (@ 20 ° C)

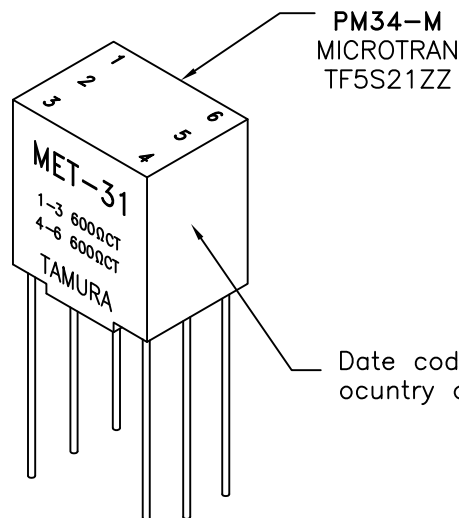
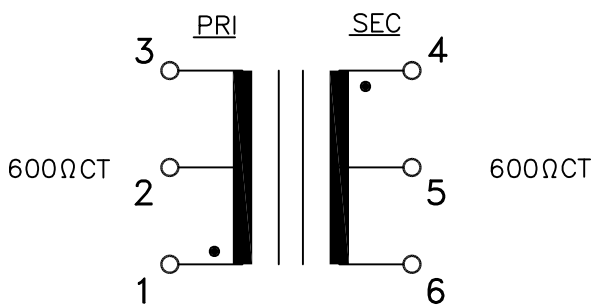
1. Pri Source Impedance; 600Ω CT
2. Sec Load Impedance; 600Ω CT
3. Pri DC Current; 3 mA MAX
4. Operating Level; 50 mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
6. Longitudinal Balance; 60 dB MIN @ 1 KHz
7. DC Resistance;
 - (1-3) 70Ω ±20%
 - (4-6) 95Ω ±20%
8. Turns Ratio; (1-3) : (4-6) = 1 : 1.00 ±2%
9. Dielectric Strength; 60Hz 1KVrms 0.5 minute @ Pri - Sec



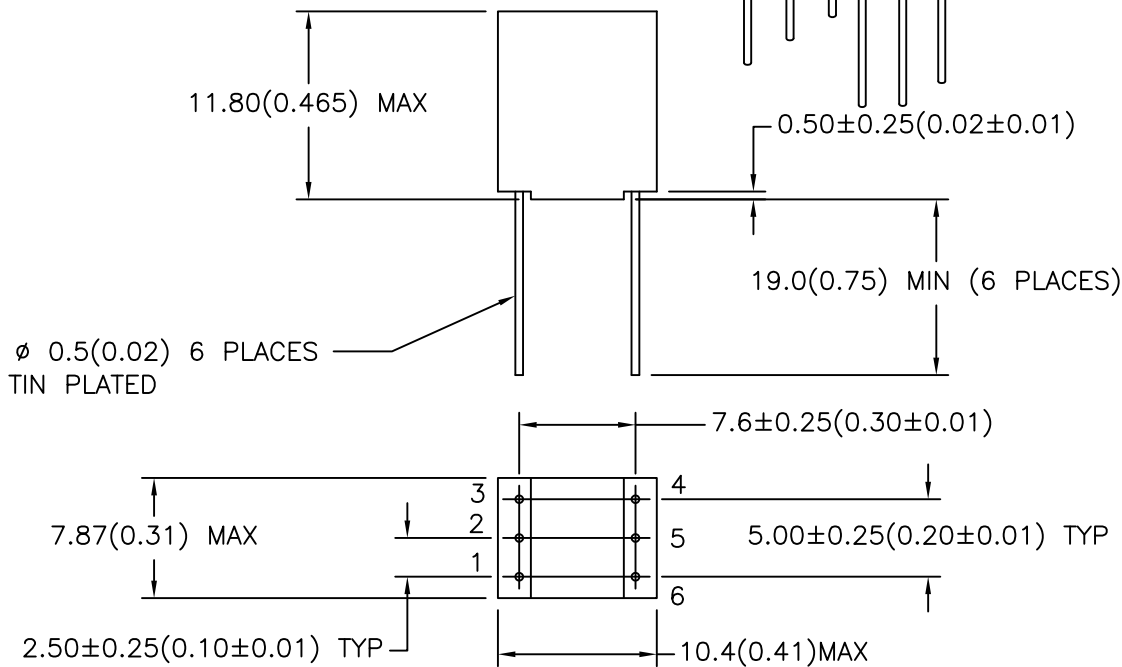
B. Marking; MET-31, TAMURA, Primary and Secondary Impedance, PM34-M, MICROTRAN, TF5S21ZZ, date code and country of origin

- C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)	
≤ 4	± 0.2
4 ≤ 20	± 0.3
20 ≤ 50	± 0.4

PREPARED BY:

C. POPPE

ENGINEER:

MATHI P.

SAFETY ENGINEER

DRAWING CONTROL NO.	REV	MODEL DESCRIPTION	MODEL SPECIFICATION
P-A1-10268	F	AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MET-31
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536			DIM: mm [In] SCL: 2/1 SH: 1 OF 1

APPROVED:

M. PITCHAI

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MODEL NUMBER

MET-31

REV. Status

REVISION A
REVISED AND
REDRAWN ON
CAD/CAM
03/28/96 TS

REVISION B
ADDED RoHS
12/05/05 MP

REVISION C
ADDED TEMP
RATING
5/5/15 MP

AUDIO COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 50mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 600Ω WITH 600Ω CT, 150Ω SPLIT LOAD ON SECONDARY.

A. Electrical Specifications (@ 20 ° C)

1. Pri Source Impedance; 600Ω
2. Sec Load Impedance; 600Ω CT, 150Ω SPLIT
3. Pri DC Current; 3 mA MAX
4. Operating Level; 50 mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
6. Longitudinal Balance; 60 dB MIN @ 1 KHz
7. DC Resistance;
 - (1-2) 70Ω ±20%
 - (3-6) 95Ω ±20%
8. Turns Ratio; (1-2) : (3-4) : (5-6) = 2 : 1.00 : 1.00 ±2%
9. Dielectric Strength; 1000 Vrms 0.5 minute @ Pri - Sec

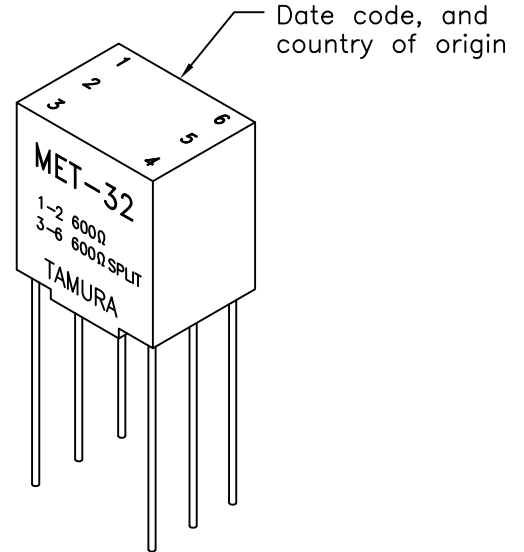
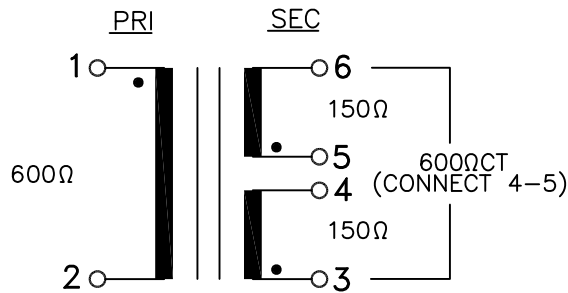


MODEL NUMBER
MET-32

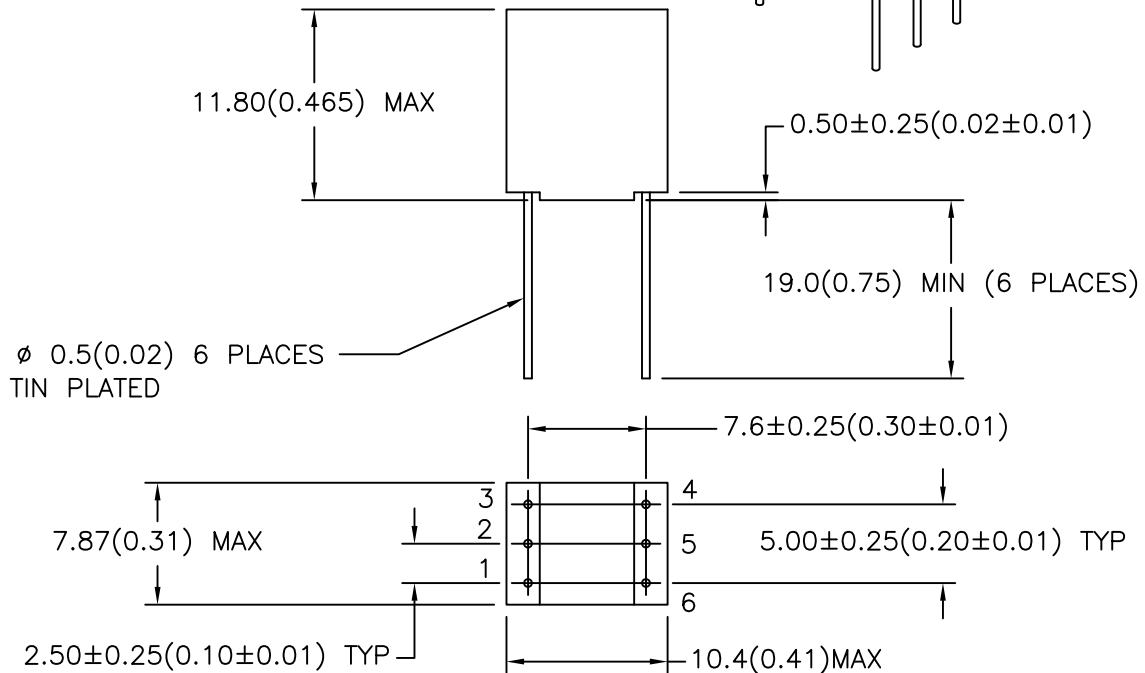
B. Marking; MET-32, TAMURA, Primary and Secondary Impedance, date code and country of origin

C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER: MATHI P.	DRAWING CONTROL NO. P-A1-10329	REV C	MODEL DESCRIPTION AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MODEL SPECIFICATION MET-32
SAFETY ENGINEER			DIM: mm[In] SCL: 2/1 SH: 1 OF 1	
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE			TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536	
APPROVED: M. PITCHAI				
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REV. Status

REVISION A
REVISED AND
REDRAWN ON
CAD/CAM
11/28/95 TS

REVISION B
ADDED RoHS
12/05/05 MP

REVISION C
NOTE 9: 1000Vrms
WAS 500Vrms
05/05/06 MP

REVISION D
ADDED TEMP
RATING
5/5/15 MP

AUDIO COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 50mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 600Ω CT WITH 8Ω LOAD ON SECONDARY.

A. Electrical Specifications (@ 20 ° C)

1. Pri Source Impedance; 600Ω CT
2. Sec Load Impedance; 8Ω
3. Pri DC Current; 4.5 mA MAX
4. Operating Level; 50 mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
6. Longitudinal Balance; 60 dB MIN @ 1 KHz
7. DC Resistance;
 - (1-3) 60Ω ±20%
 - (4-5) 1.5Ω ±20%
8. Turns Ratio; (1-3) : (4-5) = 8.66 : 1 ±2%
9. Dielectric Strength; 1000 Vrms, 60Hz 0.5 minute @ Pri - Sec

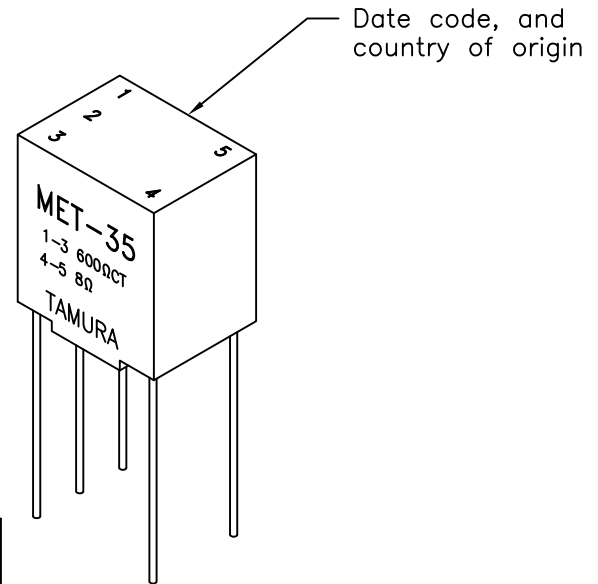
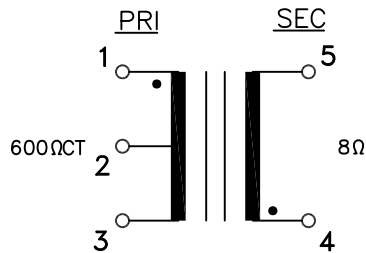


MODEL NUMBER
MET-35

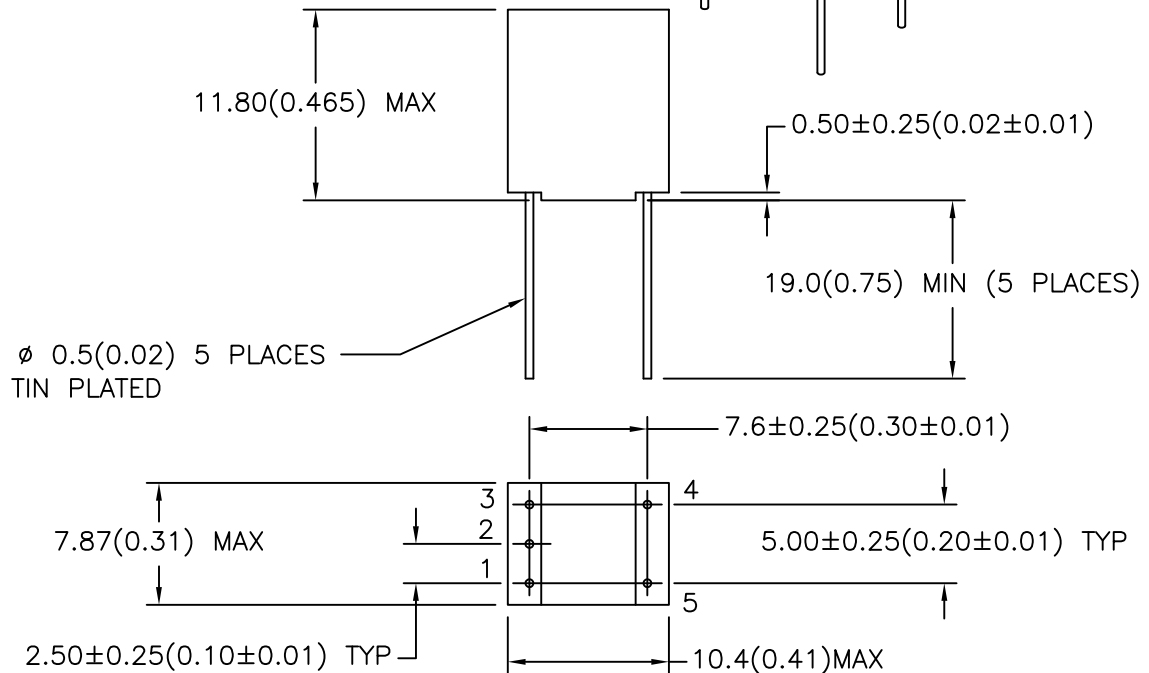
B. Marking; MET-35, TAMURA, Primary and Secondary Impedance, date code and country of origin

C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER: MATHI P.	DRAWING CONTROL NO. P-A1-10335	REV D	MODEL DESCRIPTION AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MODEL SPECIFICATION MET-35
SAFETY ENGINEER			DIM: mm[In] SCL: 2/1 SH: 1 OF 1	
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE			TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536	
APPROVED: M. PITCHAI				
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REV. Status

REVISION - 01/20/95 TS
REVISION A ADDED PM35-M MICROTRAN 10/27/95 TS
REVISION B ADDED RoHS 12/05/05 MP
REVISION C ADDED TEMP RATING 5/6/15 MP

AUDIO COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 50mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 500Ω WITH 50Ω LOAD ON SECONDARY.

MODEL NUMBER
MET-39

A. Electrical Specifications (@ 20 ° C)

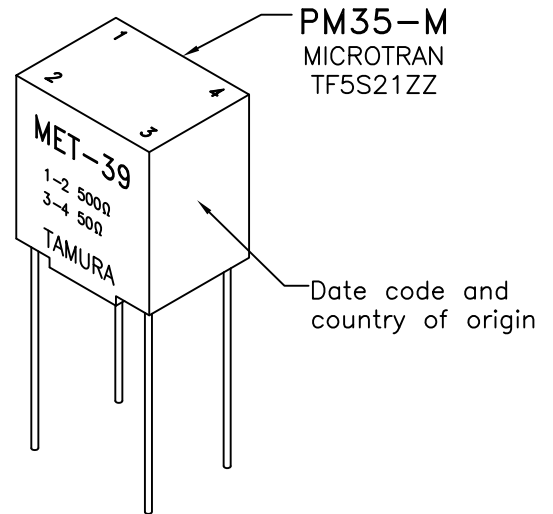
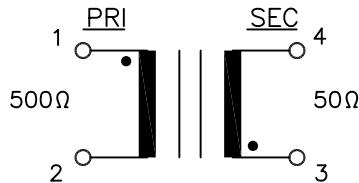
1. Pri Source Impedance; 500Ω
2. Sec Load Impedance; 50 Ω
3. Pri DC Current; 3 mA MAX
4. Operating Level; 50 mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
6. Longitudinal Balance; 60 dB MIN @ 1 KHz
7. DC Resistance;
 - (1-2) 55Ω ±20%
 - (3-4) 8Ω ±20%
8. Turns Ratio; (1-2) : (3-4) = 3.16 : 1.00 ±2%
9. Dielectric Strength; 500 Vrms 0.5 minute @ Pri - Sec



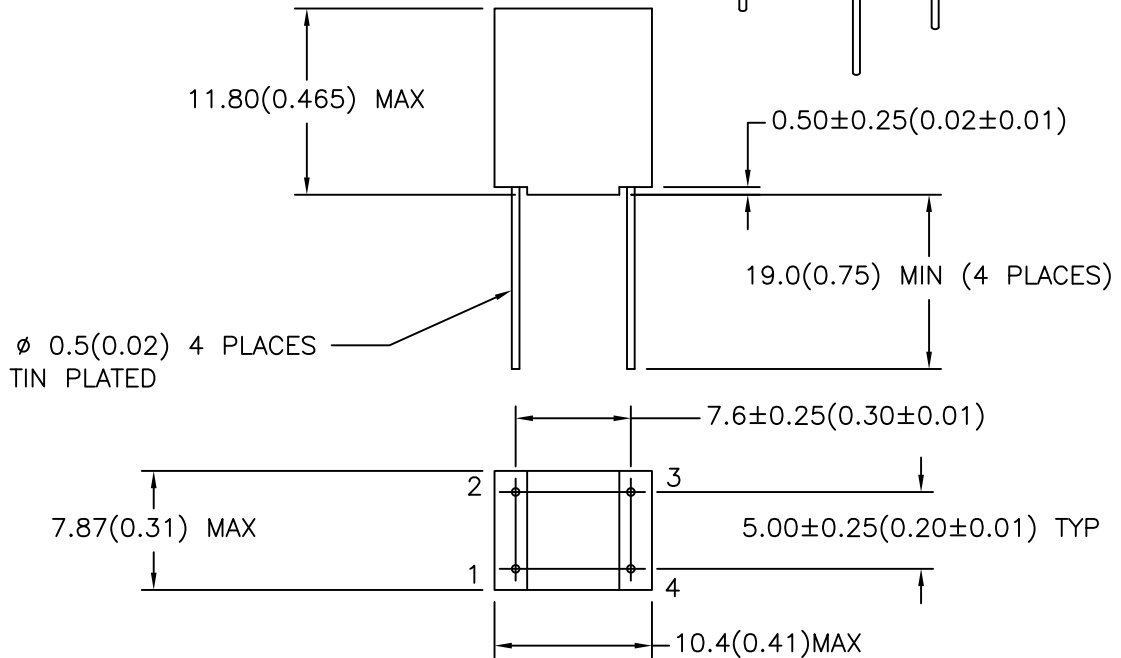
B. Marking; MET-39, TAMURA, Primary and Secondary Impedance, pin numbers, PM35-M, MICROTRAN, TF5S21ZZ, 196-date code and country of origin

- C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)	
≤ 4	± 0.2
4 ≤ 20	± 0.3
20 ≤ 50	± 0.4

PREPARED BY:

C. POPPE

ENGINEER: MATHI P.	DRAWING CONTROL NO. P-A1-11233	REV C	MODEL DESCRIPTION AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MODEL SPECIFICATION MET-39
SAFETY ENGINEER	CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536			DIM: mm[In] SCL: 2/1 SH: 1 OF 1
APPROVED: M. PITCHAI	PROPRIETARY NOTICE: THIS DRAWING PRINT OR DOCUMENT AND SUBJECT MATTER DISCLOSED HEREIN ARE PROPRIETARY ITEMS TO WHICH TAMURA RETAINS THE EXCLUSIVE RIGHT OF DISSEMINATION, REPRODUCTION, MANUFACTURE AND SALE. THIS DRAWING, PRINT OR DOCUMENT IS SUBMITTED IN CONFIDENCE FOR CONSIDERATION BY THE RECIPIENT ALONE UNLESS PERMISSION FOR FURTHER DISCLOSURE IS EXPRESSLY GRANTED IN WRITING.			

REV. Status

REVISION –
05/05/95 TS

REVISION A
ADDED RoHS
12/05/05 MP

REVISION B
ADDED TEMP
RATING
5/6/15 MP

TELECOMMUNICATION COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 50mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 150Ω WITH 12Ω LOAD ON SECONDARY.

MODEL NUMBER
MET-42

A. Electrical Specifications (@ 20 ° C)

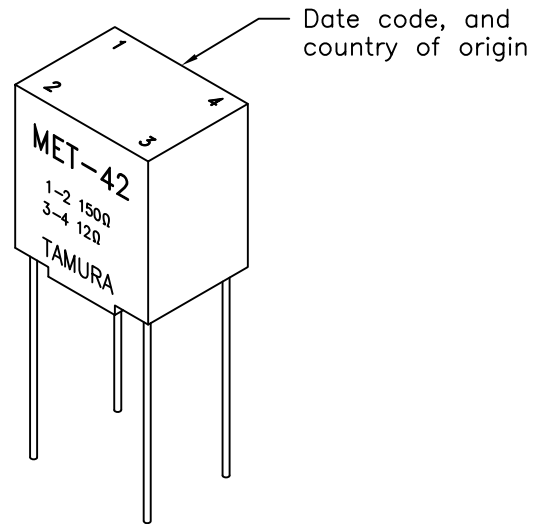
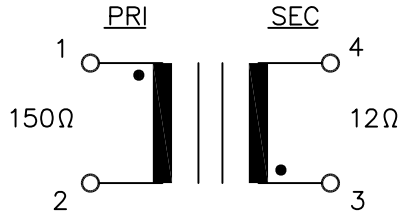
1. Pri Source Impedance; 150Ω
2. Sec Load Impedance; 12Ω
3. Pri DC Current; 10 mA MAX
4. Operating Level; 50 mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
6. Longitudinal Balance; 60 dB MIN @ 1 KHz
7. DC Resistance;
 - (1-2) 20Ω ±20%
 - (3-6) 2.5Ω ±20%
8. Turns Ratio; (1-2) : (3-4) = 3.54 : 1.00 ±2%
9. Dielectric Strength; 500 Vrms 0.5 minute @ Pri – Sec



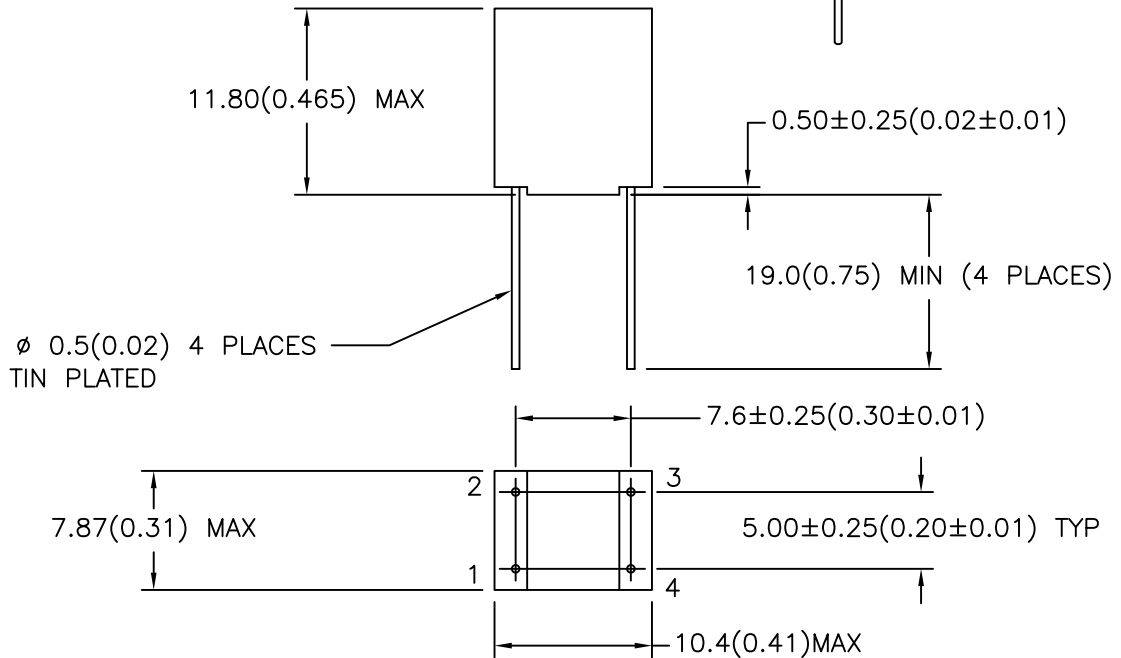
B. Marking; MET-42, TAMURA, Primary and Secondary Impedance, pin numbers, date code and country of origin

C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)	
≤ 4	± 0.2
4 ≤ 20	± 0.3
20 ≤ 50	± 0.4

PREPARED BY:

C. POPPE

ENGINEER:	DRAWING CONTROL NO.	REV	MODEL DESCRIPTION	MODEL SPECIFICATION
MATHI P.	P-A1-11305	B	AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MET-42
SAFETY ENGINEER	CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536			DIM: mm[In] SCL: 2/1 SH: 1 OF 1
APPROVED:	PROPRIETARY NOTICE: THIS DRAWING PRINT OR DOCUMENT AND SUBJECT MATTER DISCLOSED HEREIN ARE PROPRIETARY ITEMS TO WHICH TAMURA RETAINS THE EXCLUSIVE RIGHT OF DISSEMINATION, REPRODUCTION, MANUFACTURE AND SALE. THIS DRAWING, PRINT OR DOCUMENT IS SUBMITTED IN CONFIDENCE FOR CONSIDERATION BY THE RECIPIENT ALONE UNLESS PERMISSION FOR FURTHER DISCLOSURE IS EXPRESSLY GRANTED IN WRITING.			
M. PITCHAI				

REV. Status

REVISION B
01/30/92 TS

REVISION C
TEMECULA WAS
CARSON
ADDED PM32-M
& MICROTRAN
11/06/05 TS

REVISION D
REV'D TITLE
03/07/96 TS

REVISION E
ADDED RoHS
12/08/05 MP

REVISION F
NOTE 5: DELETED
DC3mA
05/05/06 MP

REVISION G
ADD OPERATING
AND TEMP.
02/23/11 MP

TELECOMMUNICATION COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 50mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 600Ω WITH 600Ω LOAD ON SECONDARY.

A. Electrical Specifications (@ 20 ° C)

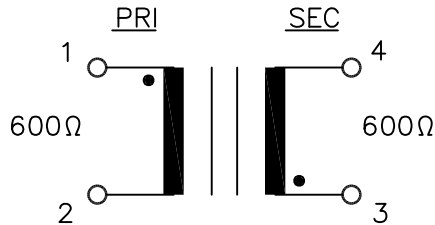
1. Pri Source Impedance; 600Ω
2. Sec Load Impedance; 600Ω
3. Pri DC Current; 3 mA MAX
4. Operating Level; 50 mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±1.0 dB, @ 300 Hz to 3.5 KHz, 0dBm
6. Longitudinal Balance; 60 dB MIN @ 1 KHz
7. DC Resistance;
 - (1-2) 85Ω MAX
 - (3-4) 110Ω MAX
8. Turns Ratio; (1-2) : (3-4) = 1 : 1.00 ±2
9. Dielectric Strength; 1500 Vrms (10 mA peak MAX) 1 minute @ Pri - Sec

B. Operating Temperature; -40 to +85°C

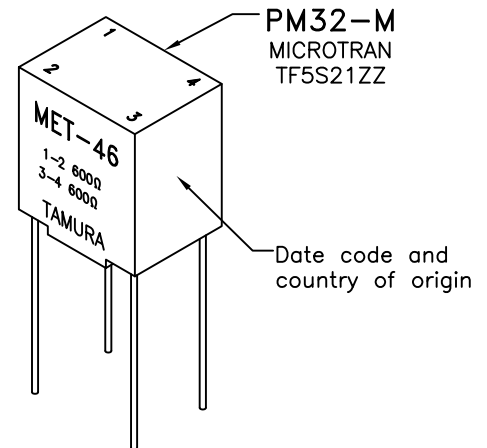
C. Storage Temperature; -55 to +105°C

D. Marking; MET-46, TAMURA, Primary and Secondary Impedance, pin numbers, PM32-M, MICROTRAN, TF5S21ZZ, 196-date code and country of origin

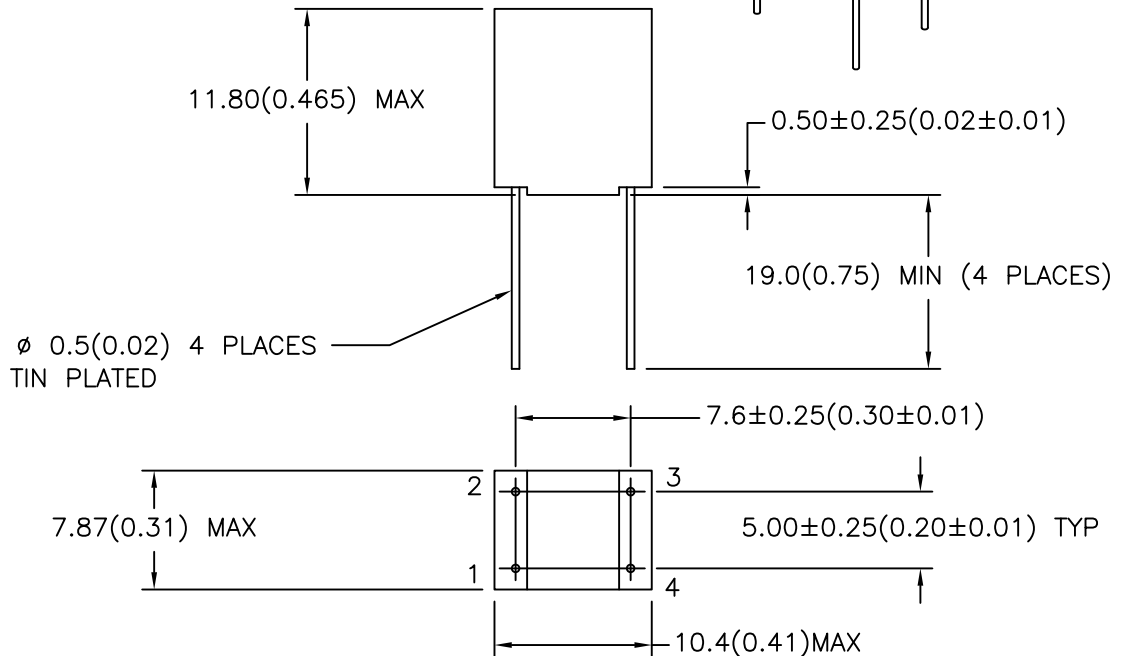
E. Schematic Diagram



MODEL NUMBER
MET-46



D. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER:

M. PITCHAI

SAFETY ENGINEER

B. OCONNELL

APPROVED:

P. BRUNE

DRAWING CONTROL NO.	REV	MODEL DESCRIPTION	MODEL SPECIFICATION
P-A1-10302 ACAD\MET\A1103021.DWG	G	AUDIO COUPLING	MET-46
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE		TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536	DIM: mm[In] SCL: NONE SH: 1 OF 1

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REV. Status
REVISION - 12-17-01 YS
REVISION A CHANGED PIN MARKING 07/10/02 YS
REVISION B CHANGED PIN LENGTH 11/06/02 YS
REVISION C ADDED RoHS 12/08/05 MP
REVISION D ADDED GOLD PLATED 6-22-09 MP
REVISION E ADDED TEMP RATING 5/6/15 MP

AUDIO COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 10mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 10KΩ WITH 125Ω LOAD ON SECONDARY.

MODEL NUMBER
MET-50



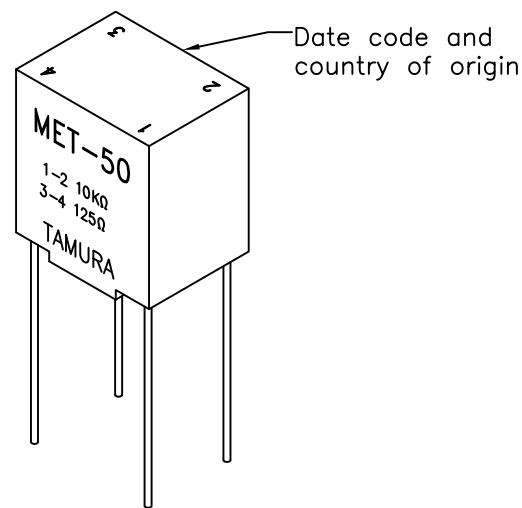
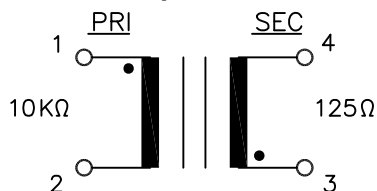
A. Electrical Specifications (@ 20°C)

1. Pri Source Impedance; 10KΩ
2. Sec Load Impedance; 125Ω
3. Pri DC Current; 0mA MAX
4. Operating Level; 10mW MAX @ 300Hz
5. Frequency Response (relative to 1KHz); ±3.0dB, @ 300Hz to 20KHz
6. Distortion; 5% MAX @ 300Hz, 10dBm
7. DC Resistance;
 - (1-2) 1100Ω ±30%
 - (3-4) 28Ω ±30%
8. Turns Ratio; (1-2) : (3-4) = 8.62 : 1 ±3%
9. Dielectric Strength; 500Vrms 0.5 minute @ Pri - Sec

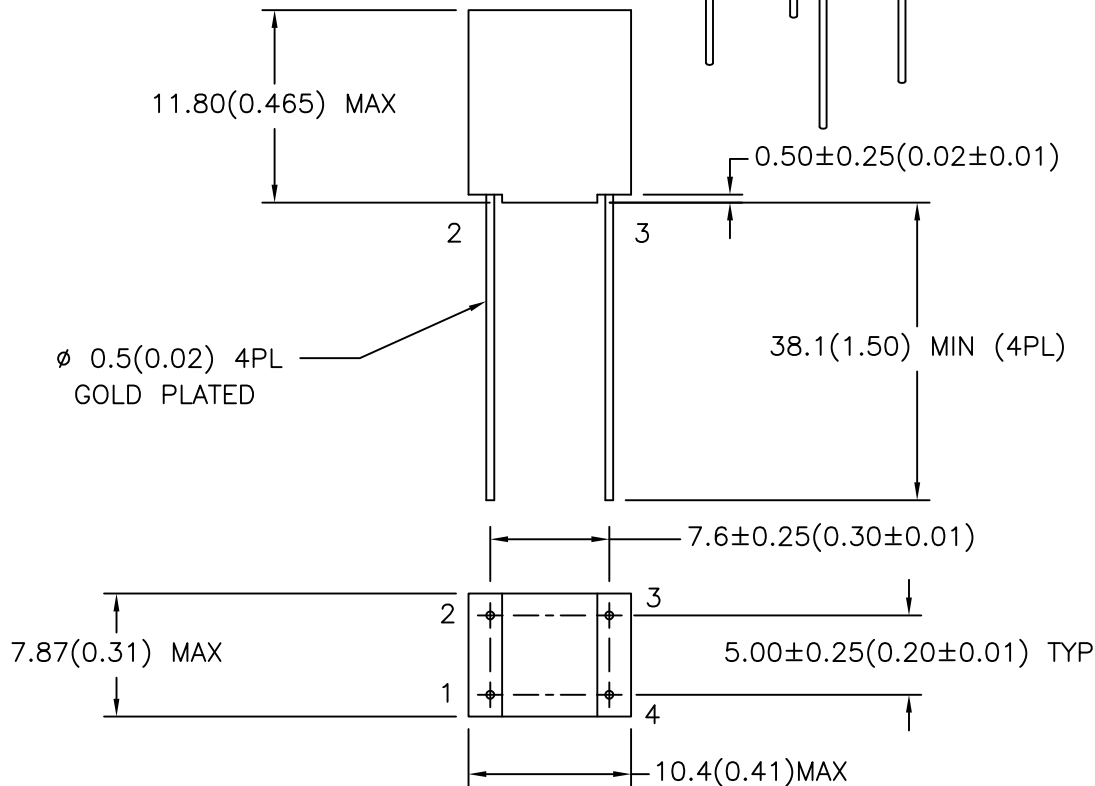
B. Marking; MET-50, TAMURA, Primary and Secondary Impedance, pin numbers, 196-date code and country of origin

C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER:

MATHI P.

SAFETY ENGINEER

DRAWING CONTROL NO. P-A1-12968	REV E	MODEL DESCRIPTION AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MODEL SPECIFICATION MET-50
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE		TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536	DIM: mm[In] SCL: 2/1 SH: 1 OF 1

APPROVED:

M. PITCHAI

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REV. Status

REVISION - 02/03/94 TS
REVISION B REVISED PIN NUMBERS 06/06/95 TS
REVISION C ADDED RoHS 12/09/05 MP
REVISION D ADDED TEMP RATING 5/6/15 MP

TELECOMMUNICATION COUPLING MINIATURE ENCAPSULATED TRANSFORMER DESIGNED TO OPERATE 50mW MAX IN PRIMARY AND REFLECT A PRIMARY SOURCE IMPEDANCE OF APPROXIMATELY 600Ω WITH 600Ω CT, 150Ω SPLIT LOAD ON SECONDARY.

A. Electrical Specifications (@ 20 ° C)

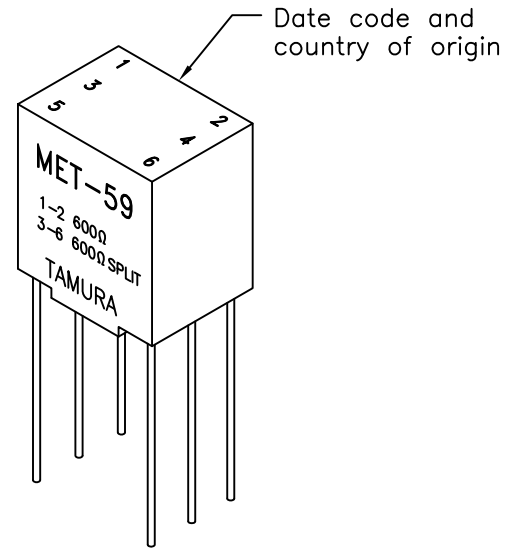
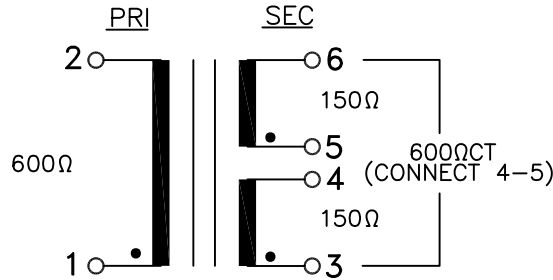
1. Pri Source Impedance; 600Ω
2. Sec Load Impedance; 600Ω CT, 150Ω SPLIT
3. Pri DC Current; 3 mA MAX
4. Operating Level; 50 mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±2.0 dB, @ 300 Hz to 100 KHz
6. Longitudinal Balance; 60 dB MIN @ 1 KHz
7. DC Resistance; (1-2) 70Ω ±20% (3-6) 95Ω ±20%
8. Turns Ratio; (1-2) : (3-4) : (5-6) = 2 : 1.00 : 1.00 ±2%
9. Dielectric Strength; 1000 Vrms 0.5 minute @ Pri - Sec



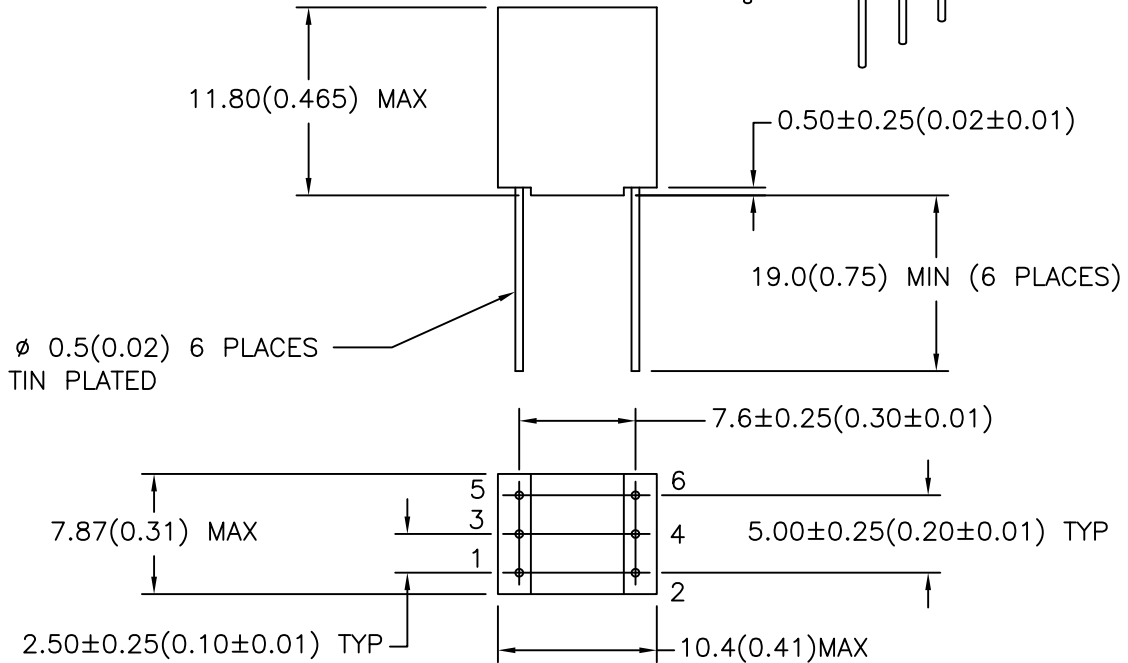
B. Marking; MET-59, TAMURA, Primary and Secondary Impedance, pin numbers, date code and country of origin.

C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER:

MATHI P.

SAFETY ENGINEER

DRAWING CONTROL NO. P-A1-10255	REV D	MODEL DESCRIPTION AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MODEL SPECIFICATION MET-59
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536			DIM: mm[In] SCL: 2/1 SH: 1 OF 1

APPROVED:

M. PITCHAI

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MODEL NUMBER

MET-59

REV. Status
REVISION - 06/01/92 TS
REVISION A REV'D DC RES 08/17/99 TS
REVISION B ADDED RoHS 12/05/05 MP
REVISION C NOTE 5: 100KHz WAS 3.5KHz 05/05/06 MP
REVISION D ADDED TEMP RATING 5/6/15 MP

A. Electrical Specifications (@ 20 ° C)

1. Pri Source Impedance; 135Ω
2. Sec Load Impedance; 135ΩCT
3. Pri DC Current; 10mA MAX
4. Operating Level; 50mW MAX @ 300 Hz
5. Frequency Response (relative to 1 KHz); ±2.0dB, @ 300 Hz to 100 KHz
6. Longitudinal Balance; 60dB MIN @ 1KHz
7. DC Resistance;
 - (1-2) 10.5Ω + 30%, -10%
 - (3-5) 10.8Ω + 30%, -10%
8. Turns Ratio; (1-2) : (3-5) = 1.00 : 1.00 ±2
9. Dielectric Strength; 1500 Vrms (10mA peak MAX) 1 minute @ Pri - Sec



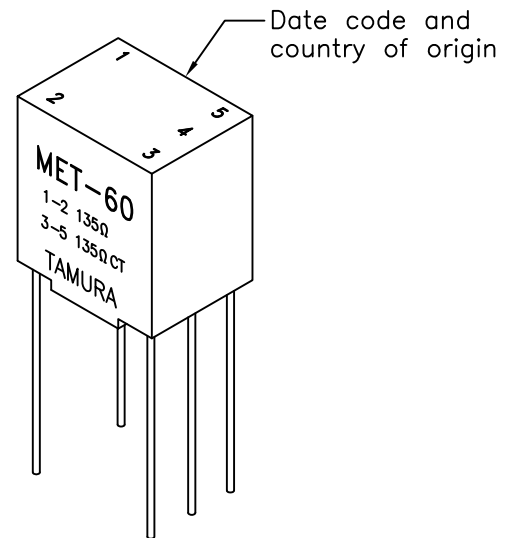
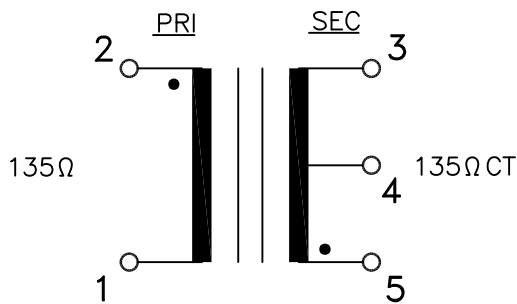
MODEL NUMBER

MET-60

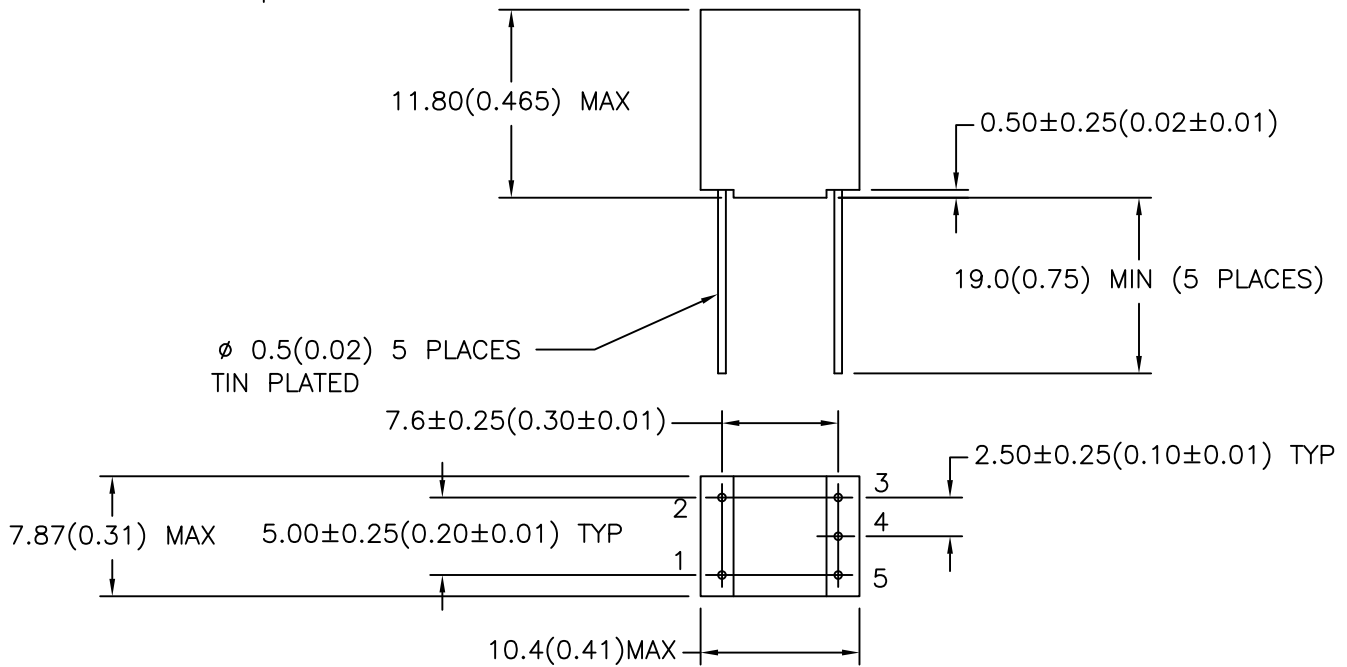
B. Marking; MET-60, TAMURA, Primary and Secondary Impedance, pin numbers, date code and country of origin

C. Operating Temperature: -20 to +85°C
Storage Temperature: -55 to +105°C

D. Schematic Diagram



E. Mechanical Specifications



TOLERANCES (mm)
≤ 4 ± 0.2
4 ≤ 20 ± 0.3
20 ≤ 50 ± 0.4

PREPARED BY:

C. POPPE

ENGINEER:

MATHI P.

SAFETY ENGINEER

DRAWING CONTROL NO. P-A1-10696	REV D	MODEL DESCRIPTION AUDIO COUPLING MINIATURE ENCAPSULATED XFMR	MODEL SPECIFICATION MET-60
CONTENTS OF THIS DRAWING ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE TAMURA CORPORATION OF AMERICA 1040 SOUTH ANDREASEN DRIVE, #100 ESCONDIDO, CA. 92029 (951) 699-1270 FAX 7607400536			DIM: mm [In] SCL: 2/1 SH: 1 OF 1

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