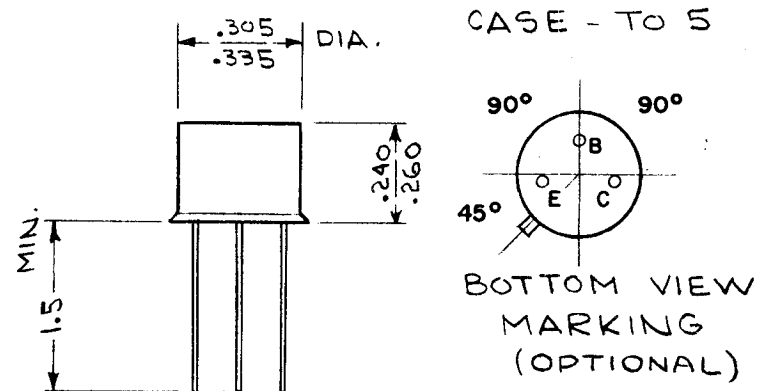


REQ. PER UNIT	USED ON			TX 100 B
	MODEL	ASS'Y. NO.	DATE	
1 EACH	TTRT-1, 2, 3, 4		2-4-64	

TX 100 IS A 2N2219A SILICON NPN TRANSISTOR WITH BETA LINEARITY CHARACTERISTICS INDICATED ON THIS DRAWING. AS



NOTE: TX100 SHALL BE MARKED ON THE TOP OF THE CASE, 2N2219A SHALL BE MARKED ON THE TOP, OR ON THE SIDE, OR OMITTED.

### STANDARD DRAWING

REQ. ITEM	PART NO.	PALMER	DESCRIPTION	SYMBOL									
	---		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK										
B	---		TRANSISTOR, SILICON, NPN										
A	---		2N2219A										
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	MATERIAL	TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL	
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	SCALE	---										
	DECIMALS .X ± .05 .XX ± .01 .XXX ± .005	FRACTIONS ± 1/64 ANGLES ± 0° 30'	CODE	C S401-265									TX 100 B
	TOLERANCES												

# STANDARD DRAWING

REQ. PER UNIT

USED ON

MODEL

ASS'Y. NO.

DATE

VLRA, B

26 Oct 64

TX101-1

A

$h_{fe}$  LIMITS 85-105 AT 1Kc  
TEST CONDITIONS

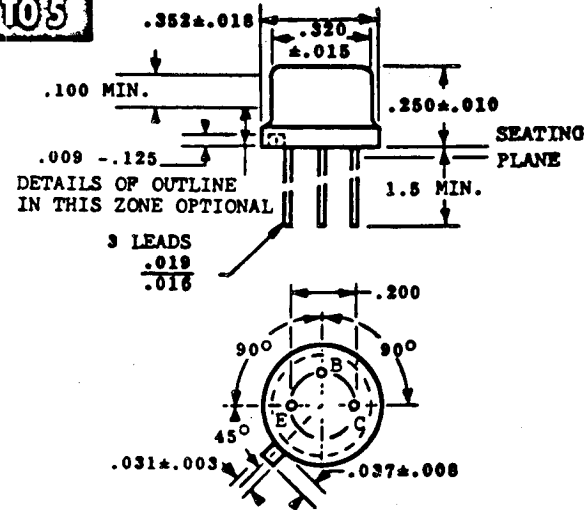
$I_c$  10Ma  
 $V_{ce}$  1V

TX101-1 IS A JEDEC TYPE 2N396A  
GERMANIUM PNP TRANSISTOR WITH  
A CONTROLLED  $h_{fe}$  THE CASE SHALL  
BE JEDEC TYPE TOS.

NOTE:

TX101-1 SHALL BE MARKED ON THE TOP OF  
THE CASE. 2N396A SHALL BE MARKED ON THE  
TOP, OR ON THE SIDE, OR OMITTED.

**TOS**



SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL	
A	TOP VIEW DELE; NOTE ADDED.	4-22-65	13871	2.f.	<i>[Signature]</i>	<i>[Signature]</i>			THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK TRANSISTOR, GERMANIUM, PNP 2N396A	A	
Ø	ORIGINAL RELEASE FOR PRODUCTION										
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES							SCALE _____				
DECIMALS .X ± .05 .XX ± .01 .XXX ± .005		TOLERANCES		FRACTIONS ± 1/64 ANGLES ± 0° 30'		CODE C	S401-333				
TYPE & TEMPER HEAT TREAT. SPEC.							DRAWN CHECKED		FINAL APPROVAL <i>[Signature]</i>		
FINISH & SPEC. NO.							ELEC. DES. APP.		MECH. DES. APP.		TX101-1 A









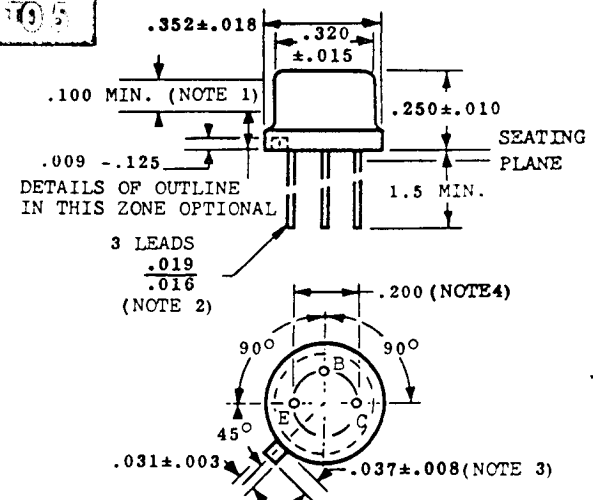
# STANDARD DRAWING

REQ. PER UNIT	USED ON			TX107	C
	MODEL	ASS'Y. NO.	DATE		
6	TTR-10		10/26/64		

hFE LIMITS 60-75  
 TEST CONDITIONS  
 VCE = 1V  
 IC = 50 Ma

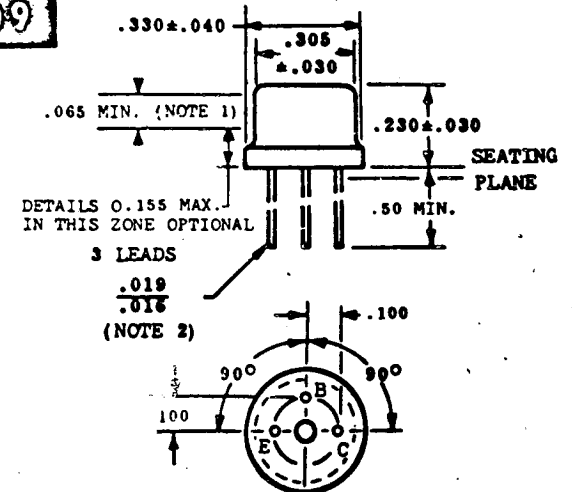
- NOTE 1:** This zone is controlled for automatic handling. The variation in actual dia. within this zone shall not exceed .010.
- NOTE 2:** The specified lead dia. applies in the zone between .050 & .250 from the seating plane. Between .250 & 1.5 a max. of .021 dia. is held. Outside of these zones the lead dia. is not controlled.
- NOTE 3:** Measured from max. dia. of the actual device.
- NOTE 4:** Leads having max. dia. .019 measured in gaging plane .054 ± .001 below the seating plane shall be within .007 of their true locations relative to a max-width tab.

**T05**



- NOTE 5:** TX107 IS A JEDEC TYPE 2N1370 GERMANIUM PNP TRANSISTOR WITH A CONTROLLED hFE. THE CASE SHALL BE JEDEC TYPE T05.
- NOTE 6:** TX107 MAY BE ACCEPTED WITH EITHER A T05 CASE (STANDARD) OR WITH A T09 CASE (NON-STANDARD).
- NOTE 7:** TX107 SHALL BE MARKED ON THE TOP OF THE CASE. "2N1370-4" SHALL BE MARKED ON THE TOP, OR ON THE SIDE, OR OMITTED.

**T09**



SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL	
C	NOTE 7: TX107 WAS TX108 2N1370-4 WAS 2N1370-7	6-21-65	14297	D.V.V.	QCB				<b>THE TECHNICAL MATERIEL CORP.</b> MAMARONECK, NEW YORK TRANSISTOR, GERMANIUM, PNP 2N1370-4	C	
B	TOP VIEW DELE; NOTE 7 ADDED.	4-23-65	13871	25	QCB						
A	NOTES 5 & 6 ADD. PICT: (T05) ADD	12-31-64	13140	15							
	ORIGINAL RELEASE FOR PRODUCTION	10-22-64									
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		SCALE					TYPE & TEMPER		HEAT TREAT. SPEC.		
DECIMALS .X ± .05 .XX ± .01 .XXX ± .005		FRACTIONS ± 1/64 ANGLES ± 0° 30'		CODE C		5401-40		DRAWN J. J. WARD @ 10-21-64		CHECKED AFC	
TOLERANCES								ELEC. DES. APP.		MECH. DES. APP.	
										TX 107	

# STANDARD DRAWING

REQ. PER UNIT	USED ON			TX108	B
	MODEL	ASS'Y. NO.	DATE		
	TTR-10		10/26/64		

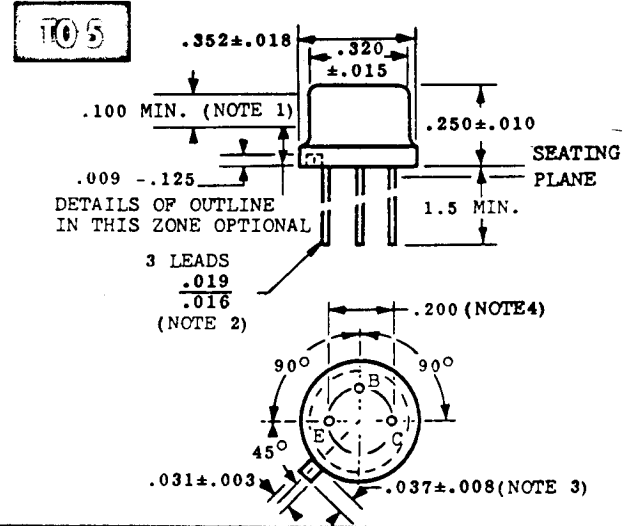
hFE LIMITS 120-150  
 TEST CONDITIONS  
 VCE = 1V  
 IC = 50 Ma

**NOTE 1:** This zone is controlled for automatic handling. The variation in actual dia. within this zone shall not exceed .010

**NOTE 2:** The specified lead dia. applies in the zone between .050 & .250 from the seating plane. Between .250 & 1.5 a max. of .020 dia. is held. Outside of these zones the lead dia. is not controlled.

**NOTE 3:** Measured from max. dia. of the actual device.

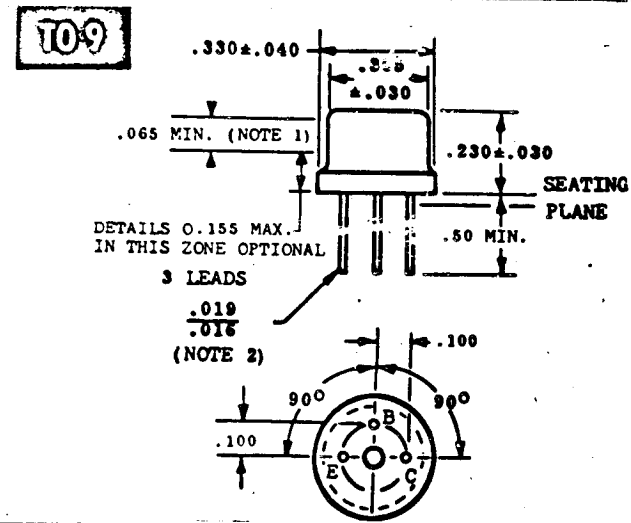
**NOTE 4:** Leads having max. dia. .019 measured in gaging plane .054 + .001 below the seating plane shall be within .007 of their true locations relative to a max-width tab.



**NOTE 5:**  
 TX 108 IS A JEDEC TYPE 2N1370 GERMANIUM PNP TRANSISTOR WITH A CONTROLLED hFE. THE CASE SHALL BE JEDEC TYPE T05.

**NOTE 6:**  
 TX108 MAY BE ACCEPTED WITH EITHER A T05 CASE (STANDARD) OR WITH A T09 CASE (NON-STANDARD).

**NOTE 7:**  
 TX108 SHALL BE MARKED ON THE TOP OF THE CASE, "2N1370-7" SHALL BE MARKED ON THE TOP, OR ON THE SIDE; OR OMITTED.



REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
B			TOP VIEW DELE. NOTE 7 ADD.	
A			NOTES 5 & 6 ADD. PICT: (T05) ADD.	
/			FINAL RELEASE FOR PRODUCTION	
SYM			DESCRIPTION	
			UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	
			SCALE	
			DECIMALS: .X ± .05, .XX ± .01, .XXX ± .005	
			FRACTIONS: ± 1/64, ANGLES: ± 0° 30'	
			TOLERANCES	
			CODE: C	
			DATE: 10-27-64	
			CH. NO. 1230-14	
			DRAFTS 13-14	
			CHECKER J. L. ...	
			ENG. APP. J. L. ...	
			TYPE & TEMPER	
			HEAT TREAT. SPEC.	
			DRAWN	
			CHECKED	
			FINISH & SPEC. NO.	
			ELEC. DES. APP.	
			MECH. DES. APP.	
THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK				
TRANSISTOR, GERMANIUM, PNP				
2N1370-7				
FINAL APPROVAL				
TX 108				B



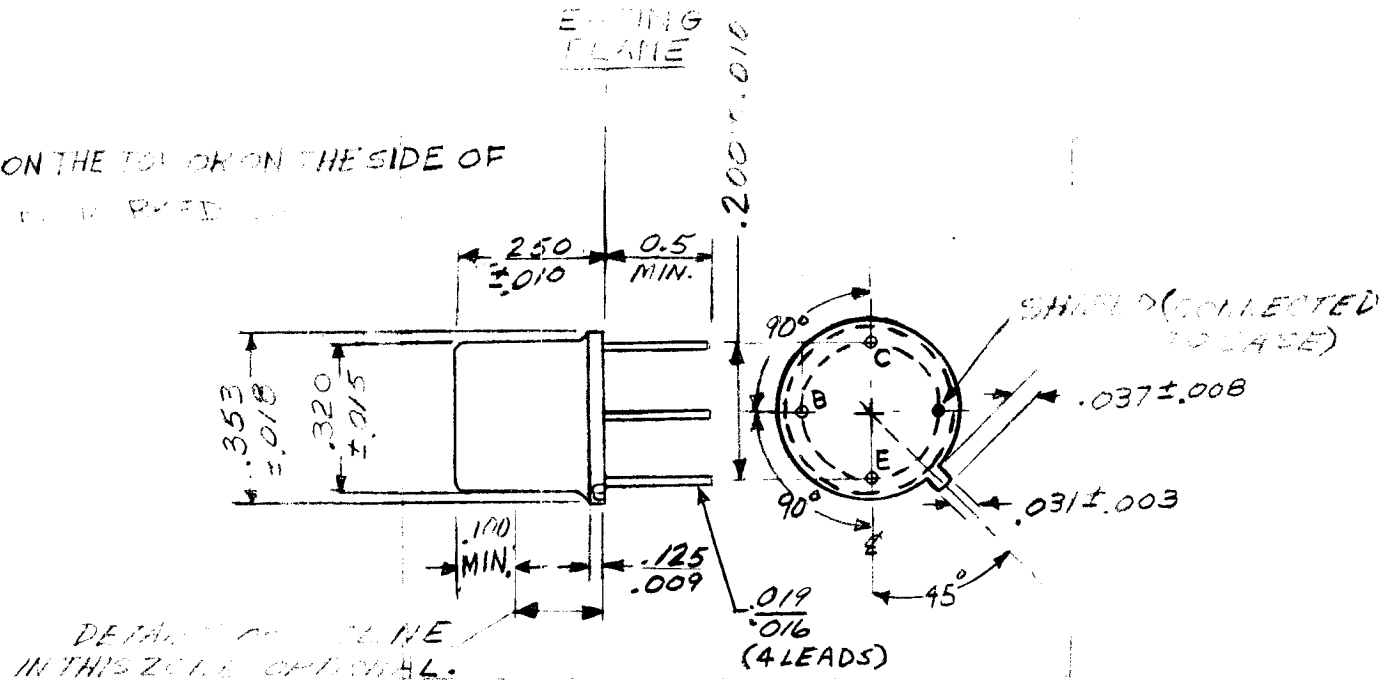
# STANDARD DRAWING

REQ. PER UNIT 12	USED ON		TX109	D
	MODEL TTR-10	ASS'Y. NO.		

h<sub>FE</sub> LIMITS 95 - 150  
 TEST CONDITIONS  
 I<sub>E</sub> 1 Ma  
 V<sub>CB</sub> 6 V

TX109 IS A JEDEC TYPE 2N2495 GERMANIUM PNP TRANSISTOR WITH A CONTROLLED h<sub>FE</sub>. THE CASE SHALL BE JEDEC TYPE TO12.

NOTE:  
 TX109 SHALL BE MARKED ON THE TOP OR ON THE SIDE OF THE CASE, "2N2495". THIS MARKING MAY BE OMITTED.



D	1/6 DIMENSIONS	1/6/66	15533	H.V.	90/7	
C	FEED IN WITH CHANGE	1/1/66	15000	A.I.I.		
B	COMPLETELY REVISED	10/1/65	14700	H.V.	8/2	
A	TOP VIEW DELETED; NOTE ADDED.	4-23-65	13271	92	9/6	
Ø	ORIGINAL RELEASE FOR PRODUCTION	10/1/65		1		
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		SCALE				
DECIMALS .X ± .05 .XX ± .01 .XXX ± .005	FRACTIONS ± 1/64 ANGLES ± 0° 30'	CODE C	3401-32			

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
STOCK SIZE		TRANSISTOR, GERMANIUM, PNP	
MATERIAL		2N2495	
TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED
FINISH & SPEC. NO.		ELEC. DES. APP.	MECH. DES. APP.
		12-01-64	RC
		TX109	D

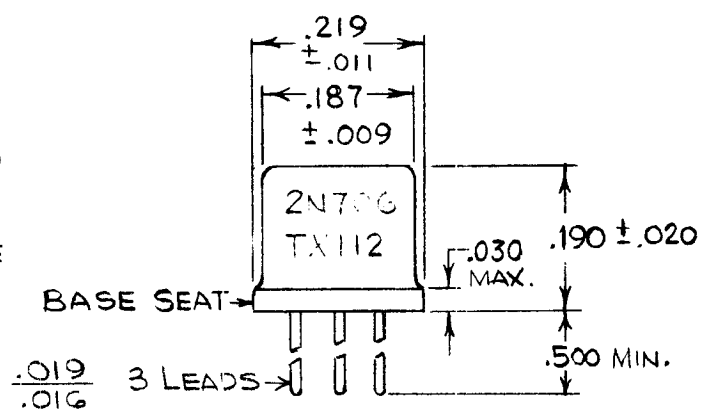
REQ. PER UNIT	USED ON			TX112	Ø
	MODEL	ASS'Y. NO.	DATE		

hFE LIMITS 40-60  
 TEST CONDITIONS  
 $V_{CE} = 1V$   
 $I_C = 10mA$

TX112 IS A JEDEC TYPE 2N706 SILICON NPN TRANSISTOR WITH A CONTROLLED hFE. THE CASE SHALL BE JEDEC TYPE TO-18.

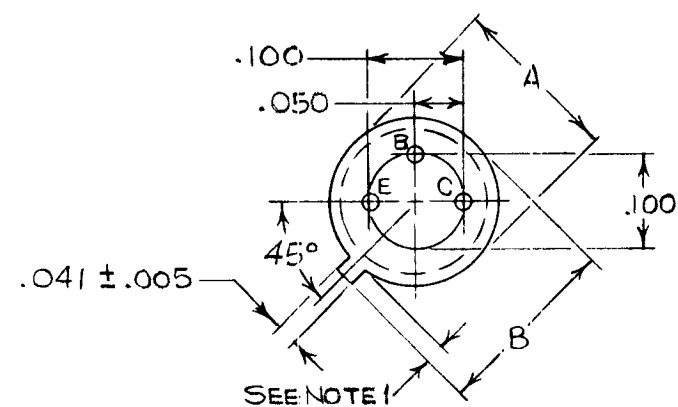
NOTE 2:

CASE SHALL BE MARKED AS SHOWN OR THE MARKING "2N706" MAY BE OMITTED.



NOTE 1:

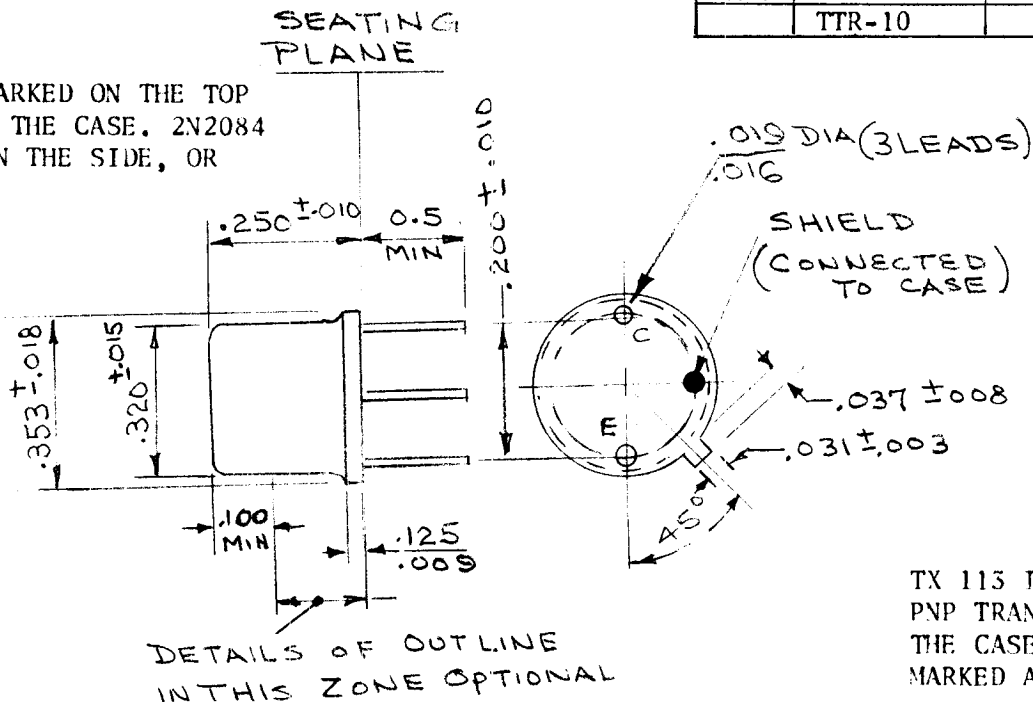
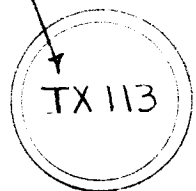
TAB LENGTH TO BE .028 MIN-.048 MAX. AND WILL BE DETERMINED BY SUBTRACTING DIA "A" FROM DIMENSION "B".



							REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL	
									THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK		
								STOCK SIZE	TRANSISTOR, SILICON, NPN		
									2N706		
Ø	ORIGINAL RELEASE FOR PRODUCTION	6-17-65	<del>AA</del>	JC							
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		SCALE							H. AUSTIN	<i>[Signature]</i>	<i>[Signature]</i> 6/17/65
							TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL
DECIMALS .X ±.05 .XX ±.01 .XXX ±.005	TOLERANCES	FRACTIONS ± 1/64 ANGLES ± 0° 30'	CODE C	S401-40							Ø
							FINISH & SPEC. NO.		ELEC. DES. APP.	MECH. DES. APP.	TX112

NOTE :

TX 113 SHALL BE MARKED ON THE TOP OR ON THE SIDE OF THE CASE. 2N2084 SHALL BE MARKED ON THE SIDE, OR OMITTED.



hfe LIMITS 60-100  
TEST CONDITIONS  
Ie 1Ma  
Vcb 6V

TX 113 IS A JEDEC TYPE 2N2084 GERMANIUM PNP TRANSISTOR WITH A CONTROLLED hfe. THE CASE SHALL BE JEDEC TYPE T033 AND MARKED AS SHOWN

REQ. PER UNIT	USED ON			TX 113	
	MODEL	ASS'Y. NO.	DATE		
	TTR-10				

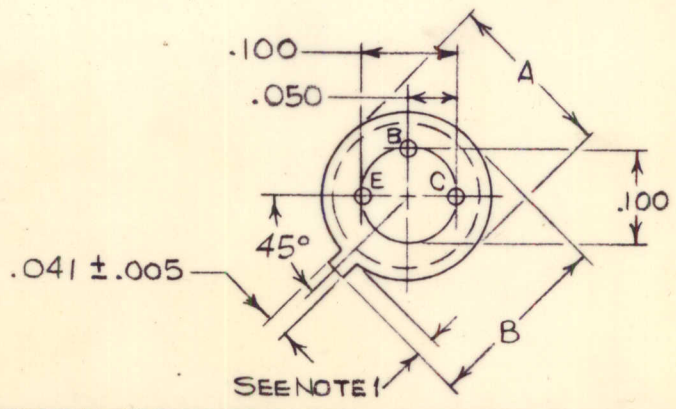
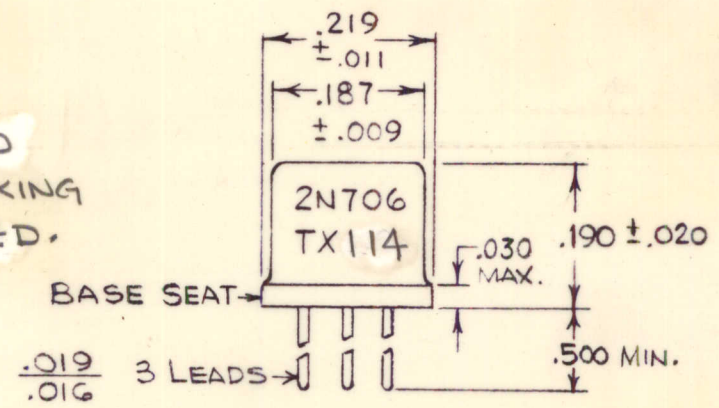
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL		
									THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK			
								STOCK SIZE	TRANSISTOR, GERMANIUM, PNP			
	ORIGINAL RELEASE	4/15/66						MATERIAL	2N2084			
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	SCALE							C.V.			
	DECIMALS .X ± .05 .XX ± .01 .XXX ± .005	FRACTIONS ± 1/64 ANGLES ± 0° 30'	CODE					TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL
	TOLERANCES		S401-321									
								FINISH & SPEC. NO.	ELEC. DES. APP.	MECH. DES. APP.	TX 113	

REQ. PER UNIT	USED ON			TX114	Ø
	MODEL	ASS'Y. NO.	DATE		
	CDN-3				

h<sub>FE</sub> LIMITS 70 MIN  
 TEST CONDITIONS  
 V<sub>CE</sub> = 1V  
 I<sub>C</sub> = 10MA.

NOTE 2:  
 CASE SHALL BE MARKED AS SHOWN OR THE MARKING "2N706" MAY BE OMITTED.

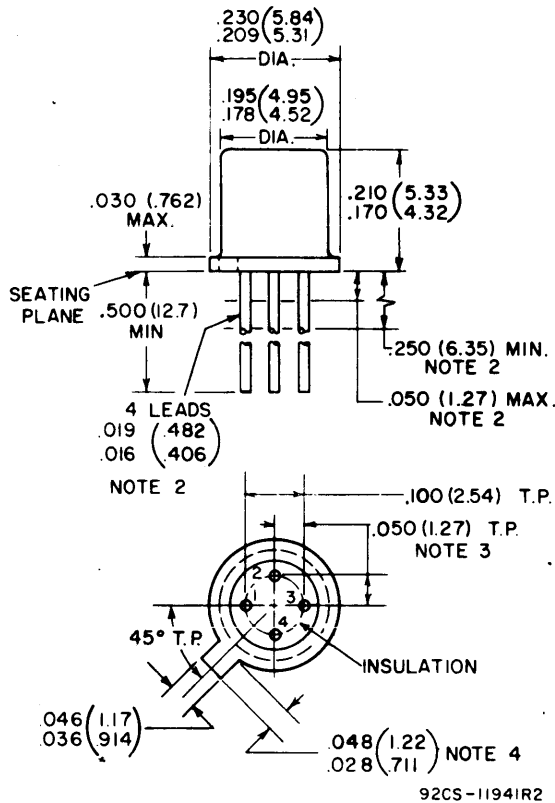
TX114 IS A JEDEC TYPE 2N706 SILICON NPN TRANSISTOR WITH A CONTROLLED h<sub>FE</sub>. THE CASE SHALL BE JEDEC TYPE TO-18.



NOTE 1:  
 TAB LENGTH TO BE .028 MIN.: .048 MAX. AND WILL BE DETERMINED BY SUBTRACTING DIA "A" FROM DIMENSION "B".

SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
							—#—		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
							—#—	STOCK SIZE		
							—#—	MATERIAL	TRANSISTOR, SILICON, NPN 2N706	
							—#—	TYPE & TEMPER	JAD	
							—#—	HEAT TREAT. SPEC.	JAD 2/23/66	
							—#—	FINISH & SPEC. NO.	MECH. DES. APP.	
									FINAL APPROVAL	
										TX114
										Ø

APPLICATION			REVISIONS						
QTY	MODEL USED ON	ASS'Y NO.	LTR	DESCRIPTION	DATE	E.M.N.NO	DRAFT	CHKD	APPD
6	HFRR-4 HFRR-5	AX5088 AX5008	Ø	ORIGINAL RELEASE	6/11/69	Ø	CV		JLQ



### SPECIFICATIONS

DRAIN CURRENT: .1 TO .3 mA  
 GATE VOLTAGE: -2V  
 "PINCH-OFF" CHARACTERISTICS  
 IN COMMON SOURCE CONFIGURATION

TX115 IS A JEDEC TYPE 3N128  
 TRANSISTOR WITH THE ABOVE  
 SPECS

### Dimensions in Inches and Millimeters

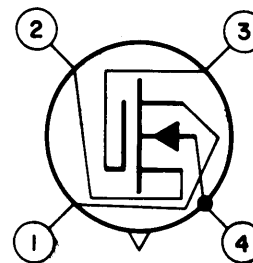
**Note 1:** Dimensions in parentheses are in millimeters and are derived from the basic inch dimensions as indicated.

**Note 2:** The specified lead diameter applies in the zone between 0.050" (1.27 mm) and 0.250" (6.35 mm) from the seating plane. From 0.250" (6.35 mm) to the end of the lead a maximum diameter of 0.021" (0.533 mm) is held. Outside of these zones, the lead diameter is not controlled.

**Note 3:** Leads having a maximum diameter of 0.019" (0.482 mm) at a gauging plane of 0.054" (1.372 mm) + 0.001" (0.025 mm) - 0.000" (0.000 mm) below seating plane shall be within 0.007" (0.177 mm) at their true position (location) relative to a maximum width of tab.

**Note 4:** Measured from actual maximum diameter.

### TERMINAL DIAGRAM



- 1 - Drain
- 2 - Source
- 3 - Insulated Gate
- 4 - Bulk (Substrate) and Case

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	REQ'D	ITEM	PART NUMBER	DESCRIPTION	SYM.
DECIMALS .X ± .05 .XX ± .01 .XXX ± .005					
FRACTIONS 1/64 ANGLES 0° - 30°					
MATERIAL		POSE		LIST OF MATERIAL	
FINISH		MECH. DES.	DATE 6/11/69	THE TECHNICAL MATERIEL CORP.	
		ELECT. DES.	DATE	MAMARONECK, NEW YORK	
		CHECKED	DATE 5/27/69	TRANSISTOR, SILICON	
S401-327(3N128)		DRAWN	DATE 5/22/69	(3N128)	
NOTICE TO PERSONS RECEIVING THIS DRAWING THE TECHNICAL MATERIEL CORPORATION claims proprietary right in the material disclosed hereon. This drawing is issued in confidence for engineering information only and may not be reproduced or used to manufacture anything shown hereon without permission from THE TECHNICAL MATERIEL CORPORATION to the user. This drawing is loaned for mutual assistance and is subject to recall at any time.				SIZE A	ISSUE Ø
				CODE IDENT. NO. 82679	DWG NO. TX 115
				SCALE	SHEET OF