

### VX10-B1 Solid State Switches



Actual product appearance may vary.

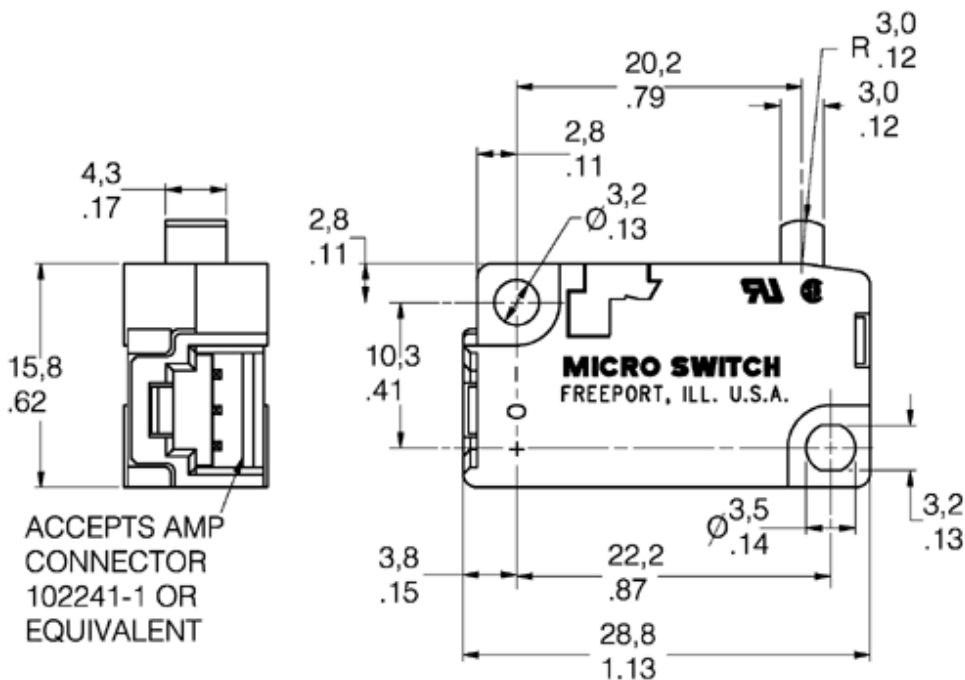
#### Features

##### Features

- Plunger operated non-contact digital output
- Low force operation
- Direct interface to solid state circuits
- Reverse voltage protection
- Rugged construction
- Tested to over 100 million operations
- Wide variety of standard levers and actuators available
- Lever external to switch body
- Industry standard mounting holes
- No external terminals - uses standard keyed and locking plug-in connectors
- UL recognized, CSA certified
- Plunger is acetal copolymer. Housing is PBT polyester.

#### Product Specifications

Product Type	Hall-Effect Basic Switch
Transistor State	Normally Off
Lever Style	Simulated Roller
Package Style	V Switch
Supply Voltage	4.5 Vdc to 24.0 Vdc
Output Type	Sink
Termination Type	AMP Connector
Operating Temperature Range	-40 °C to 70 °C [-40 °F to 158 °F]
Output Voltage	0.4 Vdc max.
Switching Time Rise (10 % to 90 %)	1.5 μs max.
Switching Time Fall (90 % to 10 %)	1.0 μs max.
Availability	Global
Operating Force	0,06 N [0.20 oz]
Supply Current (max. @ 25 °C)	15 mA
Output Current (max.)	10 mA
Lever Actuation Point	32,6 mm [1.285 in]
Pretravel (PT) max.	5,21 mm [0.205 in]
Overtravel (OT) min.	1,91 mm [0.075 in]
Operating Position (OP)	17,02 mm [0.670 in] min.
Series Name	VX
Description	VX Series Solid State Basic Switch with simulated roller; output normally off



**ABSOLUTE MAXIMUM RATINGS**

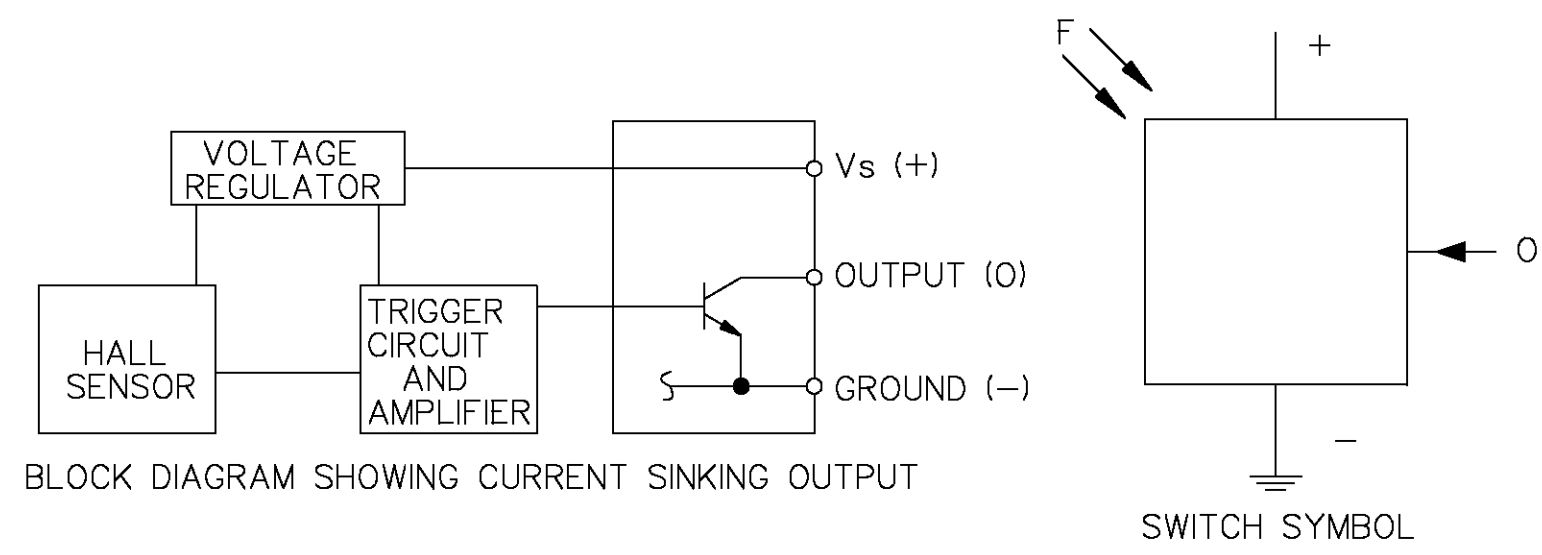
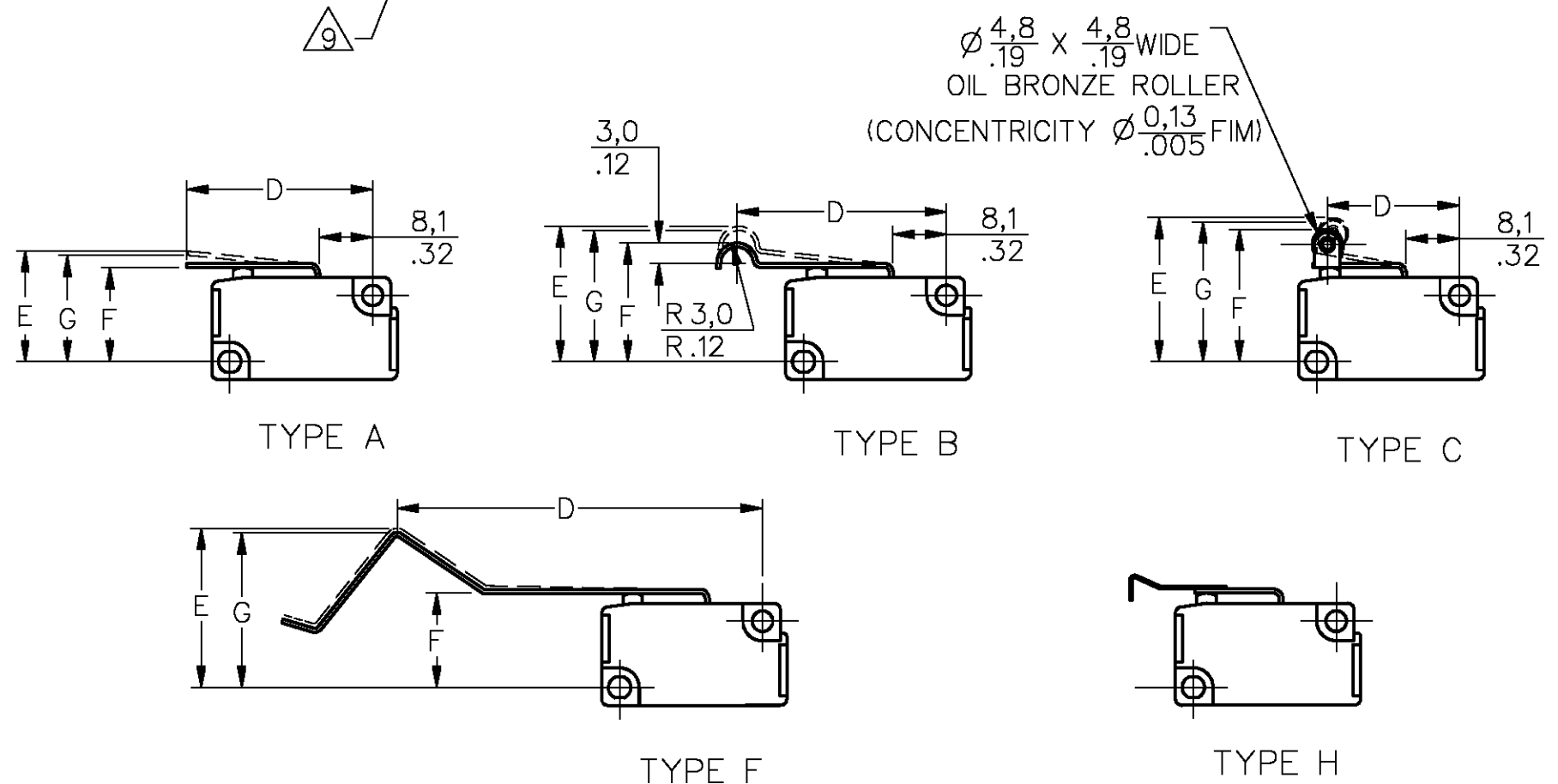
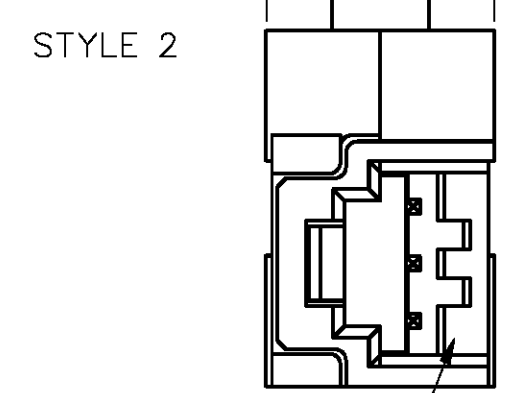
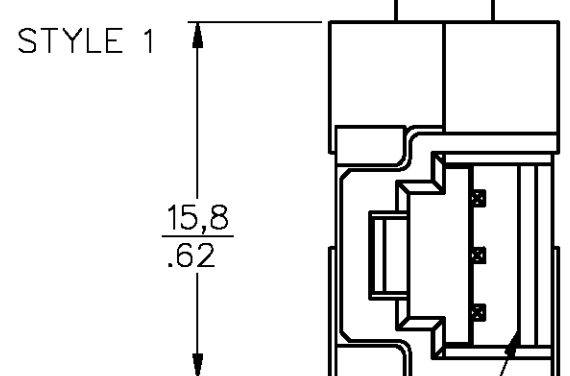
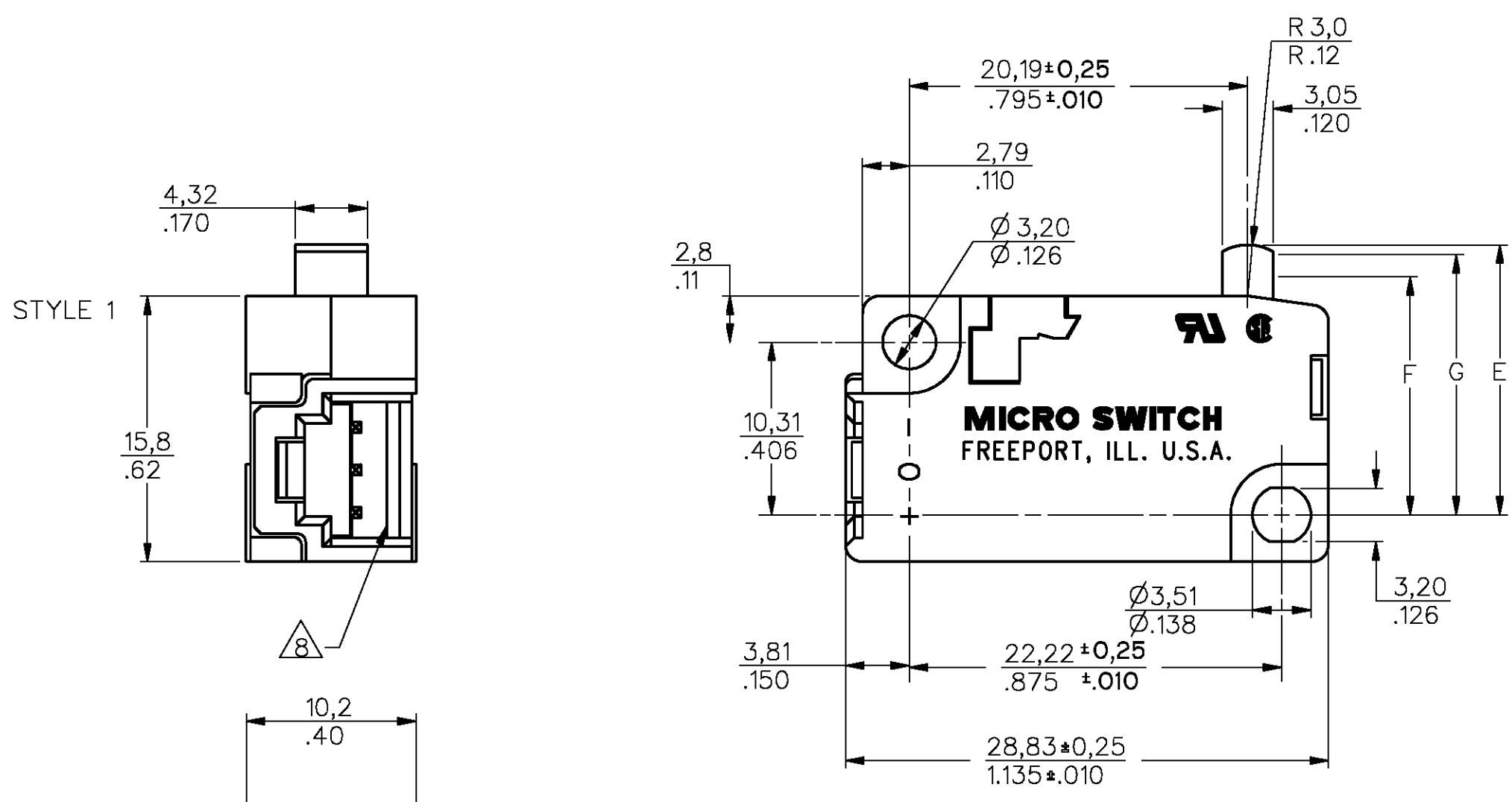
SUPPLY VOLTAGE (V <sub>S</sub> )	-24 TO +28 VOLTS DC
VOLTAGE EXTERNALLY APPLIED TO OUTPUT	28 VOLTS DC MAX WITH OUTPUT TRANSISTOR IN OFF CONDITION ONLY $\sqrt{1/6}$ -0.5 VOLTS MIN WITH OUTPUT TRANSISTOR IN ON OR OFF CONDITION $\sqrt{1/6}$
LOAD ON OUTPUT	20mA
TEMPERATURE $\sqrt{11}$	-40°C TO +70°C EXCEPT SPECIAL LISTINGS

**ELECTRICAL CHARACTERISTICS  $\sqrt{1}$**

	MIN	TYP	MAX	REMARKS
SUPPLY CURRENT $\sqrt{2}$		5mA	15mA	OUTPUT TRANSISTOR OFF $\sqrt{6}$
OUTPUT VOLTAGE $\sqrt{1/3}$ (OUTPUT TRANSISTOR ON) $\sqrt{5/6}$		0.15V	0.4V	SINKING 10mA MAX
OUTPUT LEAKAGE CURRENT (OUTPUT TRANSISTOR OFF) $\sqrt{5/6}$			10μA	LEAKAGE INTO SWITCH OUTPUT
OUTPUT SWITCHING TIME (SINKING 10mA) $\sqrt{3/5}$				
RISE TIME		0.5μS	1.5μS	10% TO 90%
FALL TIME		0.5μS	1.0μS	90% TO 10%

**NOTES**

- $\sqrt{1}$  REFER TO CHART TO DETERMINE THE UNACTUATED OUTPUT VOLTAGE AND OUTPUT TRANSISTOR STATE
- $\sqrt{2}$  AT 24°C ± 2°C AND SUPPLY VOLTAGE OF 4.5 TO 24 VOLTS DC
- $\sqrt{3}$  OVER A TEMPERATURE RANGE OF 0°C TO +70°C
- $\sqrt{4}$  LEVER MAY NOT BE SELF RETURNING WHEN MOUNTED WITH WEIGHT OF LEVER ON SWITCH PLUNGER
- $\sqrt{5}$  SUPPLY VOLTAGE OF 4.5 TO 24 VOLTS DC
- $\sqrt{6}$  "TRANSISTOR ON" CONDITION IS DEFINED TO BE WHEN THE OUTPUT TRANSISTOR IS CONDUCTING CURRENT
- 7 - BLACK PLUNGER INDICATES NORMALLY HIGH OUTPUT; RED PLUNGER INDICATES NORMALLY LOW OUTPUT
- $\sqrt{8}$  ACCEPTS CONNECTOR EQUIVALENT TO AMP PART NO. 102241-1
- $\sqrt{9}$  ACCEPTS CONNECTOR EQUIVALENT TO MOLEX PART NO. 50-57-9403
- $\sqrt{10}$  SPECIAL LEVER FORM
- $\sqrt{11}$  SPECIAL TEMPERATURE FOR GE -40°C TO +60°C



DRAWING NUMBER: VX SERIES CHART 1  
 PAGE 1 OF 4  
 ISSUE: 21  
 CHECK: J A F 13 JAN 99  
 RELEASE NO.: PR-12882  
 REPLACES: X80986-VX  
 REVISIONS:  
 A CO79902  
 J A F 7 FEB 95  
 B PR22156  
 J A K 14 AUG 96  
 C CO83741  
 J A K 8 OCT 96  
 D CO93789  
 J A F 3 NOV 98  
 E PR23775  
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 G PR23780  
 P P F 25 FEB 99  
 H CO93843  
 D L T 14 APR 99  
 J CO95107  
 G J W 29 APR 99  
 K CO-95704  
 D L M 22 MAR 00  
 FORMTEK DRAWN: J A F 17 FEB 95  
 CHECK: K A G 16 FEB 95

SCALE: FULL SIZE

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**MICRO SWITCH** a Honeywell Division  
 SWITCH - SOLID STATE  
 CATALOG LISTING  
**VX SERIES CHART 1**

THIRD ANGLE PROJECTION  
 SCALE 3:1  
 DO NOT SCALE PRINT  
**UNLESS OTHERWISE SPECIFIED TOLERANCES ARE**  
 ONE PLACE (.0) ±.030  
 TWO PLACES (.00) ±.015  
 THREE PLACES (.000) ±.005  
 ANGLES ±  
 WEIGHT

"D" LEVER ACTUATION POINT	LEVER TYPE	"E" FREE POSITION (MAX)	"F" OPERATION POINT (MIN)	"G" RELEASE POINT (MAX)	OVER-TRAVEL (MIN)	DIFF TRAVEL (MIN)	FORCE AT OPERATE POINT		UNACTUATED OUTPUT VOLTAGE	OUTPUT TRANSISTOR	SOLDER PLATED TERMINALS		
							OUNCES	GRAMS			CATALOG LISTING	STYLE 1	STYLE 2
							OUNCES	GRAMS			8	9	
.795	NONE	$\frac{16.38}{.645}$	$\frac{14.22}{.560}$	$\frac{15.54}{.612}$	$\frac{1.02}{.040}$	$\frac{0.05}{.002}$	$\frac{.35}{-.14}^{+.18}$	$10^{+5}_{-4}$	HIGH	OFF	VX10	VX12	
							$\frac{3.0}{.88}$	$85^{*}25$	LOW	ON	VX11	VX13	
.860	A	$\frac{17.27}{.680}$	$\frac{14.71}{.579}$	$\frac{16.33}{.643}$	$\frac{1.02}{.040}$	$\frac{0.05}{.002}$	$\frac{.35}{.2}$	$10^{*}5$	HIGH	OFF	VX10-A1	VX12-A1	
							$2.8^{*}1.1$	$80^{*}30$	LOW	ON	VX11-A1	(H)	
1.400	A	$\frac{19.28}{.759}$	$\frac{13.94}{.549}$	$\frac{17.32}{.682}$	$\frac{2.16}{.085}$	$\frac{0.10}{.004}$	$\frac{0.2}{.1}$	$5^{+3}_{-2}$	HIGH	OFF	VX10-A2	(H)	
							$1.41^{*}.50$	$40^{*}15$	LOW	ON	VX11-A2	VX13-A2	
2.340	A	$\frac{22.58}{.889}$	$\frac{12.62}{.497}$	$\frac{18.97}{.747}$	$\frac{4.06}{.160}$	$\frac{0.20}{.008}$	$\frac{.10}{.07}$	$3^{*}2$	HIGH	OFF	VX10-A3	VX12-A3	
							$\frac{.75}{.7}$	$21^{+9}_{-7}$	LOW	ON	VX11-A3	VX13-A3	
1.285	B	$\frac{22.23}{.875}$	$\frac{17.02}{.670}$	$\frac{20.52}{.808}$	$\frac{1.91}{.075}$	$\frac{0.10}{.004}$	$\frac{0.20}{.10}^{+.15}_{-.10}$	$5^{+4}_{-2}$	HIGH	OFF	VX10-B1	VX12-B1	
							$1.55^{*}.53$	$44^{*}15$	LOW	ON	VX11-B1	VX13-B1	
.810	C	$\frac{22.48}{.885}$	$\frac{19.99}{.787}$	$\frac{21.62}{.851}$	$\frac{1.02}{.040}$	$\frac{0.05}{.002}$	$\frac{.40}{.20}$	$12^{*}5$	HIGH	OFF	VX10-C1	VX12-C1	
							$3.0^{*}1.06$	$85^{*}30$	LOW	ON	VX11-C1	VX13-C1	
$\frac{.795}{\Delta}$	A	$\frac{17.78}{.700}$	$\frac{14.73}{.580}$	$\frac{16.13}{.635}$	$\frac{1.02}{.040}$	$\frac{0.10}{.004}$	$\frac{.35}{-.14}^{+.18}$	$10^{+5}_{-4}$	LOW	ON	VX81-A2-GE		
1.226	F	$\frac{25.73}{1.013}$	$\frac{21.72}{.855}$	$\frac{23.98}{.944}$	$\frac{1.65}{.065}$	$\frac{0.13}{.005}$	$\frac{.35}{-.14}^{+.18}$	$10^{+5}_{-4}$	HIGH	OFF	VX10-F1	VX11-F1	
1.250	F	$\frac{25.58}{1.007}$	$\frac{21.72}{.855}$	$\frac{23.83}{.938}$	$\frac{1.65}{.065}$	$\frac{0.13}{.005}$	$\frac{.35}{-.14}^{+.18}$	$10^{+5}_{-4}$	HIGH	OFF	VX10-FA		

NOTE  
 $\Delta$  MEASUREMENTS TAKEN OVER PLUNGER

DRAWING NUMBER: VX SERIES CHART 1  
 PAGE 2 OF 4  
 ISSUE: 21  
 RELEASE NO. PR-12882  
 REPLACES: X80986-VX  
 REVISIONS:  
 L CO-95107  
 G J W 29 APR 99  
 K CO-95704  
 DLM 22 MAR 00  
 CHECK J A F 13 JAN 99  
 CHECK J A F 08 DEC 98  
 CHECK J A F 13 JAN 99  
 FORMTEK DRAWN  
 J A S BAUG88



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ANSI Y14.5M-1982 APPLIES

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SWITCH - SOLID STATE

CATALOG LISTING  
**VX SERIES**  
**CHART 1**

FED. MFG. CODE 91929

THIRD ANGLE PROJECTION

SCALE NONE

DO NOT SCALE PRINT

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE

ONE PLACE	(.0)	±.030
TWO PLACES	(.00)	±.015
THREE PLACES	(.000)	±.005
ANGLES		±

WEIGHT

UNLESS OTHERWISE NOTED MECHANICAL CHARACTERISTICS ARE GIVEN ON LEVER OVER PLUNGER

"D" LEVER ACTUATION POINT	LEVER TYPE	"E" FREE POSITION (MAX)	"F" OPERATION POINT (MIN)	"G" RELEASE POINT (MAX)	OVER-TRAVEL (MIN)	DIFF TRAVEL (MIN)	FORCE AT OPERATE POINT		UNACTUATED OUTPUT VOLTAGE	OUTPUT TRANSISTOR	CATALOG LISTING		COMMENTS
							OUNCES	GRAMS			STYLE 1	STYLE 2	
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF	VX10-F4		GENICOM DRAWING NO. 44A501960-001
.795	H	$\frac{17.02}{.670}$	$\frac{15.37}{.605}$	$\frac{16.69}{.657}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF			
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	LOW	ON			
.795	H	$\frac{17.02}{.670}$	$\frac{15.37}{.605}$	$\frac{16.69}{.657}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF	VX10-H2		
	NONE	$\frac{16.38}{.645}$	$\frac{14.22}{.560}$	$\frac{15.54}{.612}$	$\frac{1.02}{.040}$	$\frac{0.05}{.002}$	1.2* $\frac{+18}{-14}$	34* $\frac{+5}{-4}$	HIGH	OFF	VX30HP		
.795	A	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF			
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF			
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF	VX10-F8		
.810	C	$\frac{22.48}{.885}$	$\frac{19.99}{.787}$	$\frac{21.62}{.851}$	$\frac{1.02}{.040}$	$\frac{0.05}{.002}$	.19* $\frac{+18}{-14}$	5.4* $\frac{+5}{-4}$	HIGH	OFF	VX10-C1L		

DRAWING NUMBER: VX SERIES CHART 1  
 PAGE 3 OF 4  
 ISSUE: 21  
 RELEASE NO. PR-13520  
 REPLACES: X80986-VX  
 REVISIONS:  
 A PR16589  
 22 JUL 88  
 A PR16590  
 J A S  
 22 JUL 88  
 A C084025  
 J A S  
 22 JUL 88  
 B PR17180  
 K A T  
 3 MAR 89  
 C C093789  
 J A S  
 3 NOV 88  
 D PR23775  
 P B F  
 08 DEC 88  
 E PR23787  
 M B O  
 13 JAN 89  
 F PR23780  
 G R T  
 25 FEB 89  
 G C093843  
 J A S  
 14 APR 89  
 H C0-95107  
 G J W  
 29 APR 89  
 J C0-95704  
 D L W  
 22 MAR 00  
 FORMTEK DRAWN BY: JAS  
 CHECKED BY: JAF  
 DATE: 22 JUL 88



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SWITCH - SOLID STATE

CATALOG LISTING  
**VX SERIES**  
**CHART 1**

FED. MFG. CODE 91929

THIRD ANGLE PROJECTION

SCALE NONE

DO NOT SCALE PRINT

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE

ONE PLACE	(.0)	±.030
TWO PLACES	(.00)	±.015
THREE PLACES	(.000)	±.005
ANGLES		±

WEIGHT

UNLESS OTHERWISE NOTED MECHANICAL CHARACTERISTICS ARE GIVEN ON LEVER OVER PLUNGER

"D" LEVER ACTUATION POINT	LEVER TYPE	"E" FREE POSITION (MAX)	"F" OPERATION POINT (MIN)	"G" RELEASE POINT (MAX)	OVER-TRAVEL (MIN)	DIFF TRAVEL (MIN)	FORCE AT OPERATE POINT		UNACTUATED OUTPUT VOLTAGE	OUTPUT TRANSISTOR	CATALOG LISTING		IBM DRAWING NO.	COMMENTS
							OUNCES	GRAMS			STYLE 1	STYLE 2		
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+.18}{-.14}$	10 $\frac{+5}{-4}$	HIGH	OFF	VX10-F1		4592340	
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+.18}{-.14}$	10 $\frac{+5}{-4}$	HIGH	OFF	(F)		4593242	
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+.18}{-.14}$	10 $\frac{+5}{-4}$	HIGH	OFF	(F)		4593470	
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+.18}{-.14}$	10 $\frac{+5}{-4}$	HIGH	OFF	(F)		4592552	

IBM CORPORATION SWITCHES ONLY THIS PAGE

DRAWING NUMBER: VX SERIES CHART 1  
 PAGE 4 OF 4  
 ISSUE: 21  
 RELEASE NO. PR-13487  
 REPLACES: X80986-VX  
 REVISIONS:  
 A CO64025 J A S 9 AUG 88  
 B CO93789 D L T 3 NOV 98  
 C PR23775 P P F 03 DEC 98  
 D PR23787 M F O 13 JAN 99  
 E PR23780 P P F 25 FEB 99  
 F CO93843 D L T 14 APR 99  
 G CO-95107 S L W 29 APR 99  
 H CO-95704 D L M 22 MAR 00  
 CHECK J A F 13JAN99  
 CHECK J A F 09DEC98  
 CHECK J A F 09AUG88  
 FORMTEK DRAWN



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SWITCH - SOLID STATE

CATALOG LISTING  
VX SERIES  
CHART 1

FED. MFG. CODE 91929

THIRD ANGLE PROJECTION	
SCALE	NONE
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UNLESS OTHERWISE SPECIFIED TOLERANCES ARE	
ONE PLACE	(.0) ±.030
TWO PLACES	(.00) ±.015
THREE PLACES	(.000) ±.005
ANGLES	±
WEIGHT	

**ABSOLUTE MAXIMUM RATINGS**

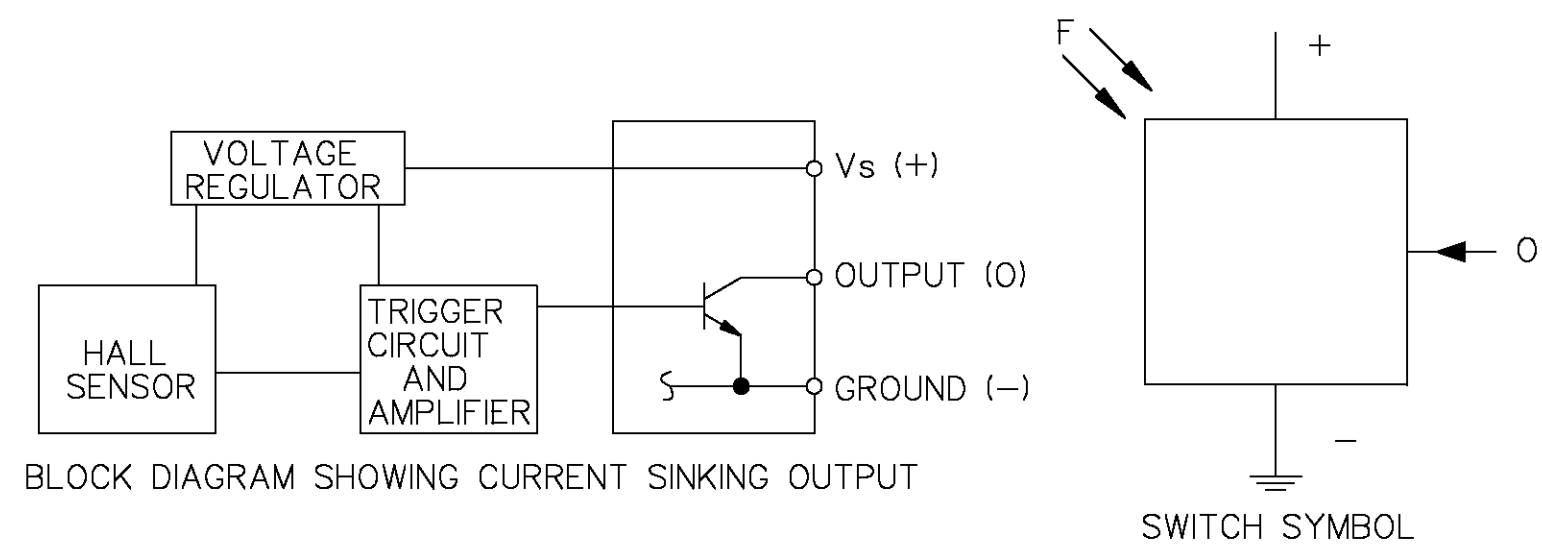
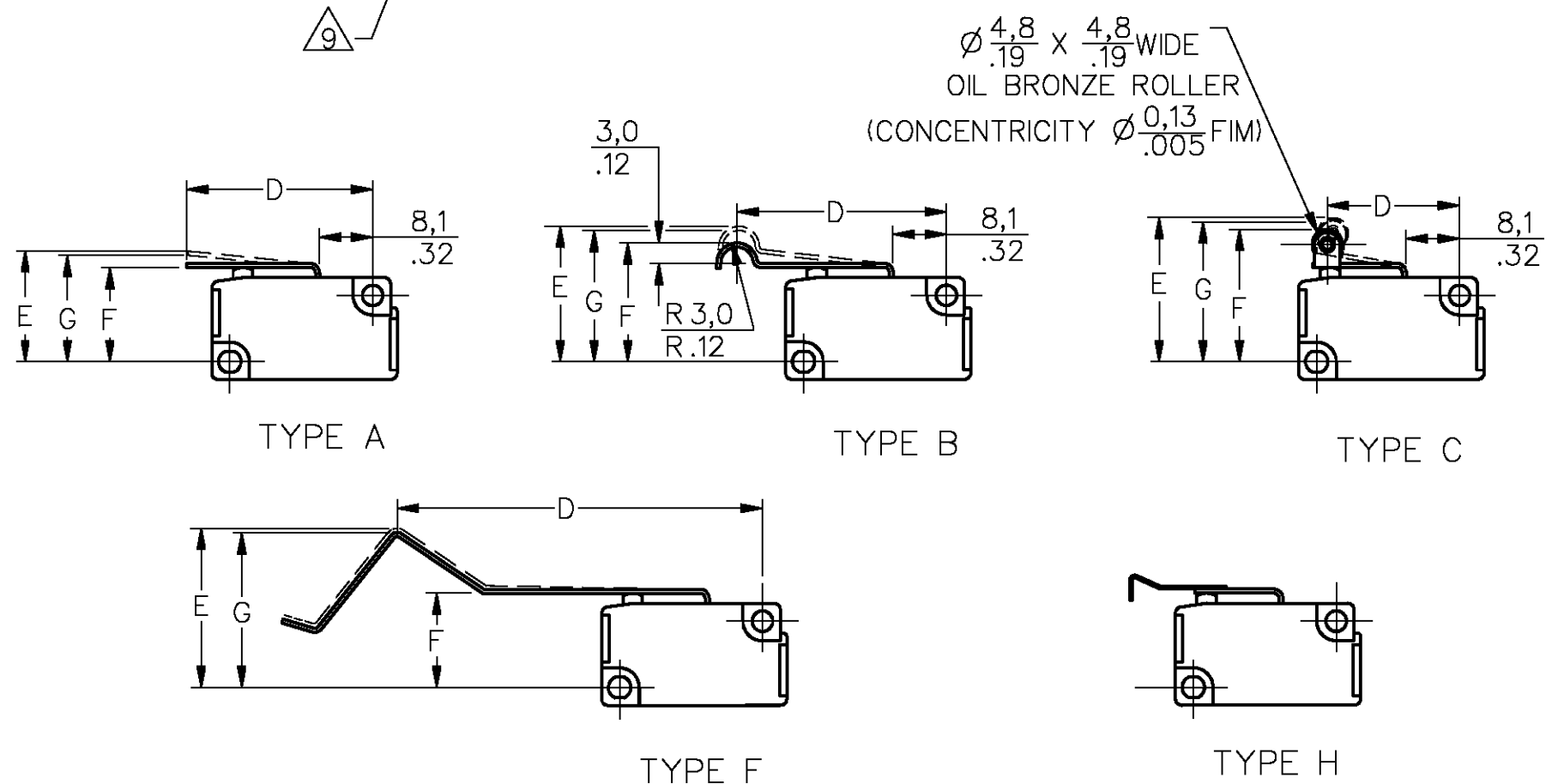
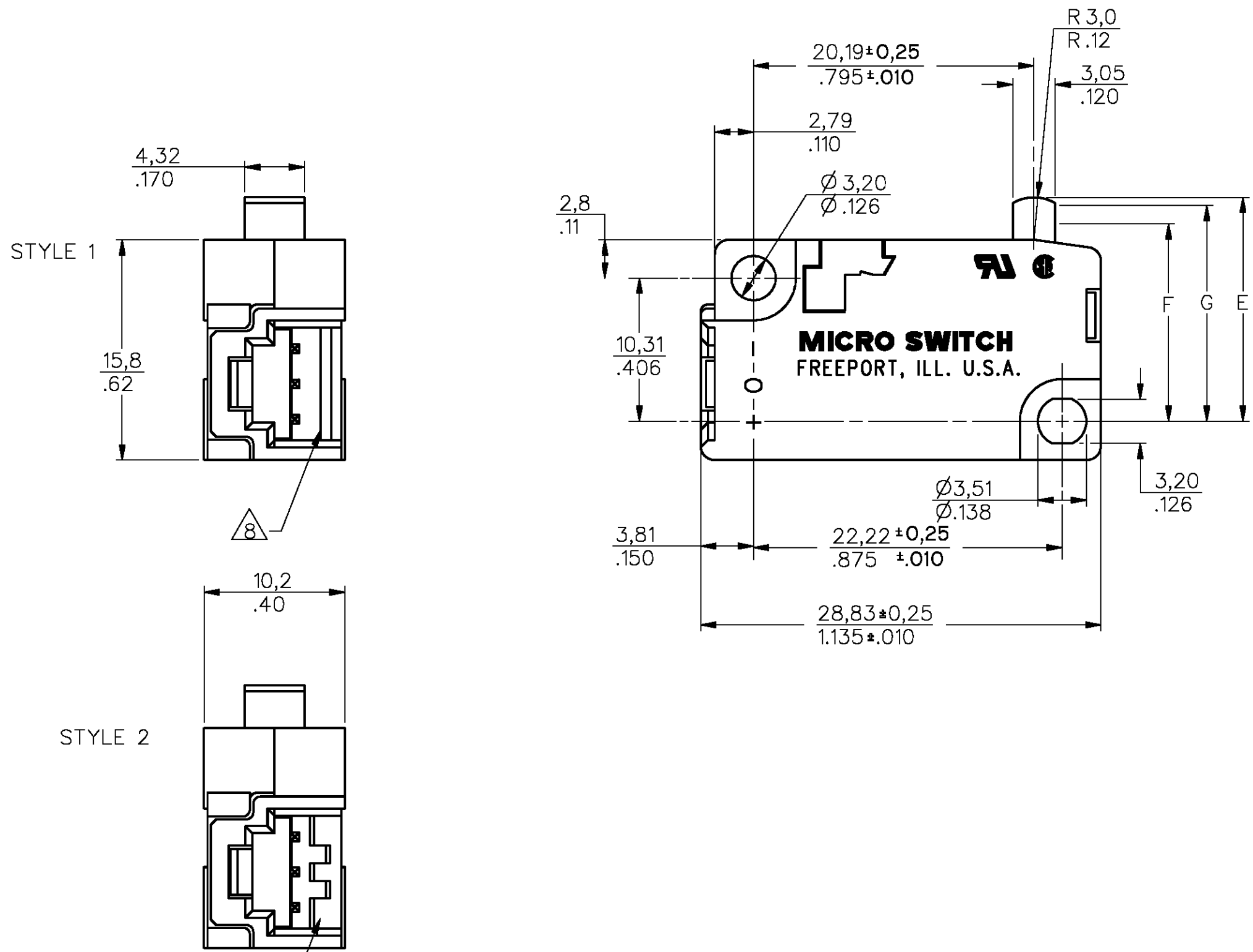
SUPPLY VOLTAGE (V <sub>S</sub> )	-24 TO +28 VOLTS DC
VOLTAGE EXTERNALLY APPLIED TO OUTPUT	28 VOLTS DC MAX WITH OUTPUT TRANSISTOR IN OFF CONDITION ONLY $\sqrt{1/6}$ -0.5 VOLTS MIN WITH OUTPUT TRANSISTOR IN ON OR OFF CONDITION $\sqrt{1/6}$
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TEMPERATURE $\sqrt{11}$	-40°C TO +70°C EXCEPT SPECIAL LISTINGS

**ELECTRICAL CHARACTERISTICS  $\sqrt{1}$**

	MIN	TYP	MAX	REMARKS
SUPPLY CURRENT $\sqrt{2}$		5mA	15mA	OUTPUT TRANSISTOR OFF $\sqrt{6}$
OUTPUT VOLTAGE $\sqrt{1/3}$ (OUTPUT TRANSISTOR ON) $\sqrt{5/6}$		0.15V	0.4V	SINKING 10mA MAX
OUTPUT LEAKAGE $\sqrt{1/3}$ CURRENT (OUTPUT TRANSISTOR OFF) $\sqrt{5/6}$			10 $\mu$ A	LEAKAGE INTO SWITCH OUTPUT
OUTPUT SWITCHING TIME (SINKING 10mA) $\sqrt{3/5}$				
RISE TIME		0.5 $\mu$ S	1.5 $\mu$ S	10% TO 90%
FALL TIME		0.5 $\mu$ S	1.0 $\mu$ S	90% TO 10%

**NOTES**

- $\sqrt{1}$  REFER TO CHART TO DETERMINE THE UNACTUATED OUTPUT VOLTAGE AND OUTPUT TRANSISTOR STATE
- $\sqrt{2}$  AT 24°C  $\pm$  2°C AND SUPPLY VOLTAGE OF 4.5 TO 24 VOLTS DC
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- $\sqrt{4}$  LEVER MAY NOT BE SELF RETURNING WHEN MOUNTED WITH WEIGHT OF LEVER ON SWITCH PLUNGER
- $\sqrt{5}$  SUPPLY VOLTAGE OF 4.5 TO 24 VOLTS DC
- $\sqrt{6}$  "TRANSISTOR ON" CONDITION IS DEFINED TO BE WHEN THE OUTPUT TRANSISTOR IS CONDUCTING CURRENT
- 7 - BLACK PLUNGER INDICATES NORMALLY HIGH OUTPUT; RED PLUNGER INDICATES NORMALLY LOW OUTPUT
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- $\sqrt{9}$  ACCEPTS CONNECTOR EQUIVALENT TO MOLEX PART NO. 50-57-9403
- $\sqrt{10}$  SPECIAL LEVER FORM
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 FORMTEK DRAWN: J A F 17 FEB 95  
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SCALE: FULL SIZE

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SWITCH - SOLID STATE

VX SERIES CHART 1

CATALOG LISTING

THIRD ANGLE PROJECTION

SCALE 3:1

DO NOT SCALE PRINT

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE

ONE PLACE (.0)	$\pm$ .030
TWO PLACES (.00)	$\pm$ .015
THREE PLACES (.000)	$\pm$ .005
ANGLES	$\pm$

WEIGHT

MASTER REDUCED ANSI Y14.5M-1982 APPLIES

FED. MFG. CODE 91929

"D" LEVER ACTUATION POINT	LEVER TYPE	"E" FREE POSITION (MAX)	"F" OPERATION POINT (MIN)	"G" RELEASE POINT (MAX)	OVER-TRAVEL (MIN)	DIFF TRAVEL (MIN)	FORCE AT OPERATE POINT		UNACTUATED OUTPUT VOLTAGE	OUTPUT TRANSISTOR	SOLDER PLATED TERMINALS		
							OUNCES	GRAMS			CATALOG LISTING	STYLE 1	STYLE 2
							OUNCES	GRAMS			8	9	
.795	NONE	$\frac{16.38}{.645}$	$\frac{14.22}{.560}$	$\frac{15.54}{.612}$	$\frac{1.02}{.040}$	$\frac{0.05}{.002}$	$\frac{.35}{-.14}^{+.18}$	$10^{+5}_{-4}$	HIGH	OFF	VX10	VX12	
							$\frac{3.0}{.88}$	$85^{*}25$	LOW	ON	VX11	VX13	
.860	A	$\frac{17.27}{.680}$	$\frac{14.71}{.579}$	$\frac{16.33}{.643}$	$\frac{1.02}{.040}$	$\frac{0.05}{.002}$	$\frac{.35}{.2}$	$10^{*}5$	HIGH	OFF	VX10-A1	VX12-A1	
							$2.8^{*}1.1$	$80^{*}30$	LOW	ON	VX11-A1	(H)	
1.400	A	$\frac{19.28}{.759}$	$\frac{13.94}{.549}$	$\frac{17.32}{.682}$	$\frac{2.16}{.085}$	$\frac{0.10}{.004}$	$\frac{0.2}{.1}$	$5^{+3}_{-2}$	HIGH	OFF	VX10-A2	(H)	
							$1.41^{*}.50$	$40^{*}15$	LOW	ON	VX11-A2	VX13-A2	
2.340	A	$\frac{22.58}{.889}$	$\frac{12.62}{.497}$	$\frac{18.97}{.747}$	$\frac{4.06}{.160}$	$\frac{0.20}{.008}$	$\frac{.10}{.75}$	$3^{*}2$	HIGH	OFF	VX10-A3	VX12-A3	
							$\frac{.75}{.25}^{+.35}_{-.10}$	$21^{+9}_{-7}$	LOW	ON	VX11-A3	VX13-A3	
1.285	B	$\frac{22.23}{.875}$	$\frac{17.02}{.670}$	$\frac{20.52}{.808}$	$\frac{1.91}{.075}$	$\frac{0.10}{.004}$	$\frac{0.20}{.10}^{+.15}_{-.10}$	$5^{+4}_{-2}$	HIGH	OFF	VX10-B1	VX12-B1	
							$1.55^{*}.53$	$44^{*}15$	LOW	ON	VX11-B1	VX13-B1	
.810	C	$\frac{22.48}{.885}$	$\frac{19.99}{.787}$	$\frac{21.62}{.851}$	$\frac{1.02}{.040}$	$\frac{0.05}{.002}$	$\frac{.40}{.3}$	$12^{*}5$	HIGH	OFF	VX10-C1	VX12-C1	
							$3.0^{*}1.06$	$85^{*}30$	LOW	ON	VX11-C1	VX13-C1	
$\frac{.795}{\Delta}$	A	$\frac{17.78}{.700}$	$\frac{14.73}{.580}$	$\frac{16.13}{.635}$	$\frac{1.02}{.040}$	$\frac{0.10}{.004}$	$\frac{.35}{-.14}^{+.18}$	$10^{+5}_{-4}$	LOW	ON	VX81-A2-GE		
1.226	F	$\frac{25.73}{1.013}$	$\frac{21.72}{.855}$	$\frac{23.98}{.944}$	$\frac{1.65}{.065}$	$\frac{0.13}{.005}$	$\frac{.35}{-.14}^{+.18}$	$10^{+5}_{-4}$	HIGH	OFF	VX10-F1	VX11-F1	
1.250	F	$\frac{25.58}{1.007}$	$\frac{21.72}{.855}$	$\frac{23.83}{.938}$	$\frac{1.65}{.065}$	$\frac{0.13}{.005}$	$\frac{.35}{-.14}^{+.18}$	$10^{+5}_{-4}$	HIGH	OFF	VX10-FA		

NOTE  
 $\Delta$  MEASUREMENTS TAKEN OVER PLUNGER

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 L CO-95107  
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 CHECK J A F 13 JAN 99  
 CHECK J A F 08 DEC 98  
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 FORMTEK DRAWN J A S BAUG88



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SWITCH - SOLID STATE

CATALOG LISTING  
**VX SERIES**  
**CHART 1**

FED. MFG. CODE 91929

THIRD ANGLE PROJECTION

SCALE NONE

DO NOT SCALE PRINT

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE

ONE PLACE	(.0)	±.030
TWO PLACES	(.00)	±.015
THREE PLACES	(.000)	±.005
ANGLES		±

WEIGHT

UNLESS OTHERWISE NOTED MECHANICAL CHARACTERISTICS ARE GIVEN ON LEVER OVER PLUNGER

"D" LEVER ACTUATION POINT	LEVER TYPE	"E" FREE POSITION (MAX)	"F" OPERATION POINT (MIN)	"G" RELEASE POINT (MAX)	OVER-TRAVEL (MIN)	DIFF TRAVEL (MIN)	FORCE AT OPERATE POINT		UNACTUATED OUTPUT VOLTAGE	OUTPUT TRANSISTOR	CATALOG LISTING		COMMENTS
							OUNCES	GRAMS			STYLE 1	STYLE 2	
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF	VX10-F4		GENICOM DRAWING NO. 44A501960-001
.795	H	$\frac{17.02}{.670}$	$\frac{15.37}{.605}$	$\frac{16.69}{.657}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF			
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	LOW	ON			
.795	H	$\frac{17.02}{.670}$	$\frac{15.37}{.605}$	$\frac{16.69}{.657}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF	VX10-H2		
	NONE	$\frac{16.38}{.645}$	$\frac{14.22}{.560}$	$\frac{15.54}{.612}$	$\frac{1.02}{.040}$	$\frac{0.05}{.002}$	1.2*18	34*5	HIGH	OFF	VX30HP		
.795	A	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF			
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF			
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+18}{-14}$	10 $\frac{+5}{-4}$	HIGH	OFF	VX10-F8		
.810	C	$\frac{22.48}{.885}$	$\frac{19.99}{.787}$	$\frac{21.62}{.851}$	$\frac{1.02}{.040}$	$\frac{0.05}{.002}$	.19*.09	5.4*2.6	HIGH	OFF	VX10-C1L		

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 A PR16589  
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 A C084025  
 J A S  
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 B PR17180  
 K A T  
 3 MAR 89  
 C C093789  
 J T  
 3 NOV 88  
 D PR23775  
 P B F  
 08 DEC 88  
 E PR23787  
 M B O  
 13 JAN 89  
 F PR23780  
 G R  
 25 FEB 89  
 G C093843  
 D L T  
 14 APR 89  
 H C0-95107  
 G J W  
 29 APR 89  
 J C0-95704  
 D L W  
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 JAS 22 JUL 88  
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CATALOG LISTING  
**VX SERIES**  
**CHART 1**

FED. MFG. CODE 91929

THIRD ANGLE PROJECTION

SCALE NONE

DO NOT SCALE PRINT

UNLESS OTHERWISE SPECIFIED TOLERANCES ARE

ONE PLACE	(.0)	±.030
TWO PLACES	(.00)	±.015
THREE PLACES	(.000)	±.005
ANGLES		±

WEIGHT



UNLESS OTHERWISE NOTED MECHANICAL CHARACTERISTICS ARE GIVEN ON LEVER OVER PLUNGER

"D" LEVER ACTUATION POINT	LEVER TYPE	"E" FREE POSITION (MAX)	"F" OPERATION POINT (MIN)	"G" RELEASE POINT (MAX)	OVER-TRAVEL (MIN)	DIFF TRAVEL (MIN)	FORCE AT OPERATE POINT		UNACTUATED OUTPUT VOLTAGE	OUTPUT TRANSISTOR	CATALOG LISTING		IBM DRAWING NO.	COMMENTS
							OUNCES	GRAMS			STYLE 1	STYLE 2		
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+.18}{-.14}$	10 $\frac{+5}{-4}$	HIGH	OFF	VX10-F1		4592340	
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+.18}{-.14}$	10 $\frac{+5}{-4}$	HIGH	OFF	(F)		4593242	
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+.18}{-.14}$	10 $\frac{+5}{-4}$	HIGH	OFF	(F)		4593470	
.795	F	$\frac{17.02}{.670}$	$\frac{14.86}{.585}$	$\frac{16.18}{.637}$	$\frac{0.91}{.036}$	$\frac{0.05}{.002}$	.35 $\frac{+.18}{-.14}$	10 $\frac{+5}{-4}$	HIGH	OFF	(F)		4592552	

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 A CO64025 J A S 9 AUG 88  
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 E PR23780 P P F 25 FEB 99  
 F CO93843 D L T 14 APR 99  
 G CO-96107 S L W 29 APR 99  
 H CO-95704 D L M 22 MAR 00  
 CHECK J A F 13JAN99  
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CATALOG LISTING  
VX SERIES  
CHART 1

FED. MFG. CODE 91929

THIRD ANGLE PROJECTION	
SCALE	NONE
DO NOT SCALE PRINT	
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ONE PLACE	(.0) ±.030
TWO PLACES	(.00) ±.015
THREE PLACES	(.000) ±.005
ANGLES	±
WEIGHT	