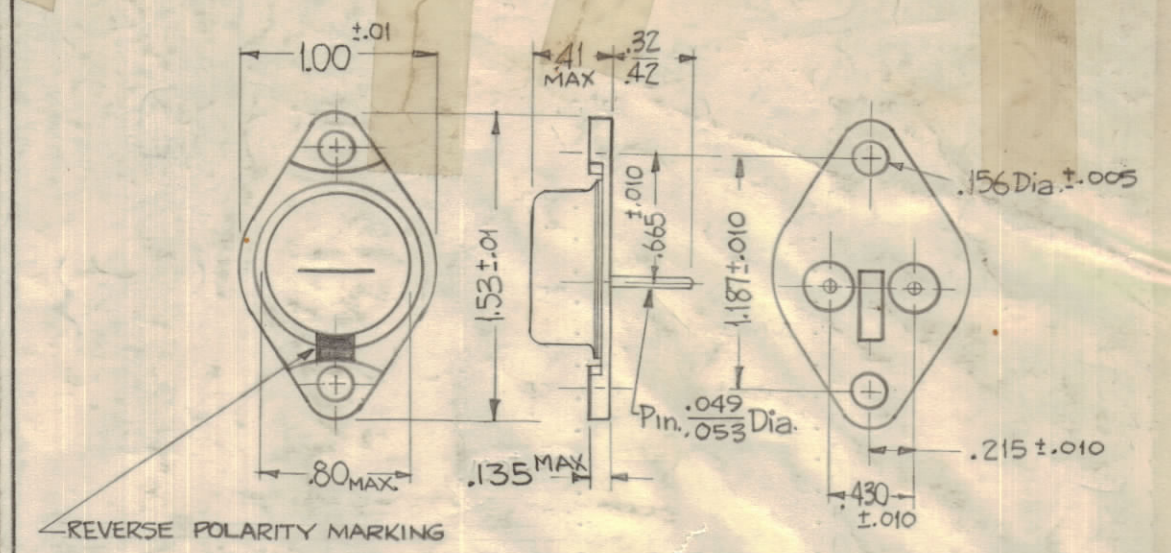


| VOLT. CODE Nominal Zener Voltage @ Izt (Vz) Volts | Jedec Type No. | Basic Motorola Type No. | Test Current (Izt) ma | MAX ZENER IMPEDANCE | | | Max DC Zener Current 55° C Base (Izm) ma | Max Forward Voltage Vf @ 10 amps | Typical Zener Voltage Temp. Coeff. %/°C |
|---|-------------------|-------------------------------|--------------------------------|---------------------|-------------------|-----------|---|--|---|
| | | | | Zzt @ Izt Ohms | Zzk @ Izk Ohms | Izk ma | | | |
| 6.8 | 1N2804 | 50M6.8Z | 1850 | 0.2 | 70 | 5 | 6,600 | 1.5 | .040 |
| 7.5 | 1N2805 | 50M7.5Z | 1700 | 0.3 | 70 | 5 | 5,900 | 1.5 | .045 |
| 8.2 | 1N2806 | 50M8.2Z | 1500 | 0.4 | 70 | 5 | 5,200 | 1.5 | .048 |
| 9.1 | 1N2807 | 50M9.1Z | 1370 | 0.5 | 70 | 5 | 4,800 | 1.5 | .051 |
| 10 | 1N2808 | 50M10Z | 1200 | 0.6 | 80 | 5 | 4,300 | 1.5 | .055 |
| 11 | 1N2809 | 50M11Z | 1100 | 0.8 | 80 | 5 | 3,900 | 1.5 | .060 |
| 12 | 1N2810 | 50M12Z | 1000 | 1.0 | 80 | 5 | 3,600 | 1.5 | .065 |
| 13 | 1N2811 | 50M13Z | 960 | 1.1 | 80 | 5 | 3,300 | 1.5 | .065 |
| 14 | 1N2812 | 50M14Z | 890 | 1.2 | 80 | 5 | 3,000 | 1.5 | .070 |
| 15 | 1N2813 | 50M15Z | 830 | 1.4 | 80 | 5 | 2,800 | 1.5 | .070 |
| 16 | 1N2814 | 50M16Z | 780 | 1.6 | 80 | 5 | 2,650 | 1.5 | .070 |
| 17 | 1N2815 | 50M17Z | 740 | 1.8 | 80 | 5 | 2,500 | 1.5 | .075 |
| 18 | 1N2816 | 50M18Z | 700 | 2.0 | 80 | 5 | 2,300 | 1.5 | .075 |
| 19 | 1N2817 | 50M19Z | 660 | 2.2 | 80 | 5 | 2,200 | 1.5 | .075 |
| 20 | 1N2818 | 50M20Z | 630 | 2.4 | 80 | 5 | 2,100 | 1.5 | .075 |
| 22 | 1N2819 | 50M22Z | 570 | 2.5 | 80 | 5 | 1,900 | 1.5 | .080 |
| 24 | 1N2820 | 50M24Z | 520 | 2.6 | 80 | 5 | 1,750 | 1.5 | .080 |
| 25 | 1N2821 | 50M25Z | 500 | 2.7 | 90 | 5 | 1,550 | 1.5 | .080 |
| 27 | 1N2822 | 50M27Z | 460 | 2.8 | 90 | 5 | 1,500 | 1.5 | .085 |
| 30 | 1N2823 | 50M30Z | 420 | 3.0 | 90 | 5 | 1,400 | 1.5 | .085 |
| 33 | 1N2824 | 50M33Z | 380 | 3.2 | 90 | 5 | 1,300 | 1.5 | .085 |
| 36 | 1N2825 | 50M36Z | 350 | 3.5 | 90 | 5 | 1,150 | 1.5 | .085 |
| 39 | 1N2826 | 50M39Z | 320 | 4.0 | 90 | 5 | 1,050 | 1.5 | .090 |
| 43 | 1N2827 | 50M43Z | 290 | 4.5 | 90 | 5 | 975 | 1.5 | .090 |
| 45 | 1N2828 | 50M45Z | 280 | 4.5 | 100 | 5 | 930 | 1.5 | .090 |
| 47 | 1N2829 | 50M47Z | 270 | 5.0 | 100 | 5 | 880 | 1.5 | .090 |
| 50 | 1N2830 | 50M50Z | 250 | 5.0 | 100 | 5 | 830 | 1.5 | .090 |
| 51 | 1N2831 | 50M51Z | 245 | 5.2 | 100 | 5 | 810 | 1.5 | .090 |
| 52 | - | 50M52Z | 240 | 5.5 | 100 | 5 | 790 | 1.5 | .090 |
| 56 | 1N2832 | 50M56Z | 220 | 6 | 110 | 5 | 740 | 1.5 | .090 |
| 62 | 1N2833 | 50M62Z | 200 | 7 | 120 | 5 | 660 | 1.5 | .090 |
| 68 | 1N2834 | 50M68Z | 180 | 8 | 140 | 5 | 600 | 1.5 | .090 |
| 75 | 1N2835 | 50M75Z | 170 | 9 | 150 | 5 | 540 | 1.5 | .090 |
| 82 | 1N2836 | 50M82Z | 150 | 11 | 160 | 5 | 490 | 1.5 | .090 |
| 91 | 1N2837 | 50M91Z | 140 | 15 | 180 | 5 | 420 | 1.5 | .090 |
| 100 | 1N2838 | 50M100Z | 120 | 20 | 200 | 5 | 400 | 1.5 | .090 |
| 105 | 1N2839 | 50M105Z | 120 | 25 | 210 | 5 | 380 | 1.5 | .095 |
| 110 | 1N2840 | 50M110Z | 110 | 30 | 220 | 5 | 365 | 1.5 | .095 |
| 120 | 1N2841 | 50M120Z | 100 | 40 | 240 | 5 | 335 | 1.5 | .095 |
| 130 | 1N2842 | 50M130Z | 95 | 50 | 275 | 5 | 310 | 1.5 | .095 |
| 140 | - | 50M140Z | 90 | 60 | 325 | 5 | 290 | 1.5 | .095 |
| 150 | 1N2843 | 50M150Z | 85 | 75 | 400 | 5 | 270 | 1.5 | .095 |
| 160 | 1N2844 | 50M160Z | 80 | 80 | 450 | 5 | 250 | 1.5 | .095 |
| 175 | - | 50M175Z | 70 | 85 | 500 | 5 | 230 | 1.5 | .095 |
| 180 | 1N2845 | 50M180Z | 68 | 90 | 525 | 5 | 220 | 1.5 | .095 |
| 200 | 1N2846 | 50M200Z | 65 | 100 | 600 | 5 | 200 | 1.5 | .100 |



FOR SINGLE UNITS - (52 VOLT, 140 VOLT & 175 VOLT UNITS ONLY)
TMC PART NO. TO BE IN THE FOLLOWING FORM:
VR 100 - 175 S 20

| | | | |
|--------------------|------------------------------|---|---|
| BASIC TMC PART NO. | NOMINAL VOLT. CODE See Chart | POLARITY R=Reverse Pol. (Cathode to Base) Red Dot S=Std. Pol. (Anode to Base) Black Dot | TOLERANCE 5 = ± 5% 10 = ± 10% 20 = ± 20% (20% Standard) |
|--------------------|------------------------------|---|---|

FOR MATCHED SETS -
TMC PART NO. TO BE IN THE FOLLOWING FORM:
VR 100 S / 6 - 1200 - 5

| | | | | |
|--------------------|---------------------------|--------------------------------|--|---|
| BASIC TMC PART NO. | POLARITY S=Std. R=Reverse | Number of Units in Matched Set | Total Voltage of Matched Set in (Series) | Total Tolerance of Matched Set in (Series) 5 = ± 5% 10 = ± 10% etc. |
|--------------------|---------------------------|--------------------------------|--|---|

FOR SINGLE UNITS - (EXCEPT 52 VOLT, 140 VOLT & 175 VOLT UNITS)
TMC PART NO. TO BE IN THE FOLLOWING FORM:
1N2804 R A

| | | |
|-----------------|--|---|
| BASIC JEDEC No. | R = Reverse Pol. Note - for std. Polarity, omit this letter. | A = ± 10% B = ± 5% For Std. Tol. (± 20%) Omit this letter |
|-----------------|--|---|

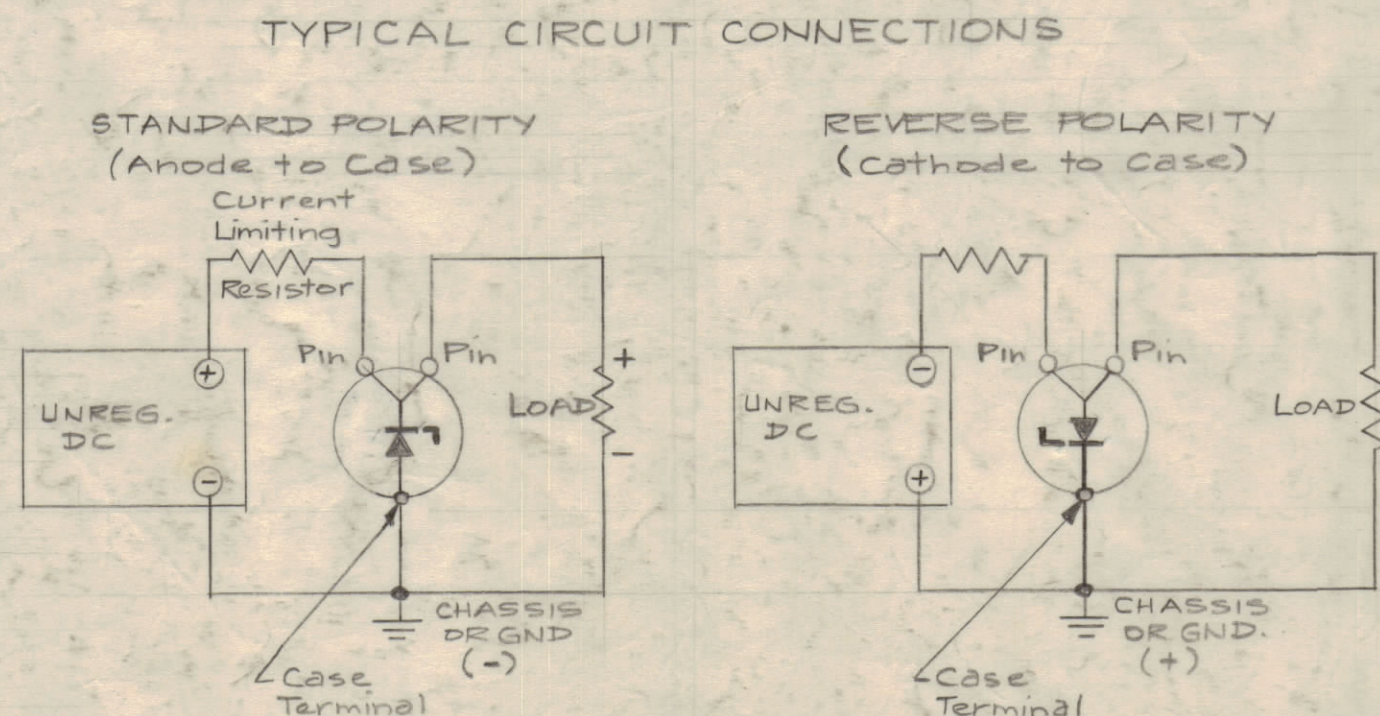
PURCHASING NOTE:
WHEN USING MFG. PART NO., USE THE FOLLOWING FORM:
50 M 125 Z R 5

| | | | | | |
|----------|-----------|------------|------------|--|--|
| 50 Watts | Mfg. Code | Nom. Volt. | Zener Type | R = Reverse Pol. (Cath. to Base) Note - For Std. Polarity (Anode to Base) Omit this letter | Tolerance 5 = ± 5% 10 = ± 10% Note - for std. tol. ± 20% Omit this no. |
|----------|-----------|------------|------------|--|--|

SPECIFICATIONS
MAXIMUM RATINGS
JUNCTION AND STORAGE TEMP. ~ -65° to +175° C.
DC POWER DISSIPATION ~ 50 Watts

MECHANICAL CHARACTERISTICS
CASE ~ INDUSTRY STD. TO-3, HERMETICALLY SEALED.
FINISH ~ EXTERNAL SURFACES ARE CORROSION RESISTANT & TERMINALS SOLDERABLE.
THERMAL RESISTANCE ~ 1°C/W.

NOTE: USE JEDEC TYPE NO. EXCEPT AS NOTED IN PART NO. DESCRIPTIONS



| ISSUE | ZONE | DESCRIPTION | DATE | CH. NO. | DRAFTS | CHECKER | ENG. APP. |
|-------|------|--|---------|---------|--------|---------|-----------|
| B | | ADD. "JEDEC" NOTE; CORRECTED SCHEMATIC; CHGD. SINGLE UNIT P/N DESCR. | 2.23.66 | 15826 | WCA | JCB | |
| A | G2 | ON PICT. .135 MAX WAS .109 ± .005 HYPHENS DELE. FR. P/N BET. V#100 | 10.6.64 | 12547 | LAB | @ | |

TOLERANCES: DEC. DIM. ±, FRAC. DIM. ±, ANGULAR DIM. ±

SCALE: MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

| | | | | |
|--------------|---------|---------|-----------------|------|
| REQ PER UNIT | MODEL | SECTION | PART ASSY. NO. | DATE |
| | GPT-10K | AX-138 | VR-100S/6-12005 | |

| REQ. ITEM | PART NO. | DESCRIPTION | SYMBOL |
|-----------|----------|---|--------|
| | | THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK | |
| | | DIODE, SILICON, ZENER TYPE, 50 WATT | |
| | | TYPE & TEMPER | |
| | | HEAT TREAT. SPEC. | |
| | | FINISH & SPEC. NO. | |

VR 100 B