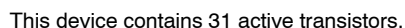


500 mA Negative Voltage Regulators

Available in fixed output voltage options of -5.0 V , -8.0 V , -12 V and -15 V , these regulators employ current limiting, thermal shutdown, and safe-area compensation, making them remarkably rugged under most operating conditions. With adequate heatsinking they can deliver output currents in excess of 0.5 A .

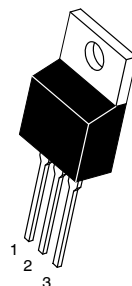
- No External Components Required
- Internal Thermal Overload Protection
- Internal Short Circuit Current Limiting
- Output Transistor Safe-Area Compensation
- Also Available in Surface Mount DPAK (DT) Package
- Pb-Free Packages are Available

| Device | Nominal Output Voltage |
|---------|------------------------|
| MC79M05 | -5.0 V |
| MC79M08 | -8.0 V |
| MC79M12 | -12 V |
| MC79M15 | -15 V |

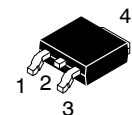


THREE-TERMINAL NEGATIVE FIXED VOLTAGE REGULATORS

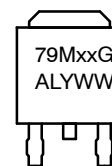
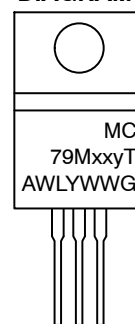
- * C_{in} is required if regulator is located an appreciable distance from power supply filter.
- ** C_O improve stability and transient response.



Pin 1. Ground
2. Input
3. Output



MARKING DIAGRAMS



xx = 05, 08, 12, or 15
y = B or C
A = Assembly Location
WL, L = Wafer Lot
Y = Year
WW = Work Week
G = Pb-Free Device

See detailed ordering and shipping information in the package dimensions section on page 6 of this data sheet.

MC79M00 Series

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$, unless otherwise noted.)

| Rating | Symbol | Value | Unit |
|---|---------------|--------------------|--------------------|
| Input Voltage | V_I | -35 | Vdc |
| Power Dissipation | | | |
| Case 221A (TO-220-3) | | | |
| $T_A = 25^\circ\text{C}$ | P_D | Internally Limited | W |
| Thermal Resistance, Junction-to-Ambient | θ_{JA} | 65 | $^\circ\text{C/W}$ |
| Thermal Resistance, Junction-to-Case | θ_{JC} | 5.0 | $^\circ\text{C/W}$ |
| Case 369C (DPAK-3) | | | |
| $T_A = 25^\circ\text{C}$ | P_D | Internally Limited | W |
| Thermal Resistance, Junction-to-Ambient | θ_{JA} | 92 | $^\circ\text{C/W}$ |
| Thermal Resistance, Junction-to-Case | θ_{JC} | 6.0 | $^\circ\text{C/W}$ |
| Storage Junction Temperature | T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| Operating Junction Temperature Range | T_J | -40 to +150 | $^\circ\text{C}$ |

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

*This device series contains ESD protection and exceeds the following tests:

Human Body Model 2000 V per MIL_STD_883, Method 3015

Machine Model Method 200 V

MC79M05B, C

ELECTRICAL CHARACTERISTICS ($V_I = -10\text{ V}$, $I_O = 350\text{ mA}$, T_{low} to T_{high} (Note 2), unless otherwise noted.)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|-------------------------|--------|------------|------------|----------------------|
| Output Voltage ($T_J = 25^\circ\text{C}$) | V_O | -4.8 | -5.0 | -5.2 | Vdc |
| Line Regulation, $T_J = 25^\circ\text{C}$ (Note 1) -7.0 Vdc $\geq V_I \geq$ -25 Vdc -8.0 Vdc $\geq V_I \geq$ -18 Vdc | Reg_{line} | - - | 7.0 2.0 | 50 30 | mV |
| Load Regulation, $T_J = 25^\circ\text{C}$ (Note 1) 5.0 mA $\leq I_O \leq$ 500 mA | Reg_{load} | - | 30 | 100 | mV |
| Output Voltage -7.0 Vdc $\geq V_I \geq$ -25 Vdc, 5.0 mA $\leq I_O \leq$ 350 mA | V_O | -4.75 | - | -5.25 | Vdc |
| Input Bias Current ($T_J = 25^\circ\text{C}$) | I_{IB} | - | 4.3 | 8.0 | mA |
| Input Bias Current Change -8.0 Vdc $\geq V_I \geq$ -25 Vdc, $I_O = 350\text{ mA}$ 5.0 mA $\leq I_O \leq$ 350 mA, $V_I = -10\text{ V}$ | ΔI_{IB} | - - | - - | 0.4 0.4 | mA |
| Output Noise Voltage, $T_A = 25^\circ\text{C}$, 10 Hz $\leq f \leq$ 100 kHz | V_n | - | 40 | - | μV |
| Ripple Rejection ($f = 120\text{ Hz}$) | RR | 54 | 66 | - | dB |
| Dropout Voltage $I_O = 500\text{ mA}$, $T_J = 25^\circ\text{C}$ | $V_I - V_O$ | - | 1.1 | - | Vdc |
| Average Temperature Coefficient of Output Voltage $I_O = 5.0\text{ mA}$, $0^\circ\text{C} \leq T_J \leq 125^\circ\text{C}$ | $\Delta V_O / \Delta T$ | - | 0.2 | - | mV/ $^\circ\text{C}$ |

1. Load and line regulation are specified at constant temperature. Change in V_O due to heating effects must be taken into account separately. Pulse testing with low duty cycle is used.
2. B = T_{low} to T_{high} , $-40^\circ\text{C} < T_J < 125^\circ\text{C}$ C = T_{low} to T_{high} , $0^\circ\text{C} < T_J < 125^\circ\text{C}$.

MC79M00 Series

MC79M08B, C

ELECTRICAL CHARACTERISTICS ($V_I = -10\text{ V}$, $I_O = 350\text{ mA}$, T_{low} to T_{high} (Note 4), unless otherwise noted.)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|----------------------------|--------|------------|------------|----------------------------|
| Output Voltage ($T_J = 25^\circ\text{C}$) | V_O | -7.7 | -8.0 | -8.3 | Vdc |
| Line Regulation, $T_J = 25^\circ\text{C}$ (Note 3) -10.5 Vdc $\geq V_I \geq$ -25 Vdc -11 Vdc $\geq V_I \geq$ -21 Vdc | Reg_{line} | - - | 5.0 3.0 | 80 50 | mV |
| Load Regulation, $T_J = 25^\circ\text{C}$ (Note 3) $5.0\text{ mA} \leq I_O \leq 500\text{ mA}$ | Reg_{load} | - | 30 | 100 | mV |
| Output Voltage -10.5 Vdc $\geq V_I \geq$ -25 Vdc, $5.0\text{ mA} \leq I_O \leq 350\text{ mA}$ | V_O | -7.6 | -8.0 | -8.4 | Vdc |
| Input Bias Current ($T_J = 25^\circ\text{C}$) | I_{IB} | - | - | 8.0 | mA |
| Input Bias Current Change -10.5 Vdc $\geq V_I \geq$ -25 Vdc, $I_O = 350\text{ mA}$ $5.0\text{ mA} \leq I_O \leq 350\text{ mA}$, $V_I = -10\text{ V}$ | ΔI_{IB} | - - | - - | 0.4 0.4 | mA |
| Output Noise Voltage, $T_A = 25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$ | V_n | - | 60 | - | μV |
| Ripple Rejection ($f = 120\text{ Hz}$) | RR | 54 | 63 | - | dB |
| Dropout Voltage $I_O = 500\text{ mA}$, $T_J = 25^\circ\text{C}$ | $V_I - V_O$ | - | 1.1 | - | Vdc |
| Average Temperature Coefficient of Output Voltage $I_O = 5.0\text{ mA}$, $0^\circ\text{C} \leq T_J \leq 125^\circ\text{C}$ | $\Delta V_O / \Delta T$ | - | 0.4 | - | $\text{mV}/^\circ\text{C}$ |

- Load and line regulation are specified at constant temperature. Change in V_O due to heating effects must be taken into account separately. Pulse testing with low duty cycle is used.
- $B = T_{\text{low}}$ to T_{high} , $-40^\circ\text{C} < T_J < 125^\circ\text{C}$
- $C = T_{\text{low}}$ to T_{high} , $0^\circ\text{C} < T_J < 125^\circ\text{C}$

MC79M12B, C

ELECTRICAL CHARACTERISTICS ($V_I = -19\text{ V}$, $I_O = 350\text{ mA}$, T_{low} to T_{high} (Note 6), unless otherwise noted.)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|----------------------------|--------|------------|------------|----------------------------|
| Output Voltage ($T_J = 25^\circ\text{C}$) | V_O | -11.5 | -12 | -12.5 | Vdc |
| Line Regulation, $T_J = 25^\circ\text{C}$ (Note 5) -14.5 Vdc $\geq V_I \geq$ -30 Vdc -15 Vdc $\geq V_I \geq$ -25 Vdc | Reg_{line} | - - | 5.0 3.0 | 80 50 | mV |
| Load Regulation, $T_J = 25^\circ\text{C}$ (Note 5) $5.0\text{ mA} \leq I_O \leq 500\text{ mA}$ | Reg_{load} | - | 30 | 240 | mV |
| Output Voltage -14.5 Vdc $\geq V_I \geq$ -30 Vdc, $5.0\text{ mA} \leq I_O \leq 350\text{ mA}$ | V_O | -11.4 | - | -12.6 | Vdc |
| Input Bias Current ($T_J = 25^\circ\text{C}$) | I_{IB} | - | 4.4 | 8.0 | mA |
| Input Bias Current Change -14.5 Vdc $\geq V_I \geq$ -30 Vdc, $I_O = 350\text{ mA}$ $5.0\text{ mA} \leq I_O \leq 350\text{ mA}$, $V_I = -19\text{ V}$ | ΔI_{IB} | - - | - - | 0.4 0.4 | mA |
| Output Noise Voltage, $T_A = 25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$ | V_n | - | 75 | - | μV |
| Ripple Rejection ($f = 120\text{ Hz}$) | RR | 54 | 60 | - | dB |
| Dropout Voltage $I_O = 500\text{ mA}$, $T_J = 25^\circ\text{C}$ | $V_I - V_O$ | - | 1.1 | - | Vdc |
| Average Temperature Coefficient of Output Voltage $I_O = 5.0\text{ mA}$, $0^\circ\text{C} \leq T_J \leq 125^\circ\text{C}$ | $\Delta V_O / \Delta T$ | - | -0.8 | - | $\text{mV}/^\circ\text{C}$ |

- Load and line regulation are specified at constant temperature. Change in V_O due to heating effects must be taken into account separately. Pulse testing with low duty cycle is used.
- $B = T_{\text{low}}$ to T_{high} , $-40^\circ\text{C} < T_J < 125^\circ\text{C}$
- $C = T_{\text{low}}$ to T_{high} , $0^\circ\text{C} < T_J < 125^\circ\text{C}$

MC79M00 Series

MC79M15B, C

ELECTRICAL CHARACTERISTICS ($V_I = -23\text{ V}$, $I_O = 350\text{ mA}$, T_{low} to T_{high} (Note 8), unless otherwise noted.)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|----------------------------|--------|------------|------------|----------------------|
| Output Voltage ($T_J = 25^\circ\text{C}$) | V_O | -14.4 | -15 | -15.6 | Vdc |
| Line Regulation, $T_J = 25^\circ\text{C}$ (Note 7) -17.5 Vdc $\geq V_I \geq$ -30 Vdc -18 Vdc $\geq V_I \geq$ -28 Vdc | Reg_{line} | - - | 5.0 3.0 | 80 50 | mV |
| Load Regulation, $T_J = 25^\circ\text{C}$ (Note 7) $5.0\text{ mA} \leq I_O \leq 500\text{ mA}$ | Reg_{load} | - | 30 | 240 | mV |
| Output Voltage -17.5 Vdc $\geq V_I \geq$ -30 Vdc, $5.0\text{ mA} \leq I_O \leq 350\text{ mA}$ | V_O | -14.25 | - | -15.75 | Vdc |
| Input Bias Current ($T_J = 25^\circ\text{C}$) | I_{IB} | - | 4.4 | 8.0 | mA |
| Input Bias Current Change -17.5 Vdc $\geq V_I \geq$ -30 Vdc, $I_O = 350\text{ mA}$ $5.0\text{ mA} \leq I_O \leq 350\text{ mA}$, $V_I = -23\text{ V}$ | ΔI_{IB} | - - | - - | 0.4 0.4 | mA |
| Output Noise Voltage, $T_A = 25^\circ\text{C}$, $10\text{ Hz} \leq f \leq 100\text{ kHz}$ | V_n | - | 90 | - | μV |
| Ripple Rejection ($f = 120\text{ Hz}$) | RR | 54 | 60 | - | dB |
| Dropout Voltage $I_O = 500\text{ mA}$, $T_J = 25^\circ\text{C}$ | $V_I - V_O$ | - | 1.1 | - | Vdc |
| Average Temperature Coefficient of Output Voltage $I_O = 5.0\text{ mA}$, $0^\circ\text{C} \leq T_J \leq 125^\circ\text{C}$ | $\Delta V_O / \Delta T$ | - | -1.0 | - | mV/ $^\circ\text{C}$ |

7. Load and line regulation are specified at constant temperature. Change in V_O due to heating effects must be taken into account separately. Pulse testing with low duty cycle is used.
8. B = T_{low} to T_{high} , $-40^\circ\text{C} < T_J < 125^\circ\text{C}$
C = T_{low} to T_{high} , $0^\circ\text{C} < T_J < 125^\circ\text{C}$

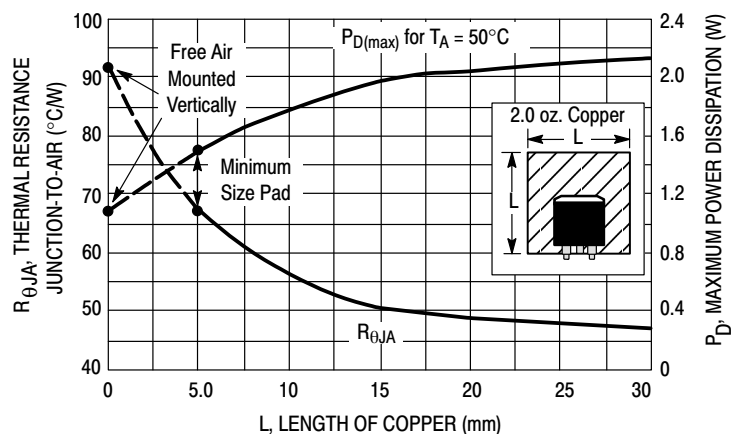


Figure 1. DPAK-3 Thermal Resistance and Maximum Power Dissipation versus P.C.B. Copper Length

MC79M00 Series

Protection Diodes

When external capacitors are used with MC79M00 series regulator it is sometimes necessary to add protection diodes to prevent the capacitors from discharging through low current points into the regulator or from output polarity reversals. Generally, no protection diode is required for values of output capacitance less than $10\mu\text{F}$. Figure 2 shows the MC79M15 with the recommended protection diodes.

- Opposite Polarity Protection

Diode D1 protects the regulator from output polarity reversals during startup, power off and short-circuit operation.

- Reverse-bias Protection

Diode D2 prevents output capacitor from discharging through the MC79M15 during an input short circuit or fast switch off of power supply.

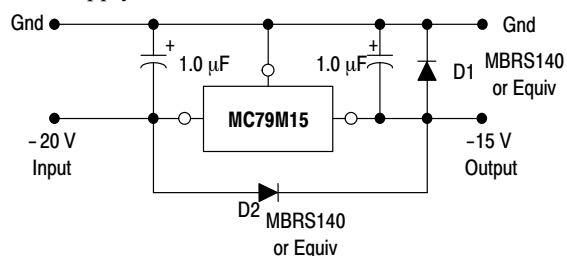


Figure 2. Protection Diodes

MC79M00 Series

ORDERING INFORMATION

| Device | Output Voltage Tolerance | Operating Temperature Range | Package | Shipping [†] |
|---------------|--------------------------|---|------------------|-----------------------|
| MC79M05BDT | 4.0% | $T_J = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ | DPAK | 75 Units / Rail |
| MC79M05BDTG | | | DPAK (Pb-Free) | 75 Units / Rail |
| MC79M05BDTRK | | | DPAK | 2500 Units / Reel |
| MC79M05BDTRKG | | | DPAK (Pb-Free) | 2500 Units / Reel |
| MC79M05BT | | | TO-220 | 50 Units / Rail |
| MC79M05BTG | | | TO-220 (Pb-Free) | 50 Units / Rail |
| MC79M05CDT | | $T_J = 0^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ | DPAK | 75 Units / Rail |
| MC79M05CDTG | | | DPAK (Pb-Free) | 75 Units / Rail |
| MC79M05CDTRK | | | DPAK | 2500 Units / Reel |
| MC79M05CDTRKG | | | DPAK (Pb-Free) | 2500 Units / Reel |
| MC79M05CT | | | TO-220 | 50 Units / Rail |
| MC79M05CTG | | | TO-220 (Pb-Free) | 50 Units / Rail |
| MC79M08BDT | | $T_J = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ | DPAK | 75 Units / Rail |
| MC79M08BDTRK | | | DPAK | 2500 Units / Reel |
| MC79M08BDTRKG | | | DPAK (Pb-Free) | 2500 Units / Reel |
| MC79M08BT | | | TO-220 | 50 Units / Rail |
| MC79M08BTG | | | TO-220 (Pb-Free) | 50 Units / Rail |
| MC79M08CDT | | $T_J = 0^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ | DPAK | 75 Units / Rail |
| MC79M08CDTG | | | DPAK (Pb-Free) | 75 Units / Rail |
| MC79M08CDTRK | | | DPAK | 2500 Units / Reel |
| MC79M08CDTRKG | | | DPAK (Pb-Free) | 2500 Units / Reel |
| MC79M08CT | | | TO-220 | 50 Units / Rail |
| MC79M08CTG | | | TO-220 (Pb-Free) | 50 Units / Rail |
| MC79M12BDT | | $T_J = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ | DPAK | 75 Units / Rail |
| MC79M12BDTG | | | DPAK (Pb-Free) | 75 Units / Rail |
| MC79M12BDTRK | | | DPAK | 2500 Units / Reel |
| MC79M12BDTRKG | | | DPAK (Pb-Free) | 2500 Units / Reel |
| MC79M12BT | | | TO-220 | 50 Units / Rail |
| MC79M12BTG | | | TO-220 (Pb-Free) | 50 Units / Rail |
| MC79M12CDT | | $T_J = 0^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ | DPAK | 75 Units / Rail |
| MC79M12CDTG | | | DPAK (Pb-Free) | 75 Units / Rail |
| MC79M12CDTRK | | | DPAK | 2500 Units / Reel |
| MC79M12CDTRKG | | | DPAK (Pb-Free) | 2500 Units / Reel |
| MC79M12CT | | | TO-220 | 50 Units / Rail |
| MC79M12CTG | | | TO-220 (Pb-Free) | 50 Units / Rail |

[†]For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

MC79M00 Series

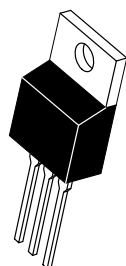
ORDERING INFORMATION

| Device | Output Voltage Tolerance | Operating Temperature Range | Package | Shipping† |
|---------------|--------------------------|---|------------------|-------------------|
| MC79M15BDT | 4.0% | $T_J = -40^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ | DPAK | 75 Units / Rail |
| MC79M15BDTG | | | DPAK (Pb-Free) | 75 Units / Rail |
| MC79M15BDTRK | | | DPAK | 2500 Units / Reel |
| MC79M15BDTRKG | | | DPAK (Pb-Free) | 2500 Units / Reel |
| MC79M15BT | | | TO-220 | 50 Units / Rail |
| MC79M15BTG | | | TO-220 (Pb-Free) | 50 Units / Rail |
| MC79M15CDT | | $T_J = 0^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ | DPAK | 75 Units / Rail |
| MC79M15CDTG | | | DPAK (Pb-Free) | 75 Units / Rail |
| MC79M15CDTRK | | | DPAK | 2500 Units / Reel |
| MC79M15CDTRKG | | | DPAK (Pb-Free) | 2500 Units / Reel |
| MC79M15CT | | | TO-220 | 50 Units / Rail |
| MC79M15CTG | | | TO-220 (Pb-Free) | 50 Units / Rail |

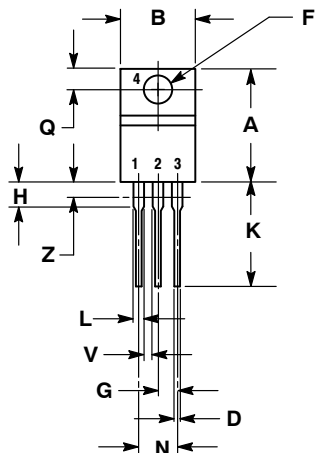
†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

MECHANICAL CASE OUTLINE PACKAGE DIMENSIONS

ON Semiconductor®

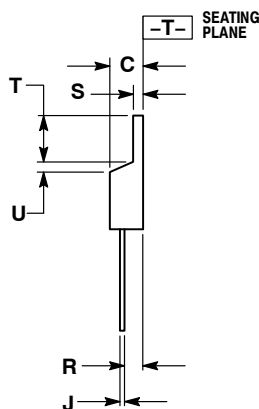


SCALE 1:1



TO-220, SINGLE GAUGE CASE 221AB-01 ISSUE A

DATE 16 NOV 2010



NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCHES.
3. DIMENSION Z DEFINES A ZONE WHERE ALL BODY AND LEAD IRREGULARITIES ARE ALLOWED.
4. PRODUCT SHIPPED PRIOR TO 2008 HAD DIMENSIONS
S = 0.045 - 0.055 INCHES (1.143 - 1.397 MM)

| DIM | INCHES | | MILLIMETERS | |
|-----|--------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.570 | 0.620 | 14.48 | 15.75 |
| B | 0.380 | 0.405 | 9.66 | 10.28 |
| C | 0.160 | 0.190 | 4.07 | 4.82 |
| D | 0.025 | 0.035 | 0.64 | 0.88 |
| F | 0.142 | 0.147 | 3.61 | 3.73 |
| G | 0.095 | 0.105 | 2.42 | 2.66 |
| H | 0.110 | 0.155 | 2.80 | 3.93 |
| J | 0.018 | 0.025 | 0.46 | 0.64 |
| K | 0.500 | 0.562 | 12.70 | 14.27 |
| L | 0.045 | 0.060 | 1.15 | 1.52 |
| N | 0.190 | 0.210 | 4.83 | 5.33 |
| Q | 0.100 | 0.120 | 2.54 | 3.04 |
| R | 0.080 | 0.110 | 2.04 | 2.79 |
| S | 0.020 | 0.024 | 0.508 | 0.61 |
| T | 0.235 | 0.255 | 5.97 | 6.47 |
| U | 0.000 | 0.050 | 0.00 | 1.27 |
| V | 0.045 | --- | 1.15 | --- |
| Z | --- | 0.080 | --- | 2.04 |

STYLE 1:

- PIN 1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR

STYLE 2:

- PIN 1. BASE
2. EMITTER
3. COLLECTOR
4. EMITTER

STYLE 3:

- PIN 1. CATHODE
2. ANODE
3. GATE
4. ANODE

STYLE 4:

- PIN 1. MAIN TERMINAL 1
2. MAIN TERMINAL 2
3. GATE
4. MAIN TERMINAL 2

STYLE 5:

- PIN 1. GATE
2. DRAIN
3. SOURCE
4. DRAIN

STYLE 6:

- PIN 1. ANODE
2. CATHODE
3. ANODE
4. CATHODE

STYLE 7:

- PIN 1. CATHODE
2. ANODE
3. CATHODE
4. ANODE

STYLE 8:

- PIN 1. CATHODE
2. ANODE
3. EXTERNAL TRIP/DELAY
4. ANODE

STYLE 9:

- PIN 1. GATE
2. COLLECTOR
3. EMITTER
4. COLLECTOR

STYLE 10:

- PIN 1. GATE
2. SOURCE
3. DRAIN
4. SOURCE

STYLE 11:

- PIN 1. DRAIN
2. SOURCE
3. GATE
4. SOURCE

DOCUMENT NUMBER: 98AON23085D

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DESCRIPTION: TO-220, SINGLE GAUGE

PAGE 1 OF 1

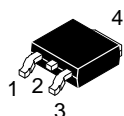
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MECHANICAL CASE OUTLINE

PACKAGE DIMENSIONS

ON Semiconductor®

ON



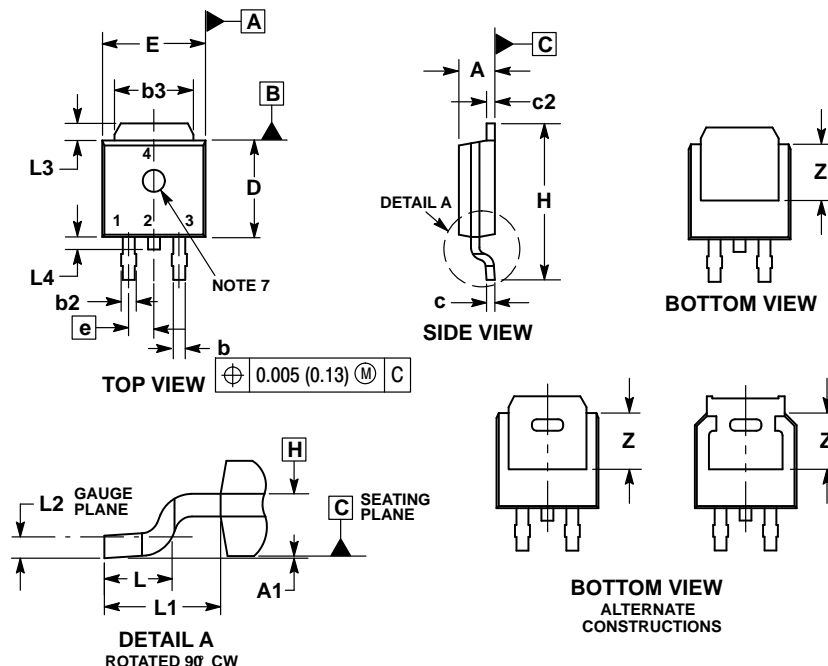
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DPAK (SINGLE GAUGE)

CASE 369C

ISSUE F

DATE 21 JUL 2015

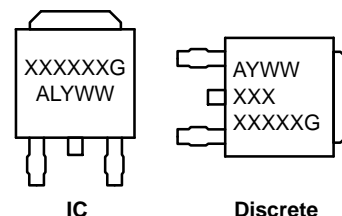


NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: INCHES.
3. THERMAL PAD CONTOUR OPTIONAL WITHIN DIMENSIONS b3, L3 and Z.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR BURRS. MOLD FLASH, PROTRUSIONS, OR GATE BURRS SHALL NOT EXCEED 0.006 INCHES PER SIDE.
5. DIMENSIONS D AND E ARE DETERMINED AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY.
6. DATUMS A AND B ARE DETERMINED AT DATUM PLANE H.
7. OPTIONAL MOLD FEATURE.

| DIM | INCHES | | MILLIMETERS | |
|-----|-----------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.086 | 0.094 | 2.18 | 2.38 |
| A1 | 0.000 | 0.005 | 0.00 | 0.13 |
| b | 0.025 | 0.035 | 0.63 | 0.89 |
| b2 | 0.028 | 0.045 | 0.72 | 1.14 |
| b3 | 0.180 | 0.215 | 4.57 | 5.46 |
| c | 0.018 | 0.024 | 0.46 | 0.61 |
| c2 | 0.018 | 0.024 | 0.46 | 0.61 |
| D | 0.235 | 0.245 | 5.97 | 6.22 |
| E | 0.250 | 0.265 | 6.35 | 6.73 |
| e | 0.090 BSC | | 2.29 BSC | |
| H | 0.370 | 0.410 | 9.40 | 10.41 |
| L | 0.055 | 0.070 | 1.40 | 1.78 |
| L1 | 0.114 REF | | 2.90 REF | |
| L2 | 0.020 BSC | | 0.51 BSC | |
| L3 | 0.035 | 0.050 | 0.89 | 1.27 |
| L4 | --- | 0.040 | --- | 1.01 |
| Z | 0.155 | --- | 3.93 | --- |

GENERIC MARKING DIAGRAM*

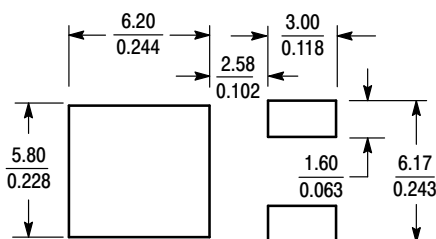


XXXXXX = Device Code
A = Assembly Location
L = Wafer Lot
Y = Year
WW = Work Week
G = Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking.

- STYLE 1:**
PIN 1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR
- STYLE 2:**
PIN 1. GATE
2. DRAIN
3. SOURCE
4. DRAIN
- STYLE 3:**
PIN 1. ANODE
2. CATHODE
3. ANODE
4. CATHODE
- STYLE 4:**
PIN 1. CATHODE
2. ANODE
3. GATE
4. ANODE
- STYLE 5:**
PIN 1. GATE
2. ANODE
3. CATHODE
4. ANODE
- STYLE 6:**
PIN 1. MT1
2. MT2
3. GATE
4. MT2
- STYLE 7:**
PIN 1. GATE
2. COLLECTOR
3. EMITTER
4. COLLECTOR
- STYLE 8:**
PIN 1. N/C
2. CATHODE
3. ANODE
4. CATHODE
- STYLE 9:**
PIN 1. ANODE
2. CATHODE
3. RESISTOR ADJUST
4. CATHODE
- STYLE 10:**
PIN 1. CATHODE
2. ANODE
3. CATHODE
4. ANODE

SOLDERING FOOTPRINT*




SCALE 3:1 (mm inches)

*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

| | | |
|-------------------------|--|--|
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| STATUS: | ON SEMICONDUCTOR STANDARD | |
| NEW STANDARD: | REF TO JEDEC TO-252 | |
| DESCRIPTION: | DPAK SINGLE GAUGE SURFACE MOUNT | PAGE 1 OF 2 |

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