



**THE DATASHEET OF
NSVDTC114YM3T5G**



MUN2214, MMUN2214L, MUN5214, DTC114YE, DTC114YM3, NSBC114YF3

Digital Transistors (BRT) R1 = 10 kΩ, R2 = 47 kΩ

NPN Transistors with Monolithic Bias Resistor Network

This series of digital transistors is designed to replace a single device and its external resistor bias network. The Bias Resistor Transistor (BRT) contains a single transistor with a monolithic bias resistor network consisting of two resistors; a series base resistor and a base-emitter resistor. The BRT eliminates these individual components by integrating them into a single device. The use of a BRT can reduce both system cost and board space.

Features

- Simplifies Circuit Design
- Reduces Board Space
- Reduces Component Count
- S and NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS (T_A = 25°C)

| Rating | Symbol | Max | Unit |
|--------------------------------|----------------------|-----|------|
| Collector-Base Voltage | V _{CBO} | 50 | Vdc |
| Collector-Emitter Voltage | V _{CEO} | 50 | Vdc |
| Collector Current - Continuous | I _C | 100 | mAdc |
| Input Forward Voltage | V _{IN(fwd)} | 40 | Vdc |
| Input Reverse Voltage | V _{IN(rev)} | 6 | Vdc |

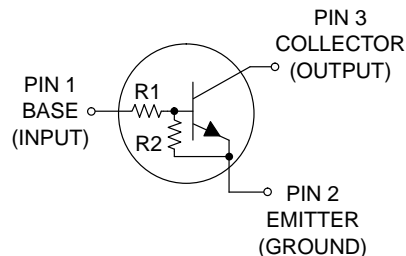
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



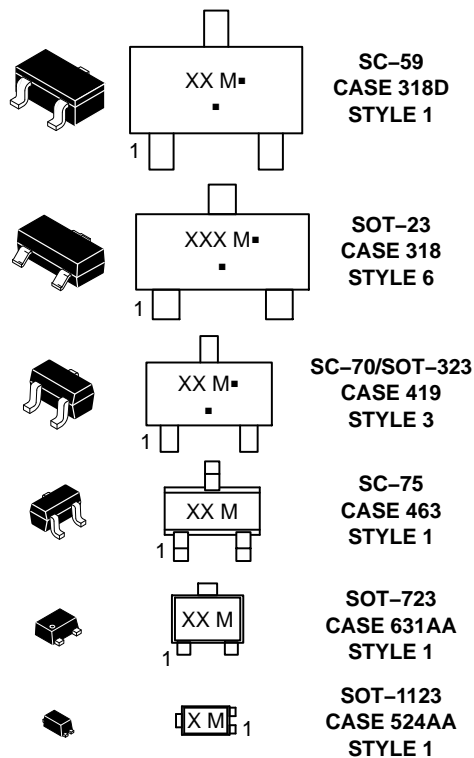
ON Semiconductor®

www.onsemi.com

PIN CONNECTIONS



MARKING DIAGRAMS



XXX = Specific Device Code
M = Date Code*
▪ = Pb-Free Package

(Note: Microdot may be in either location)

*Date Code orientation may vary depending upon manufacturing location.

ORDERING INFORMATION

See detailed ordering, marking, and shipping information in the package dimensions section on page 2 of this data sheet.

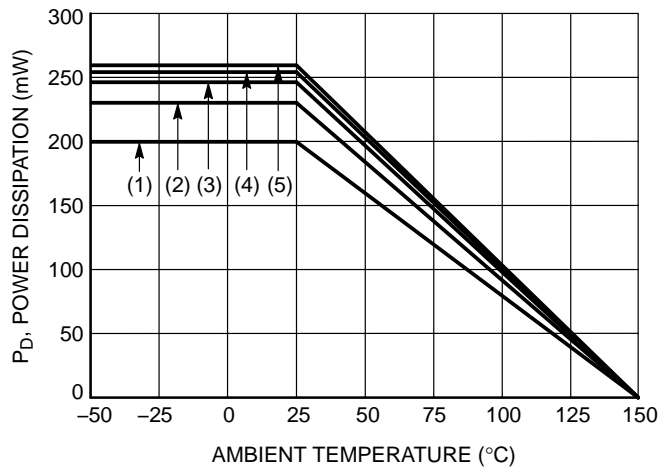
MUN2214, MMUN2214L, MUN5214, DTC114YE, DTC114YM3, NSBC114YF3

Table 1. ORDERING INFORMATION

| Device | Part Marking | Package | Shipping† |
|-----------------------------------|--------------|----------------------------|---------------------|
| MUN2214T1G, SMUN2214T1G* | 8D | SC-59 (Pb-Free) | 3000 / Tape & Reel |
| MUN2214T3G, SMUN2214T3G* | 8D | SC-59 (Pb-Free) | 10000 / Tape & Reel |
| MMUN2214LT1G, SMMUN2214LT1G* | A8D | SOT-23 (Pb-Free) | 3000 / Tape & Reel |
| MUN5214T1G, SMUN5214T1G* | 8D | SC-70/SOT-323 (Pb-Free) | 3000 / Tape & Reel |
| DTC114YET1G, SDTC114YET1G | 8D | SC-75 (Pb-Free) | 3000 / Tape & Reel |
| DTC114YM3T5G, NSVDTC114YM3T5G* | 8D | SOT-723 (Pb-Free) | 8000 / Tape & Reel |
| NSBC114YF3T5G | J | SOT-1123 (Pb-Free) | 8000 / Tape & Reel |

†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.

*S and NSV Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



- (1) SC-75 and SC-70/SOT-323; Minimum Pad
- (2) SC-59; Minimum Pad
- (3) SOT-23; Minimum Pad
- (4) SOT-1123; 100 mm², 1 oz. copper trace
- (5) SOT-723; Minimum Pad

Figure 1. Derating Curve

MUN2214, MMUN2214L, MUN5214, DTC114YE, DTC114YM3, NSBC114YF3

Table 2. THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|----------------------------------------------------------|-----------------------------------------|-------------------|---------------------------|
| THERMAL CHARACTERISTICS (SC-59) (MUN2214) | | | |
| Total Device Dissipation $T_A = 25^\circ\text{C}$ | (Note 1) P_D | 230 | mW |
| Derate above 25°C | (Note 2) (Note 1) (Note 2) | 338 1.8 2.7 | mW/ $^\circ\text{C}$ |
| Thermal Resistance, Junction to Ambient | (Note 1) $R_{\theta JA}$ (Note 2) | 540 370 | $^\circ\text{C}/\text{W}$ |
| Thermal Resistance, Junction to Lead | (Note 1) $R_{\theta JL}$ (Note 2) | 264 287 | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature Range | T_J, T_{stg} | -55 to +150 | $^\circ\text{C}$ |
| THERMAL CHARACTERISTICS (SOT-23) (MMUN2214L) | | | |
| Total Device Dissipation $T_A = 25^\circ\text{C}$ | (Note 1) P_D | 246 | mW |
| Derate above 25°C | (Note 2) (Note 1) (Note 2) | 400 2.0 3.2 | mW/ $^\circ\text{C}$ |
| Thermal Resistance, Junction to Ambient | (Note 1) $R_{\theta JA}$ (Note 2) | 508 311 | $^\circ\text{C}/\text{W}$ |
| Thermal Resistance, Junction to Lead | (Note 1) $R_{\theta JL}$ (Note 2) | 174 208 | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature Range | T_J, T_{stg} | -55 to +150 | $^\circ\text{C}$ |
| THERMAL CHARACTERISTICS (SC-70/SOT-323) (MUN5214) | | | |
| Total Device Dissipation $T_A = 25^\circ\text{C}$ | (Note 1) P_D | 202 | mW |
| Derate above 25°C | (Note 2) (Note 1) (Note 2) | 310 1.6 2.5 | mW/ $^\circ\text{C}$ |
| Thermal Resistance, Junction to Ambient | (Note 1) $R_{\theta JA}$ (Note 2) | 618 403 | $^\circ\text{C}/\text{W}$ |
| Thermal Resistance, Junction to Lead | (Note 1) $R_{\theta JL}$ (Note 2) | 280 332 | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature Range | T_J, T_{stg} | -55 to +150 | $^\circ\text{C}$ |
| THERMAL CHARACTERISTICS (SC-75) (DTC114YE) | | | |
| Total Device Dissipation $T_A = 25^\circ\text{C}$ | (Note 1) P_D | 200 | mW |
| Derate above 25°C | (Note 2) (Note 1) (Note 2) | 300 1.6 2.4 | mW/ $^\circ\text{C}$ |
| Thermal Resistance, Junction to Ambient | (Note 1) $R_{\theta JA}$ (Note 2) | 600 400 | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature Range | T_J, T_{stg} | -55 to +150 | $^\circ\text{C}$ |
| THERMAL CHARACTERISTICS (SOT-723) (DTC114YM3) | | | |
| Total Device Dissipation $T_A = 25^\circ\text{C}$ | (Note 1) P_D | 260 | mW |
| Derate above 25°C | (Note 2) (Note 1) (Note 2) | 600 2.0 4.8 | mW/ $^\circ\text{C}$ |
| Thermal Resistance, Junction to Ambient | (Note 1) $R_{\theta JA}$ (Note 2) | 480 205 | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature Range | T_J, T_{stg} | -55 to +150 | $^\circ\text{C}$ |

1. FR-4 @ Minimum Pad.
2. FR-4 @ 1.0 x 1.0 Inch Pad.
3. FR-4 @ 100 mm², 1 oz. copper traces, still air.
4. FR-4 @ 500 mm², 1 oz. copper traces, still air.

MUN2214, MMUN2214L, MUN5214, DTC114YE, DTC114YM3, NSBC114YF3

Table 2. THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|---------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------|--------------------------------|
| THERMAL CHARACTERISTICS (SOT-1123) (NSBC114YF3) | | | |
| Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C | (Note 3) (Note 4) (Note 3) (Note 4) | P_D 254 297 2.0 2.4 | mW mW/ $^\circ\text{C}$ |
| Thermal Resistance, Junction to Ambient | (Note 3) (Note 4) | $R_{\theta JA}$ 493 421 | $^\circ\text{C/W}$ |
| Thermal Resistance, Junction to Lead | (Note 3) | $R_{\theta JL}$ 193 | $^\circ\text{C/W}$ |
| Junction and Storage Temperature Range | T_J, T_{stg} | -55 to +150 | $^\circ\text{C}$ |

- FR-4 @ Minimum Pad.
- FR-4 @ 1.0 x 1.0 Inch Pad.
- FR-4 @ 100 mm², 1 oz. copper traces, still air.
- FR-4 @ 500 mm², 1 oz. copper traces, still air.

Table 3. ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$, unless otherwise noted)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---------------------------------------------------------------------------------------------------|---------------|------|------|------|------------|
| OFF CHARACTERISTICS | | | | | |
| Collector-Base Cutoff Current ($V_{CB} = 50\text{ V}, I_E = 0$) | I_{CBO} | - | - | 100 | nAdc |
| Collector-Emitter Cutoff Current ($V_{CE} = 50\text{ V}, I_B = 0$) | I_{CEO} | - | - | 500 | nAdc |
| Emitter-Base Cutoff Current ($V_{EB} = 6.0\text{ V}, I_C = 0$) | I_{EBO} | - | - | 0.2 | mAdc |
| Collector-Base Breakdown Voltage ($I_C = 10\ \mu\text{A}, I_E = 0$) | $V_{(BR)CBO}$ | 50 | - | - | Vdc |
| Collector-Emitter Breakdown Voltage (Note 5) ($I_C = 2.0\text{ mA}, I_B = 0$) | $V_{(BR)CEO}$ | 50 | - | - | Vdc |
| ON CHARACTERISTICS | | | | | |
| DC Current Gain (Note 5) ($I_C = 5.0\text{ mA}, V_{CE} = 10\text{ V}$) | h_{FE} | 80 | 140 | - | |
| Collector - Emitter Saturation Voltage (Note 5) ($I_C = 10\text{ mA}, I_B = 0.3\text{ mA}$) | $V_{CE(sat)}$ | - | - | 0.25 | Vdc |
| Input Voltage (off) ($V_{CE} = 5.0\text{ V}, I_C = 100\ \mu\text{A}$) | $V_{i(off)}$ | - | 0.7 | 0.5 | Vdc |
| Input Voltage (on) ($V_{CE} = 0.3\text{ V}, I_C = 1.0\text{ mA}$) | $V_{i(on)}$ | 1.4 | 0.8 | - | Vdc |
| Output Voltage (on) ($V_{CC} = 5.0\text{ V}, V_B = 2.5\text{ V}, R_L = 1.0\text{ k}\Omega$) | V_{OL} | - | - | 0.2 | Vdc |
| Output Voltage (off) ($V_{CC} = 5.0\text{ V}, V_B = 0.5\text{ V}, R_L = 1.0\text{ k}\Omega$) | V_{OH} | 4.9 | - | - | Vdc |
| Input Resistor | R_1 | 7.0 | 10 | 13 | k Ω |
| Resistor Ratio | R_1/R_2 | 0.17 | 0.21 | 0.25 | |

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

- Pulsed Condition: Pulse Width = 300 msec, Duty Cycle $\leq 2\%$.

TYPICAL CHARACTERISTICS
MUN2214, MMUN2214L, MUN5214, DTC114YE, DTC114YM3

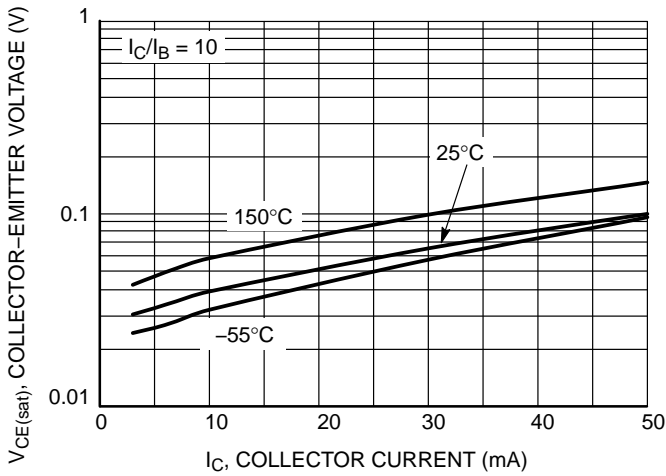


Figure 2. $V_{CE(sat)}$ vs. I_C

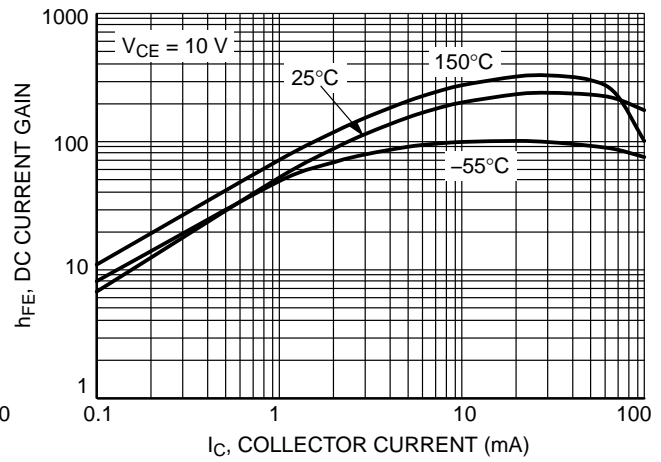


Figure 3. DC Current Gain

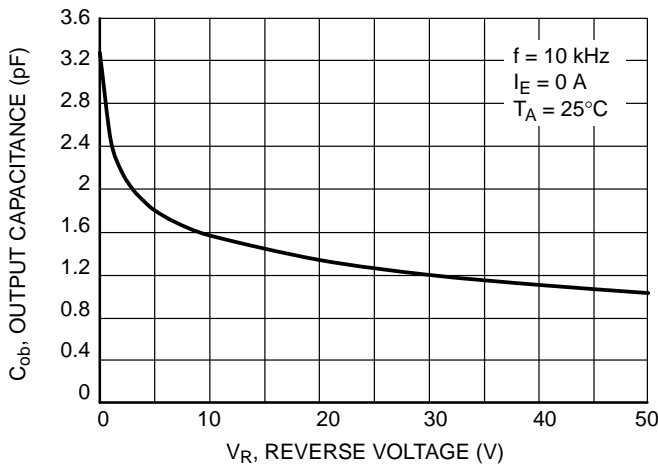


Figure 4. Output Capacitance

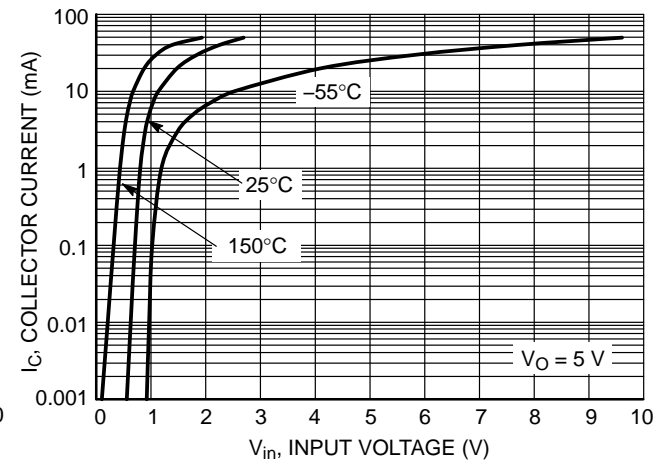


Figure 5. Output Current vs. Input Voltage

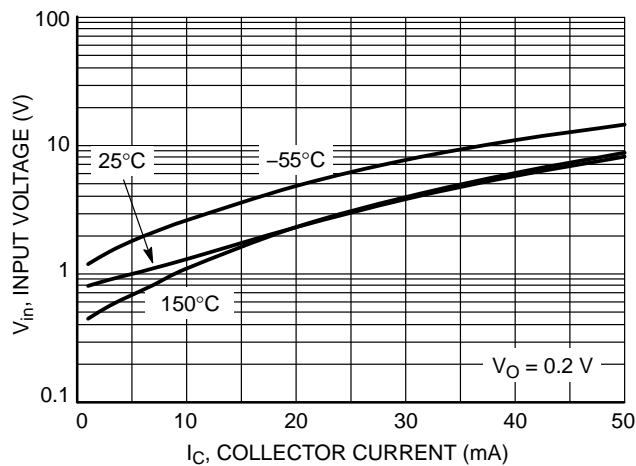


Figure 6. Input Voltage vs. Output Current

TYPICAL CHARACTERISTICS
NSBC114YF3

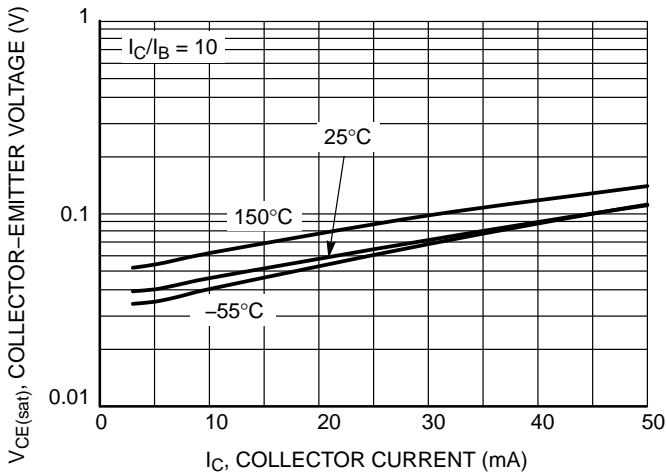


Figure 7. $V_{CE(sat)}$ vs. I_C

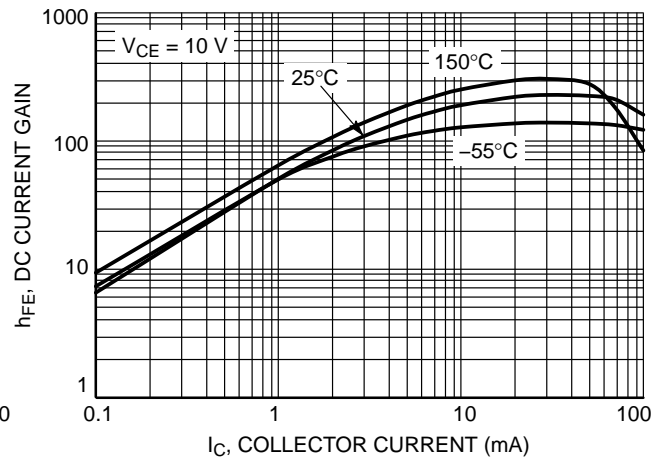


Figure 8. DC Current Gain

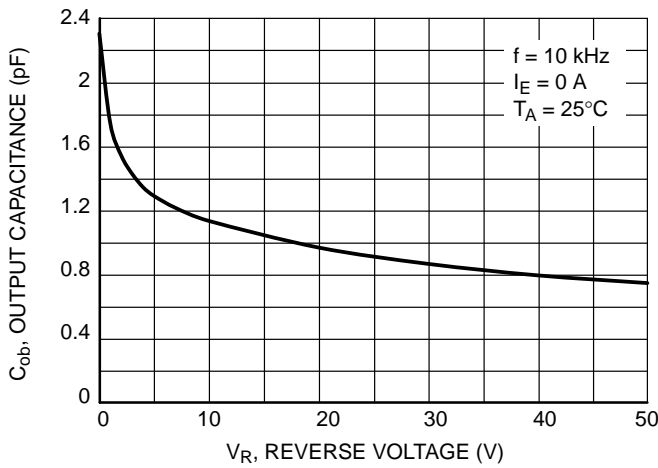


Figure 9. Output Capacitance

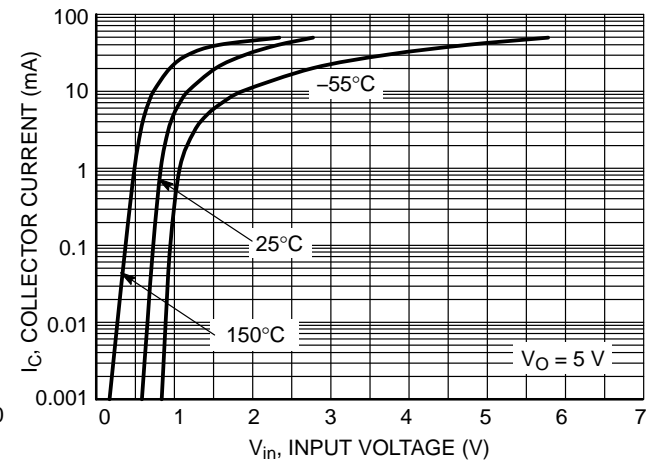


Figure 10. Output Current vs. Input Voltage

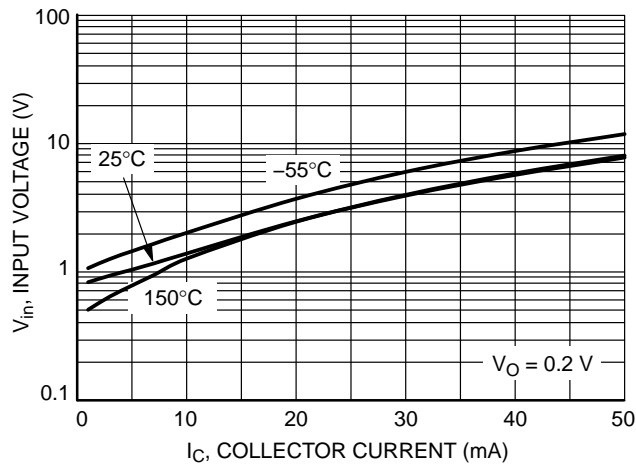
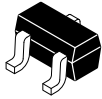


Figure 11. Input Voltage vs. Output Current

MECHANICAL CASE OUTLINE PACKAGE DIMENSIONS



SCALE 4:1

SC-70 (SOT-323) CASE 419 ISSUE R

DATE 11 OCT 2022



NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH

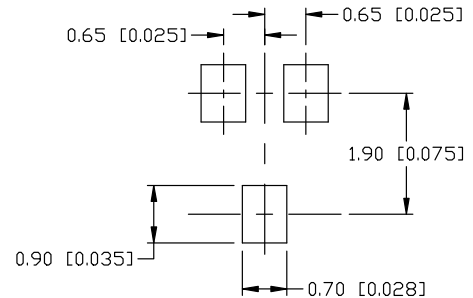
| DIM | MILLIMETERS | | | INCHES | | |
|----------------|-------------|------|------|-----------|-------|-------|
| | MIN. | NOM. | MAX. | MIN. | NOM. | MAX. |
| A | 0.80 | 0.90 | 1.00 | 0.032 | 0.035 | 0.040 |
| A1 | 0.00 | 0.05 | 0.10 | 0.000 | 0.002 | 0.004 |
| A2 | 0.70 REF | | | 0.028 BSC | | |
| b | 0.30 | 0.35 | 0.40 | 0.012 | 0.014 | 0.016 |
| c | 0.10 | 0.18 | 0.25 | 0.004 | 0.007 | 0.010 |
| D | 1.80 | 2.00 | 2.20 | 0.071 | 0.080 | 0.087 |
| E | 1.15 | 1.24 | 1.35 | 0.045 | 0.049 | 0.053 |
| e | 1.20 | 1.30 | 1.40 | 0.047 | 0.051 | 0.055 |
| e1 | 0.65 BSC | | | 0.026 BSC | | |
| L | 0.20 | 0.38 | 0.56 | 0.008 | 0.015 | 0.022 |
| H _E | 2.00 | 2.10 | 2.40 | 0.079 | 0.083 | 0.095 |

GENERIC MARKING DIAGRAM



- XX = Specific Device Code
- M = Date Code
- = Pb-Free Package

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.



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

SOLDERING FOOTPRINT

- | | | | | | |
|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------|
| STYLE 1: CANCELLED | STYLE 2: PIN 1. ANODE 2. N.C. 3. CATHODE | STYLE 3: PIN 1. BASE 2. EMITTER 3. COLLECTOR | STYLE 4: PIN 1. CATHODE 2. CATHODE 3. ANODE | STYLE 5: PIN 1. ANODE 2. ANODE 3. CATHODE | |
| STYLE 6: PIN 1. EMITTER 2. BASE 3. COLLECTOR | STYLE 7: PIN 1. BASE 2. EMITTER 3. COLLECTOR | STYLE 8: PIN 1. GATE 2. SOURCE 3. DRAIN | STYLE 9: PIN 1. ANODE 2. CATHODE 3. CATHODE-ANODE | STYLE 10: PIN 1. CATHODE 2. ANODE 3. ANODE-CATHODE | STYLE 11: PIN 1. CATHODE 2. CATHODE 3. CATHODE |

| | | |
|-------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DOCUMENT NUMBER: | 98ASB42819B | Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red. |
| DESCRIPTION: | SC-70 (SOT-323) | PAGE 1 OF 1 |

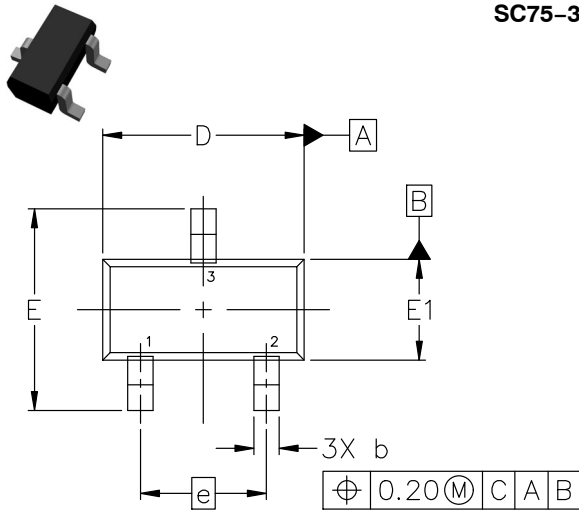
onsemi and ONSEMI are trademarks of Semiconductor Components Industries, LLC dba onsemi or its subsidiaries in the United States and/or other countries. onsemi reserves the right to make changes without further notice to any products herein. onsemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does onsemi assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. onsemi does not convey any license under its patent rights nor the rights of others.

MECHANICAL CASE OUTLINE PACKAGE DIMENSIONS

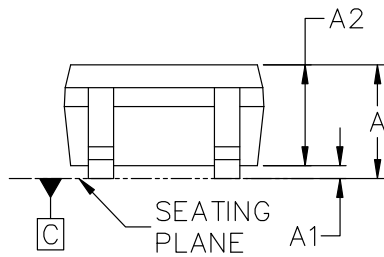


SC75-3 1.60x0.80x0.80, 1.00P
CASE 463
ISSUE H

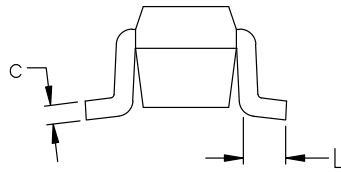
DATE 01 FEB 2024



TOP VIEW

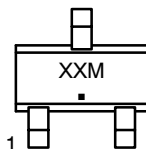


SIDE VIEW



END VIEW

GENERIC MARKING DIAGRAM*



- XX = Specific Device Code
- M = Date Code
- = Pb-Free Package

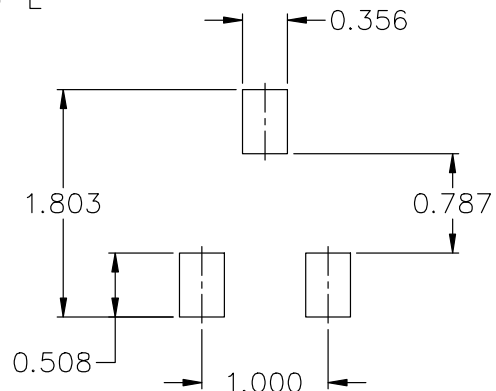
*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.

- STYLE 1:
PIN 1. BASE
2. EMITTER
3. COLLECTOR
- STYLE 2:
PIN 1. ANODE
2. N/C
3. CATHODE
- STYLE 3:
PIN 1. ANODE
2. ANODE
3. CATHODE
- STYLE 4:
PIN 1. CATHODE
2. CATHODE
3. ANODE
- STYLE 5:
PIN 1. GATE
2. SOURCE
3. DRAIN

NOTES:

1. DIMENSIONING AND TOLERANCING CONFORM TO ASME Y14.5-2018.
2. ALL DIMENSION ARE IN MILLIMETERS.

| DIM | MILLIMETERS | | |
|-----|-------------|------|------|
| | MIN. | NOM. | MAX. |
| A | 0.70 | 0.80 | 0.90 |
| A1 | 0.00 | 0.05 | 0.10 |
| A2 | 0.80 REF. | | |
| b | 0.15 | 0.20 | 0.30 |
| c | 0.10 | 0.15 | 0.25 |
| D | 1.55 | 1.60 | 1.65 |
| E | 1.50 | 1.60 | 1.70 |
| E1 | 0.70 | 0.80 | 0.90 |
| e | 1.00 BSC | | |
| L | 0.10 | 0.15 | 0.20 |



RECOMMENDED MOUNTING FOOTPRINT*

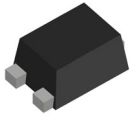
* FOR ADDITIONAL INFORMATION ON OUR Pb-FREE STRATEGY AND SOLDERING DETAILS, PLEASE DOWNLOAD THE ON SEMICONDUCTOR SOLDERING AND MOUNTING TECHNIQUES REFERENCE MANUAL, SOLDERRM/D.

| | | |
|-------------------------|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DOCUMENT NUMBER: | 98ASB15184C | Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red. |
| DESCRIPTION: | SC75-3 1.60x0.80x0.80, 1.00P | PAGE 1 OF 1 |

onsemi and ONSEMI are trademarks of Semiconductor Components Industries, LLC dba onsemi or its subsidiaries in the United States and/or other countries. onsemi reserves the right to make changes without further notice to any products herein. onsemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does onsemi assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. onsemi does not convey any license under its patent rights nor the rights of others.

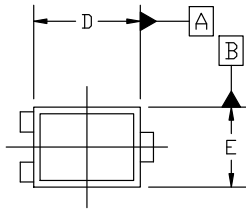
MECHANICAL CASE OUTLINE

PACKAGE DIMENSIONS

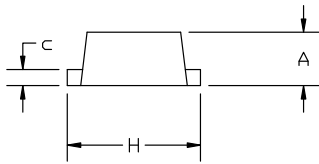


SOT-1123 0.80x0.60x0.37, 0.35P
CASE 524AA
ISSUE D

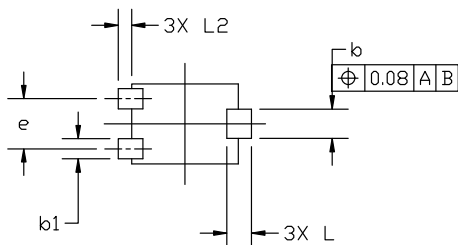
DATE 18 JAN 2024



TOP VIEW



SIDE VIEW



BOTTOM VIEW

GENERIC MARKING DIAGRAM*



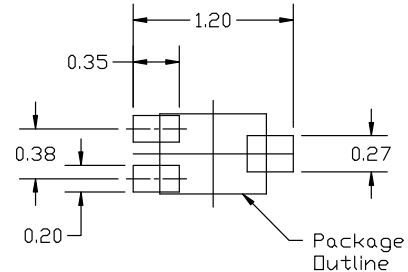
X = Specific Device Code
M = Date Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "•", may or may not be present. Some products may not follow the Generic Marking.

NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2018.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

| MILLIMETERS | | | |
|-------------|-----------|-------|-------|
| DIM | MIN | NOM | MAX |
| A | 0.34 | 0.37 | 0.40 |
| b | 0.15 | 0.22 | 0.28 |
| b1 | 0.10 | 0.15 | 0.20 |
| c | 0.07 | 0.12 | 0.17 |
| D | 0.75 | 0.80 | 0.85 |
| E | 0.55 | 0.60 | 0.65 |
| e | 0.35 | 0.38 | 0.40 |
| H | 0.950 | 1.000 | 1.050 |
| L | 0.185 REF | | |
| L2 | 0.05 | 0.10 | 0.15 |



RECOMMENDED MOUNTING FOOTPRINT

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

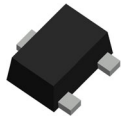
| | | | | |
|-------------------------------------------------------|--------------------------------------------------|----------------------------------------------------|------------------------------------------------------|--------------------------------------------------|
| STYLE 1: PIN 1. BASE 2. EMITTER 3. COLLECTOR | STYLE 2: PIN 1. ANODE 2. N/C 3. CATHODE | STYLE 3: PIN 1. ANODE 2. ANODE 3. CATHODE | STYLE 4: PIN 1. CATHODE 2. CATHODE 3. ANODE | STYLE 5: PIN 1. GATE 2. SOURCE 3. DRAIN |
|-------------------------------------------------------|--------------------------------------------------|----------------------------------------------------|------------------------------------------------------|--------------------------------------------------|

| | | |
|-------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DOCUMENT NUMBER: | 98AON23134D | Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red. |
| DESCRIPTION: | SOT-1123 0.80x0.60x0.37, 0.35P | PAGE 1 OF 1 |

onsemi and ONSEMI are trademarks of Semiconductor Components Industries, LLC dba onsemi or its subsidiaries in the United States and/or other countries. onsemi reserves the right to make changes without further notice to any products herein. onsemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does onsemi assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. onsemi does not convey any license under its patent rights nor the rights of others.

MECHANICAL CASE OUTLINE

PACKAGE DIMENSIONS



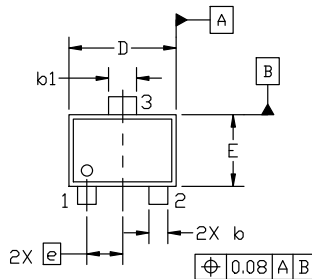
SOT-723 1.20x0.80x0.50, 0.40P
CASE 631AA
ISSUE E

DATE 24 JAN 2024

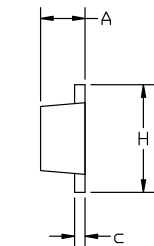
NOTES:

1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 2018.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

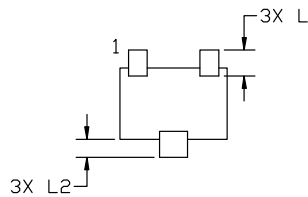
| DIM | MILLIMETERS | | |
|-----|-------------|------|------|
| | MIN. | NOM. | MAX. |
| A | 0.45 | 0.50 | 0.55 |
| b | 0.15 | 0.21 | 0.27 |
| b1 | 0.25 | 0.31 | 0.37 |
| c | 0.07 | 0.12 | 0.17 |
| D | 1.15 | 1.20 | 1.25 |
| E | 0.75 | 0.80 | 0.85 |
| e | 0.40 BSC | | |
| H | 1.15 | 1.20 | 1.25 |
| L | 0.29 REF | | |
| L2 | 0.15 | 0.20 | 0.25 |



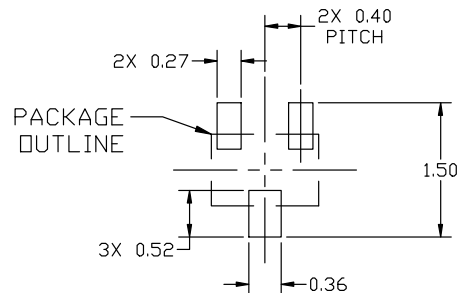
TOP VIEW



SIDE VIEW

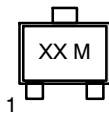


BOTTOM VIEW



RECOMMENDED MOUNTING FOOTPRINT

GENERIC MARKING DIAGRAM*



XX = Specific Device Code
M = Date Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "•", may or may not be present. Some products may not follow the Generic Marking.

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

| STYLE 1: | STYLE 2: | STYLE 3: | STYLE 4: | STYLE 5: |
|--------------|--------------|--------------|----------------|-------------|
| PIN 1. BASE | PIN 1. ANODE | PIN 1. ANODE | PIN 1. CATHODE | PIN 1. GATE |
| 2. EMITTER | 2. N/C | 2. ANODE | 2. CATHODE | 2. SOURCE |
| 3. COLLECTOR | 3. CATHODE | 3. CATHODE | 3. ANODE | 3. DRAIN |

| | | |
|-------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DOCUMENT NUMBER: | 98AON12989D | Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red. |
| DESCRIPTION: | SOT-723 1.20x0.80x0.50, 0.40P | PAGE 1 OF 1 |

onsemi and ONSEMI are trademarks of Semiconductor Components Industries, LLC dba onsemi or its subsidiaries in the United States and/or other countries. onsemi reserves the right to make changes without further notice to any products herein. onsemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does onsemi assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. onsemi does not convey any license under its patent rights nor the rights of others.

onsemi, **Onsemi**, and other names, marks, and brands are registered and/or common law trademarks of Semiconductor Components Industries, LLC dba "**onsemi**" or its affiliates and/or subsidiaries in the United States and/or other countries. **onsemi** owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of **onsemi**'s product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. **onsemi** reserves the right to make changes at any time to any products or information herein, without notice. The information herein is provided "as-is" and **onsemi** makes no warranty, representation or guarantee regarding the accuracy of the information, product features, availability, functionality, or suitability of its products for any particular purpose, nor does **onsemi** assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. Buyer is responsible for its products and applications using **onsemi** products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by **onsemi**. "Typical" parameters which may be provided in **onsemi** data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. **onsemi** does not convey any license under any of its intellectual property rights nor the rights of others. **onsemi** products are not designed, intended, or authorized for use as a critical component in life support systems or any FDA Class 3 medical devices or medical devices with a same or similar classification in a foreign jurisdiction or any devices intended for implantation in the human body. Should Buyer purchase or use **onsemi** products for any such unintended or unauthorized application, Buyer shall indemnify and hold **onsemi** and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that **onsemi** was negligent regarding the design or manufacture of the part. **onsemi** is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:

Technical Library: www.onsemi.com/design/resources/technical-documentation
onsemi Website: www.onsemi.com

ONLINE SUPPORT: www.onsemi.com/support

For additional information, please contact your local Sales Representative at www.onsemi.com/support/sales

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View NSVDTC114YM3T5G on WIN SOURCE](#)
- ⊖ [ON Semiconductor Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management