

MUN5211DW1T1G Series

Preferred Devices

Dual Bias Resistor Transistors

NPN Silicon Surface Mount Transistors with Monolithic Bias Resistor Network

The Bias Resistor Transistor (BRT) contains a single transistor with a monolithic bias network consisting of two resistors; a series base resistor and a base-emitter resistor. These digital transistors are designed to replace a single device and its external resistor bias network. The BRT eliminates these individual components by integrating them into a single device. In the MUN5211DW1T1G series, two BRT devices are housed in the SOT-363 package which is ideal for low power surface mount applications where board space is at a premium.

Features

- Simplifies Circuit Design
- Reduces Board Space
- Reduces Component Count
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS

($T_A = 25^\circ\text{C}$ unless otherwise noted, common for Q_1 and Q_2)

| Rating | Symbol | Value | Unit |
|---------------------------|-----------|-------|------|
| Collector-Base Voltage | V_{CBO} | 50 | Vdc |
| Collector-Emitter Voltage | V_{CEO} | 50 | Vdc |
| Collector Current | I_C | 100 | mAdc |

THERMAL CHARACTERISTICS

| Characteristic (One Junction Heated) | Symbol | Max | Unit |
|-----------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------|----------------------------|
| Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C | P_D | 187 (Note 1) 256 (Note 2) 1.5 (Note 1) 2.0 (Note 2) | mW mW/ $^\circ\text{C}$ |
| Thermal Resistance, Junction-to-Ambient | $R_{\theta JA}$ | 670 (Note 1) 490 (Note 2) | $^\circ\text{C}/\text{W}$ |
| Characteristic (Both Junctions Heated) | Symbol | Max | Unit |
| Total Device Dissipation $T_A = 25^\circ\text{C}$ Derate above 25°C | P_D | 250 (Note 1) 385 (Note 2) 2.0 (Note 1) 3.0 (Note 2) | mW mW/ $^\circ\text{C}$ |
| Thermal Resistance, Junction-to-Ambient | $R_{\theta JA}$ | 493 (Note 1) 325 (Note 2) | $^\circ\text{C}/\text{W}$ |
| Thermal Resistance, Junction-to-Lead | $R_{\theta JL}$ | 188 (Note 1) 208 (Note 2) | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature | T_J, T_{stg} | -55 to +150 | $^\circ\text{C}$ |

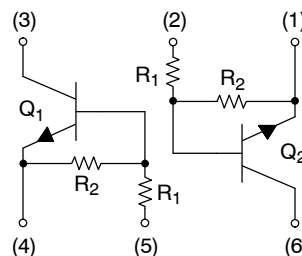
Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-4 @ Minimum Pad
2. FR-4 @ 1.0 x 1.0 inch Pad



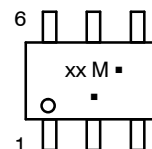
ON Semiconductor®

<http://onsemi.com>



SOT-363
CASE 419B
STYLE 1

MARKING DIAGRAM



xx = Device Code
M = Date Code*
▪ = Pb-Free Package

(Note: Microdot may be in either location)

*Date Code orientation and/or position may vary depending upon manufacturing location.

DEVICE MARKING INFORMATION

See specific marking information in the device marking table on page 2 of this data sheet.

Preferred devices are recommended choices for future use and best overall value.

MUN5211DW1T1G Series

DEVICE MARKING AND RESISTOR VALUES

| Device | Package | Marking | R1 (K) | R2 (K) | Shipping† |
|---------------|----------------------|---------|--------|--------|--------------------|
| MUN5211DW1T1G | SOT-363 (Pb-Free) | 7A | 10 | 10 | 3000 / Tape & Reel |
| MUN5212DW1T1G | SOT-363 (Pb-Free) | 7B | 22 | 22 | 3000 / Tape & Reel |
| MUN5213DW1T1G | SOT-363 (Pb-Free) | 7C | 47 | 47 | 3000 / Tape & Reel |
| MUN5214DW1T1G | SOT-363 (Pb-Free) | 7D | 10 | 47 | 3000 / Tape & Reel |
| MUN5215DW1T1G | SOT-363 (Pb-Free) | 7E | 10 | ∞ | 3000 / Tape & Reel |
| MUN5216DW1T1G | SOT-363 (Pb-Free) | 7F | 4.7 | ∞ | 3000 / Tape & Reel |
| MUN5230DW1T1G | SOT-363 (Pb-Free) | 7G | 1.0 | 1.0 | 3000 / Tape & Reel |
| MUN5231DW1T1G | SOT-363 (Pb-Free) | 7H | 2.2 | 2.2 | 3000 / Tape & Reel |
| MUN5232DW1T1G | SOT-363 (Pb-Free) | 7J | 4.7 | 4.7 | 3000 / Tape & Reel |
| MUN5233DW1T1G | SOT-363 (Pb-Free) | 7K | 4.7 | 47 | 3000 / Tape & Reel |
| MUN5234DW1T1G | SOT-363 (Pb-Free) | 7L | 22 | 47 | 3000 / Tape & Reel |
| MUN5235DW1T1G | SOT-363 (Pb-Free) | 7M | 2.2 | 47 | 3000 / Tape & Reel |
| MUN5236DW1T1G | SOT-363 (Pb-Free) | 7N | 100 | 100 | 3000 / Tape & Reel |
| MUN5237DW1T1G | SOT-363 (Pb-Free) | 7P | 47 | 22 | 3000 / 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.

MUN5211DW1T1G Series

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted, common for Q₁ and Q₂)

| 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 ($V_{EB} = 6.0\text{ V}$, $I_C = 0$) | MUN5211DW1T1G | - | - | 0.5 | mAdc |
| | MUN5212DW1T1G | - | - | 0.2 | |
| | MUN5213DW1T1G | - | - | 0.1 | |
| | MUN5214DW1T1G | - | - | 0.2 | |
| | MUN5215DW1T1G | - | - | 0.9 | |
| | MUN5216DW1T1G | - | - | 1.9 | |
| | MUN5230DW1T1G | - | - | 4.3 | |
| | MUN5231DW1T1G | - | - | 2.3 | |
| | MUN5232DW1T1G | - | - | 1.5 | |
| | MUN5233DW1T1G | - | - | 0.18 | |
| | MUN5234DW1T1G | - | - | 0.13 | |
| | MUN5235DW1T1G | - | - | 0.2 | |
| | MUN5236DW1T1G | - | - | 0.05 | |
| | MUN5237DW1T1G | - | - | 0.13 | |
| Collector-Base Breakdown Voltage ($I_C = 10\ \mu\text{A}$, $I_E = 0$) | $V_{(BR)CBO}$ | 50 | - | - | Vdc |
| Collector-Emitter Breakdown Voltage (Note 3) ($I_C = 2.0\text{ mA}$, $I_B = 0$) | $V_{(BR)CEO}$ | 50 | - | - | Vdc |

3. Pulse Test: Pulse Width < 300 μs , Duty Cycle < 2.0%

MUN5211DW1T1G Series

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted, common for Q₁ and Q₂)

| Characteristic | | Symbol | Min | Typ | Max | Unit |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|------|-----|------|------|
| ON CHARACTERISTICS (Note 4) | | | | | | |
| DC Current Gain ($V_{CE} = 10\text{ V}$, $I_C = 5.0\text{ mA}$) | MUN5211DW1T1G | h_{FE} | 35 | 60 | - | |
| | MUN5212DW1T1G | | 60 | 100 | - | |
| | MUN5213DW1T1G | | 80 | 140 | - | |
| | MUN5214DW1T1G | | 80 | 140 | - | |
| | MUN5215DW1T1G | | 160 | 350 | - | |
| | MUN5216DW1T1G | | 160 | 350 | - | |
| | MUN5230DW1T1G | | 3.0 | 5.0 | - | |
| | MUN5231DW1T1G | | 8.0 | 15 | - | |
| | MUN5232DW1T1G | | 15 | 30 | - | |
| | MUN5233DW1T1G | | 80 | 200 | - | |
| | MUN5234DW1T1G | | 80 | 150 | - | |
| | MUN5235DW1T1G | | 80 | 140 | - | |
| | MUN5236DW1T1G | | 80 | 150 | - | |
| MUN5237DW1T1G | 80 | 140 | - | | | |
| Collector-Emitter Saturation Voltage ($I_C = 10\text{ mA}$, $I_B = 0.3\text{ mA}$) ($I_C = 10\text{ mA}$, $I_B = 5\text{ mA}$) ($I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$) | MUN5211DW1T1G | $V_{CE(sat)}$ | - | - | 0.25 | Vdc |
| | MUN5212DW1T1G | | - | - | 0.25 | |
| | MUN5213DW1T1G | | - | - | 0.25 | |
| | MUN5214DW1T1G | | - | - | 0.25 | |
| | MUN5235DW1T1G | | - | - | 0.25 | |
| | MUN5236DW1T1G | | - | - | 0.25 | |
| | MUN5230DW1T1G | | - | - | 0.25 | |
| | MUN5231DW1T1G | | - | - | 0.25 | |
| | MUN5237DW1T1G | | - | - | 0.25 | |
| | MUN5215DW1T1G | | - | - | 0.25 | |
| | MUN5216DW1T1G | | - | - | 0.25 | |
| | MUN5232DW1T1G | | - | - | 0.25 | |
| | MUN5233DW1T1G | | - | - | 0.25 | |
| MUN5234DW1T1G | - | - | 0.25 | | | |
| Output Voltage (on) ($V_{CC} = 5.0\text{ V}$, $V_B = 2.5\text{ V}$, $R_L = 1.0\text{ k}\Omega$) ($V_{CC} = 5.0\text{ V}$, $V_B = 3.5\text{ V}$, $R_L = 1.0\text{ k}\Omega$) ($V_{CC} = 5.0\text{ V}$, $V_B = 5.5\text{ V}$, $R_L = 1.0\text{ k}\Omega$) ($V_{CC} = 5.0\text{ V}$, $V_B = 4.0\text{ V}$, $R_L = 1.0\text{ k}\Omega$) | MUN5211DW1T1G | V_{OL} | - | - | 0.2 | Vdc |
| | MUN5212DW1T1G | | - | - | 0.2 | |
| | MUN5214DW1T1G | | - | - | 0.2 | |
| | MUN5215DW1T1G | | - | - | 0.2 | |
| | MUN5216DW1T1G | | - | - | 0.2 | |
| | MUN5230DW1T1G | | - | - | 0.2 | |
| | MUN5231DW1T1G | | - | - | 0.2 | |
| | MUN5232DW1T1G | | - | - | 0.2 | |
| | MUN5233DW1T1G | | - | - | 0.2 | |
| | MUN5234DW1T1G | | - | - | 0.2 | |
| | MUN5235DW1T1G | | - | - | 0.2 | |
| | MUN5213DW1T1G | | - | - | 0.2 | |
| | MUN5236DW1T1G | | - | - | 0.2 | |
| MUN5237DW1T1G | - | - | 0.2 | | | |

4. Pulse Test: Pulse Width < 300 μs , Duty Cycle < 2.0%

MUN5211DW1T1G Series

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted, common for Q₁ and Q₂) (Continued)

| Characteristic | Symbol | Min | Typ | Max | Unit | |
|---------------------------------------------------------------------------------------------------------|----------|-------------------------------------------------------------|-------|-------|-------|------------|
| ON CHARACTERISTICS (Note 5) (Continued) | | | | | | |
| Output Voltage (off) ($V_{CC} = 5.0\text{ V}$, $V_B = 0.5\text{ V}$, $R_L = 1.0\text{ k}\Omega$) | V_{OH} | MUN5211DW1T1G | 4.9 | - | - | Vdc |
| | | MUN5212DW1T1G | 4.9 | - | - | |
| | | MUN5213DW1T1G | 4.9 | - | - | |
| | | MUN5214DW1T1G | 4.9 | - | - | |
| | | MUN5233DW1T1G | 4.9 | - | - | |
| | | MUN5234DW1T1G | 4.9 | - | - | |
| | | MUN5235DW1T1G | 4.9 | - | - | |
| ($V_{CC} = 5.0\text{ V}$, $V_B = 0.050\text{ V}$, $R_L = 1.0\text{ k}\Omega$) | | MUN5230DW1T1G | 4.9 | - | - | |
| ($V_{CC} = 5.0\text{ V}$, $V_B = 0.25\text{ V}$, $R_L = 1.0\text{ k}\Omega$) | | MUN5215DW1T1G | 4.9 | - | - | |
| | | MUN5216DW1T1G | 4.9 | - | - | |
| | | MUN5231DW1T1G | 4.9 | - | - | |
| | | MUN5232DW1T1G | 4.9 | - | - | |
| | | MUN5236DW1T1G | 4.9 | - | - | |
| | | MUN5237DW1T1G | 4.9 | - | - | |
| Input Resistor | R1 | MUN5211DW1T1G | 7.0 | 10 | 13 | k Ω |
| | | MUN5212DW1T1G | 15.4 | 22 | 28.6 | |
| | | MUN5213DW1T1G | 32.9 | 47 | 61.1 | |
| | | MUN5214DW1T1G | 7.0 | 10 | 13 | |
| | | MUN5215DW1T1G | 7.0 | 10 | 13 | |
| | | MUN5216DW1T1G | 3.3 | 4.7 | 6.1 | |
| | | MUN5230DW1T1G | 0.7 | 1.0 | 1.3 | |
| | | MUN5231DW1T1G | 1.5 | 2.2 | 2.9 | |
| | | MUN5232DW1T1G | 3.3 | 4.7 | 6.1 | |
| | | MUN5233DW1T1G | 3.3 | 4.7 | 6.1 | |
| | | MUN5234DW1T1G | 15.4 | 22 | 28.6 | |
| | | MUN5235DW1T1G | 1.54 | 2.2 | 2.86 | |
| | | MUN5236DW1T1G | 70 | 100 | 130 | |
| | | MUN5237DW1T1G | 32.9 | 47 | 61.1 | |
| Resistor Ratio | R1/R2 | MUN5211DW1T1G/MUN5212DW1T1G/ MUN5213DW1T1G/MUN5236DW1T1G | 0.8 | 1.0 | 1.2 | |
| | | MUN5214DW1T1G | 0.17 | 0.21 | 0.25 | |
| | | MUN5215DW1T1G/MUN5216DW1T1G | - | - | - | |
| | | MUN5230DW1T1G/MUN5231DW1T1G/MUN5232DW1T1G | 0.8 | 1.0 | 1.2 | |
| | | MUN5233DW1T1G | 0.055 | 0.1 | 0.185 | |
| | | MUN5234DW1T1G | 0.38 | 0.47 | 0.56 | |
| | | MUN5235DW1T1G | 0.038 | 0.047 | 0.056 | |
| | | MUN5237DW1T1G | 1.7 | 2.1 | 2.6 | |

5. Pulse Test: Pulse Width < 300 μs , Duty Cycle < 2.0%

ALL MUN5211DW1T1G SERIES DEVICES

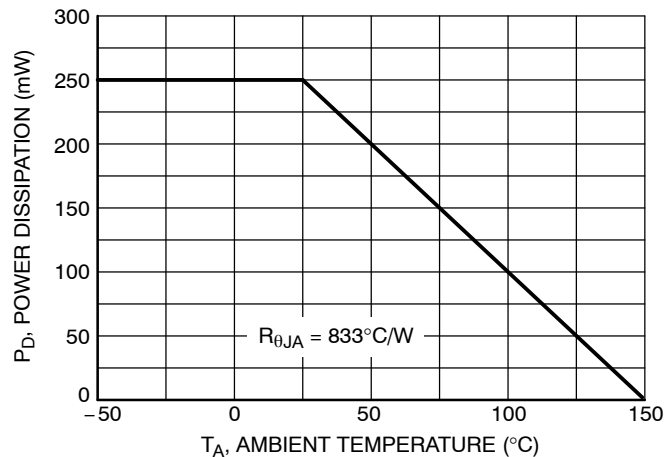


Figure 1. Derating Curve

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5211DW1T1G

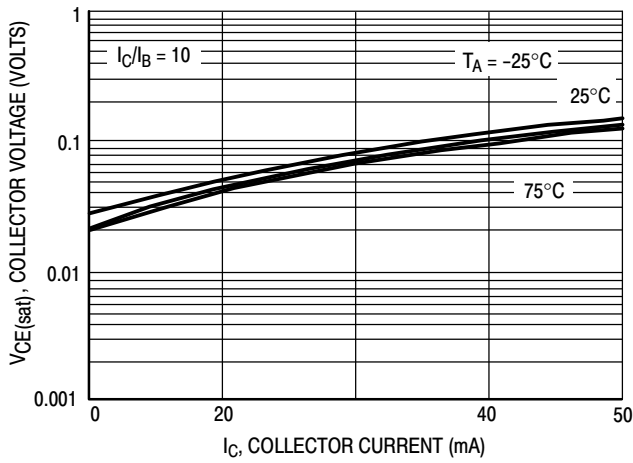


Figure 2. $V_{CE(sat)}$ versus I_C

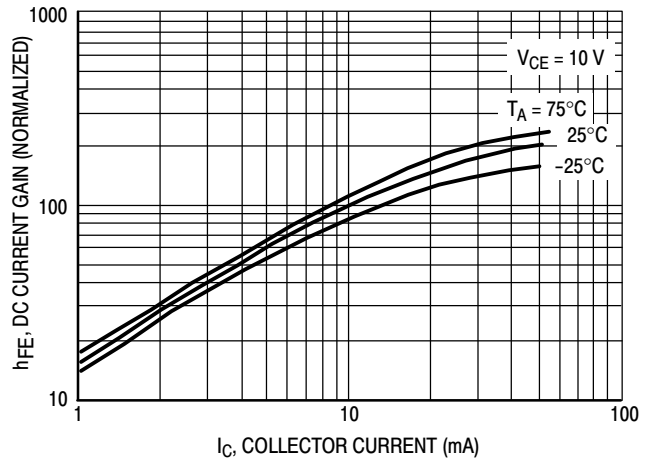


Figure 3. DC Current Gain

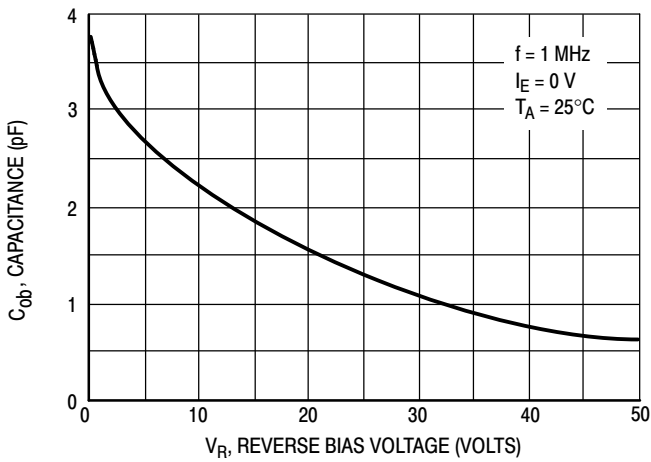


Figure 4. Output Capacitance

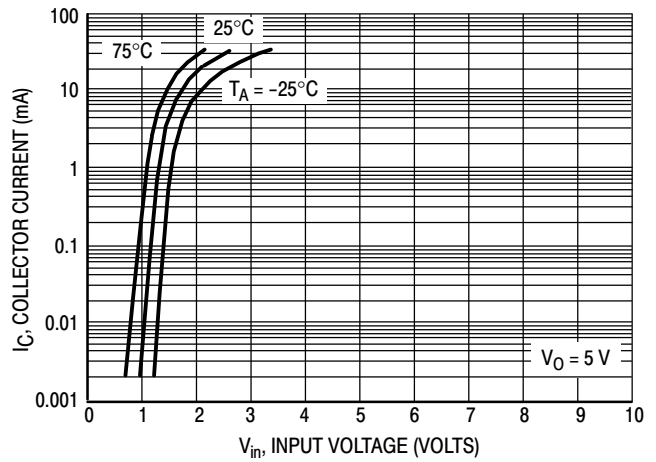


Figure 5. Output Current versus Input Voltage

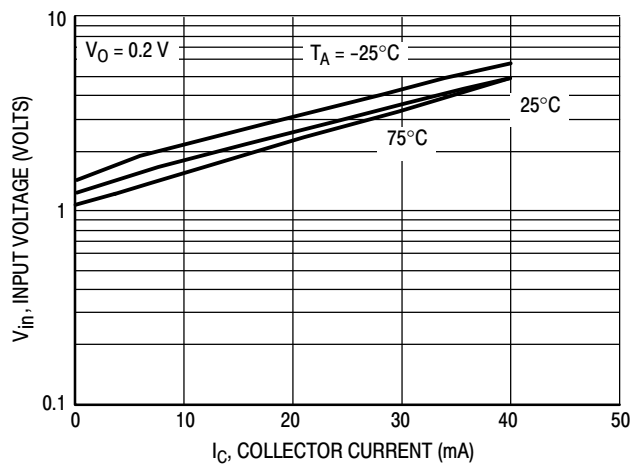


Figure 6. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5212DW1T1G

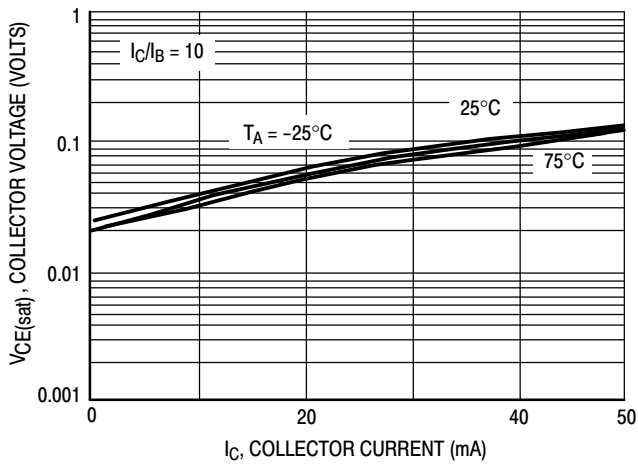


Figure 7. $V_{CE(sat)}$ versus I_C

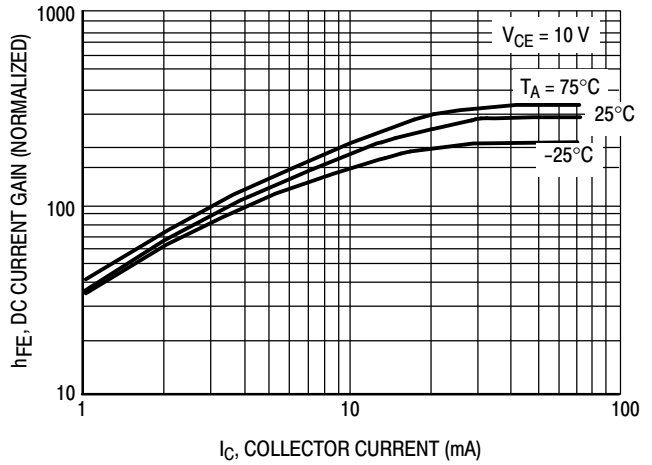


Figure 8. DC Current Gain

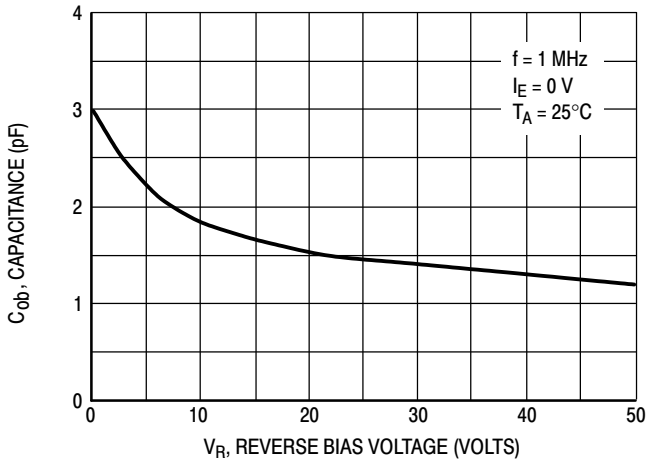


Figure 9. Output Capacitance

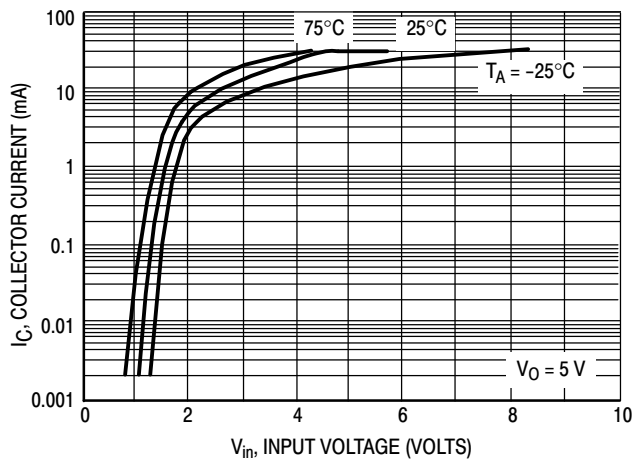


Figure 10. Output Current versus Input Voltage

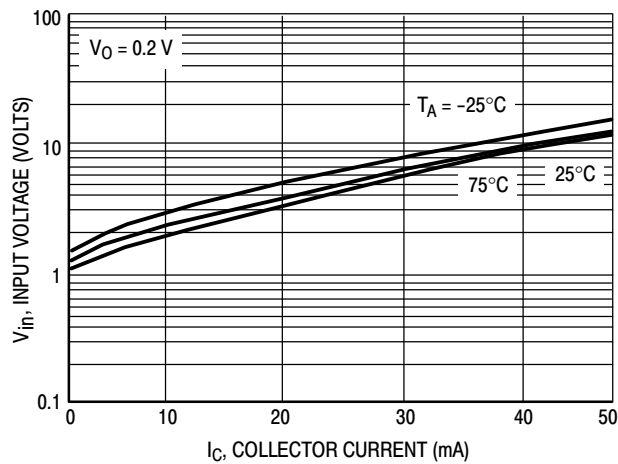


Figure 11. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5213DW1T1G

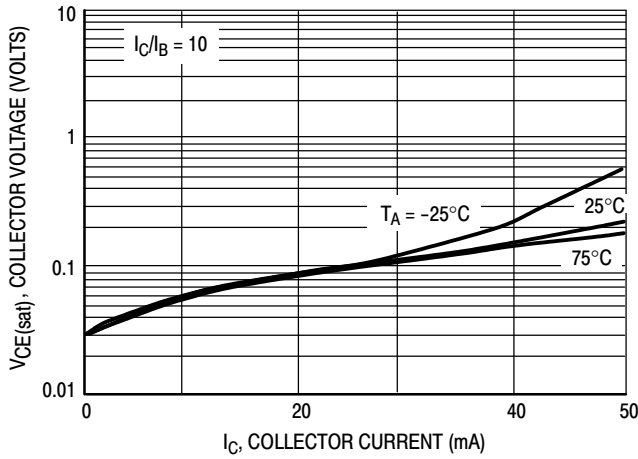


Figure 12. $V_{CE(sat)}$ versus I_C

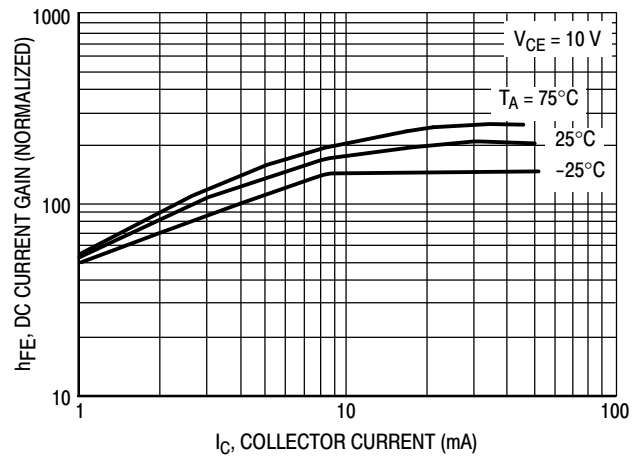


Figure 13. DC Current Gain

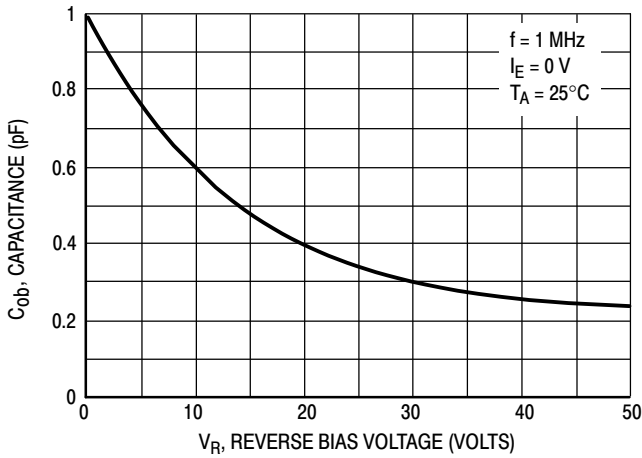


Figure 14. Output Capacitance

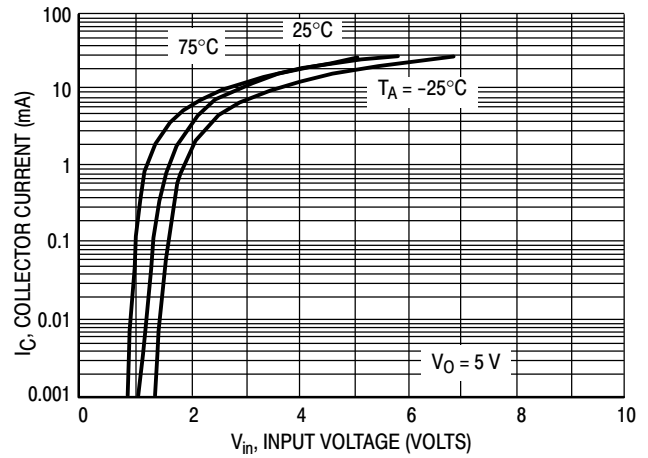


Figure 15. Output Current versus Input Voltage

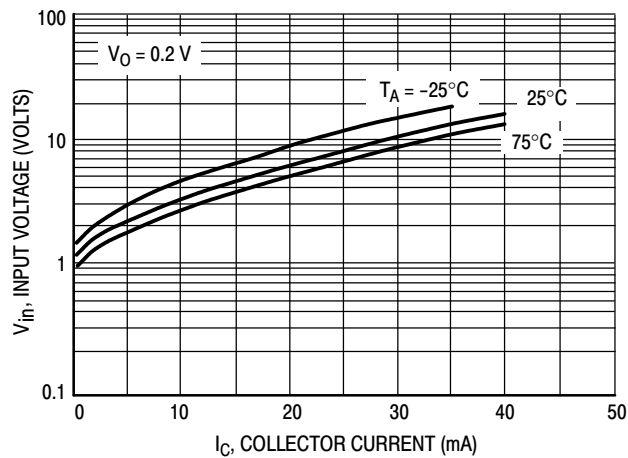


Figure 16. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5214DW1T1G

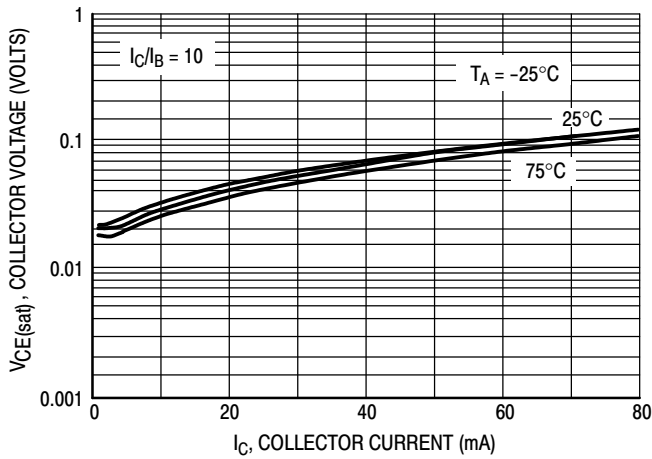


Figure 17. $V_{CE(sat)}$ versus I_C

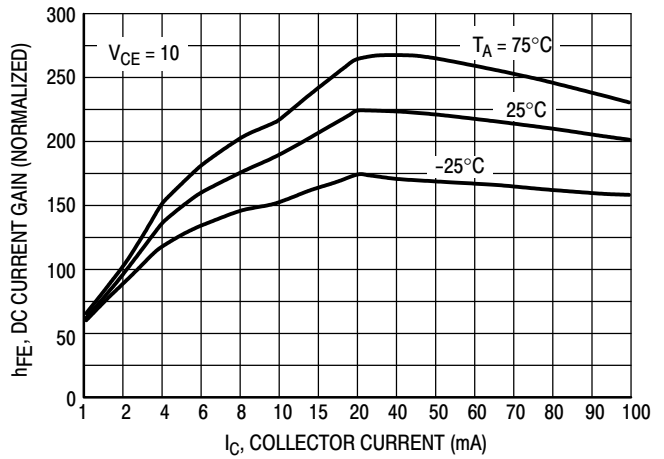


Figure 18. DC Current Gain

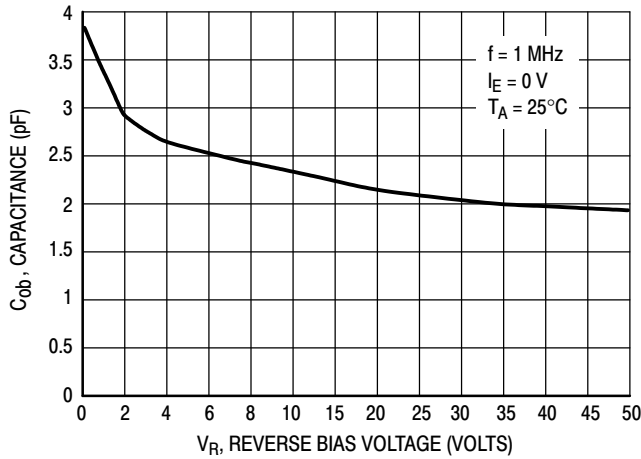


Figure 19. Output Capacitance

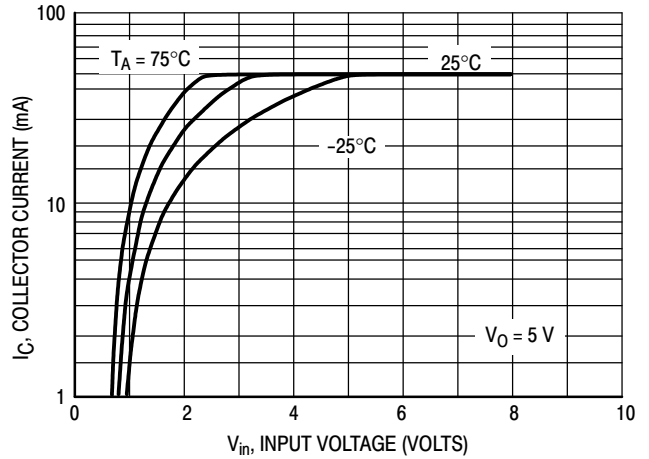


Figure 20. Output Current versus Input Voltage

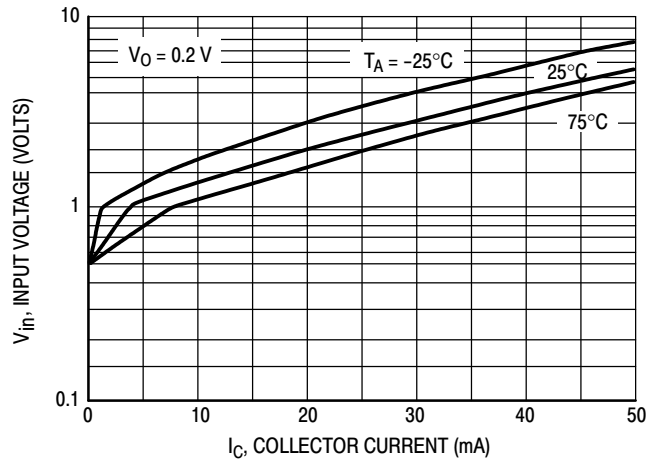


Figure 21. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5215DW1T1G

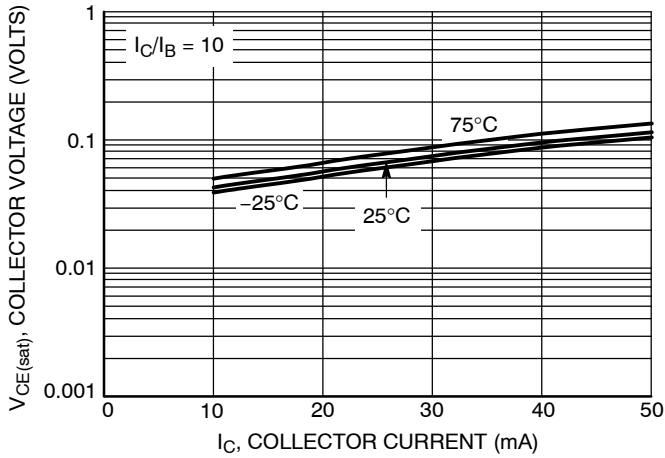


Figure 22. $V_{CE(sat)}$ versus I_C

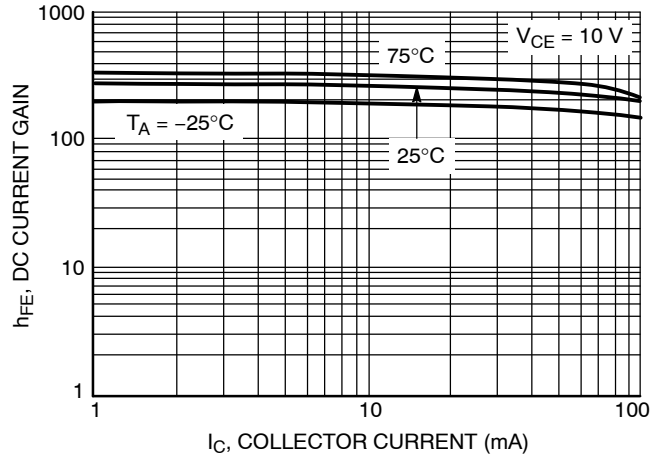


Figure 23. DC Current Gain

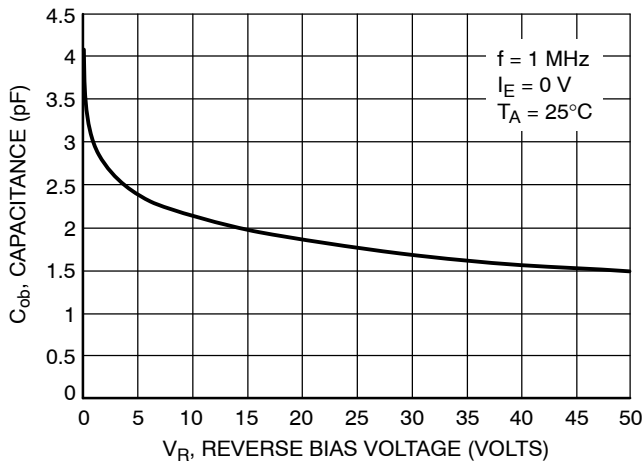


Figure 24. Output Capacitance

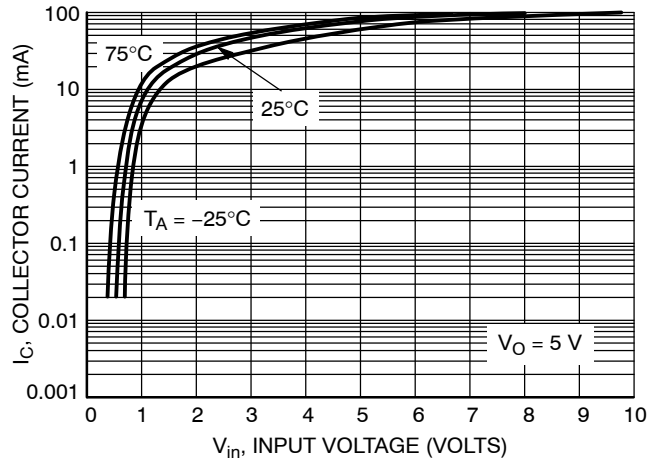


Figure 25. Output Current versus Input Voltage

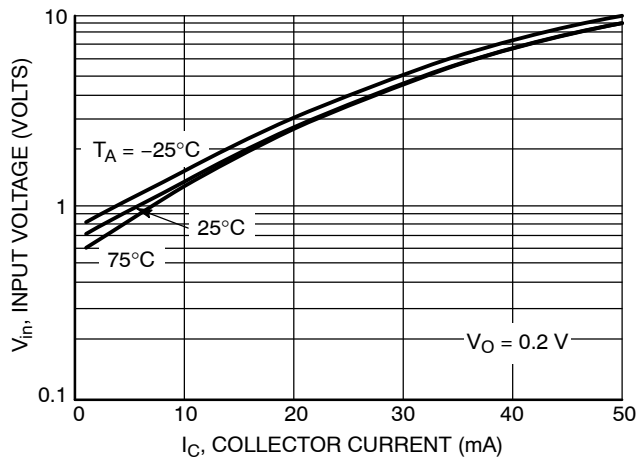


Figure 26. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5216DW1T1G

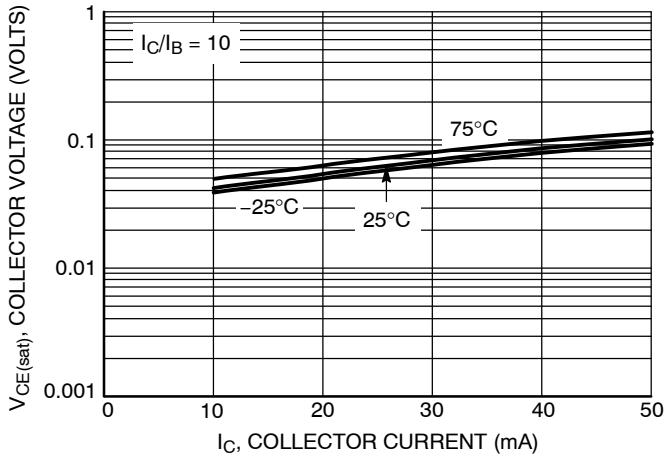


Figure 27. $V_{CE(sat)}$ versus I_C

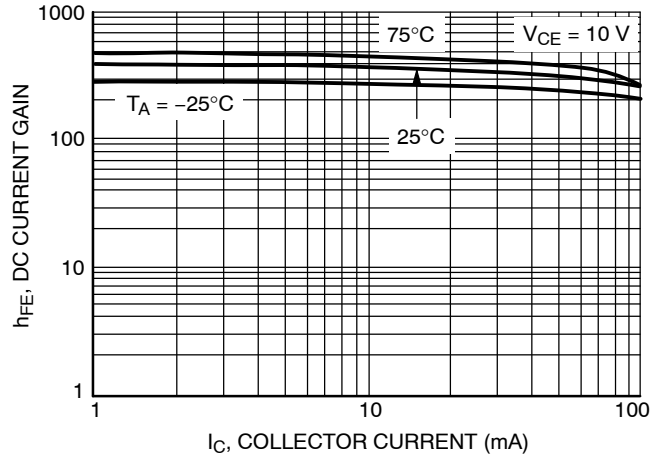


Figure 28. DC Current Gain

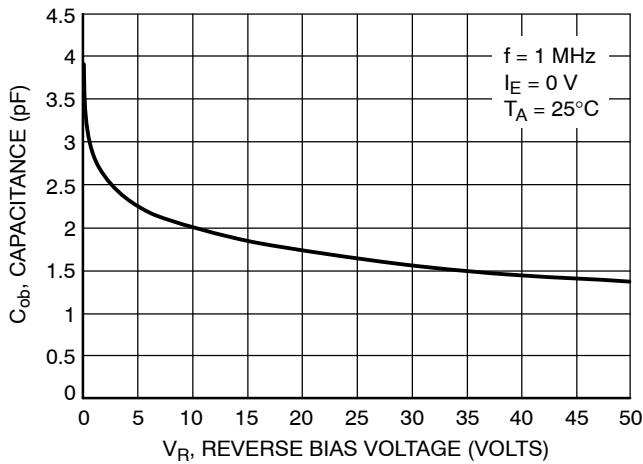


Figure 29. Output Capacitance

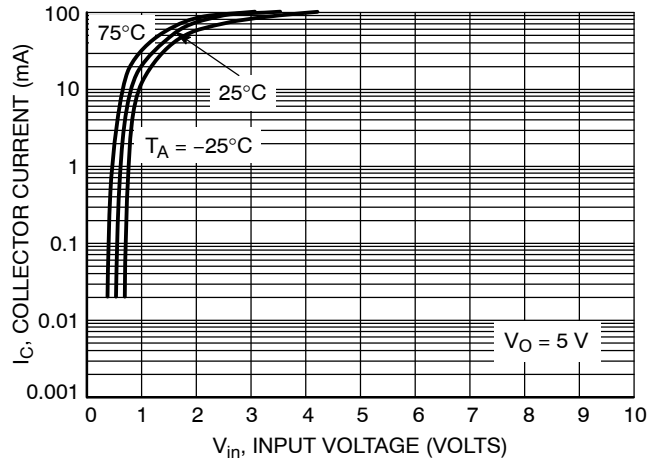


Figure 30. Output Current versus Input Voltage

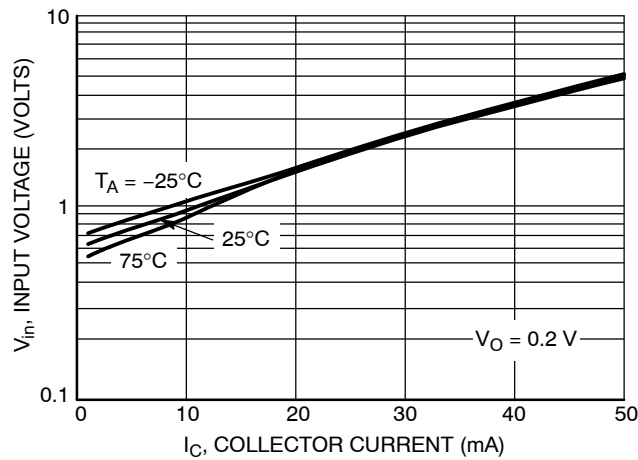


Figure 31. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5230DW1T1G

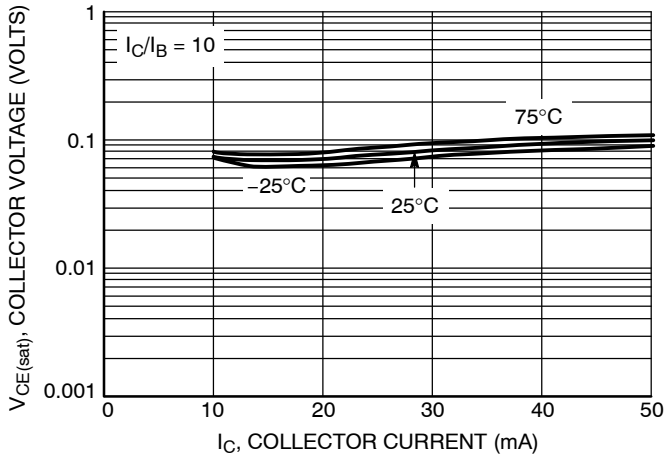


Figure 32. $V_{CE(sat)}$ versus I_C

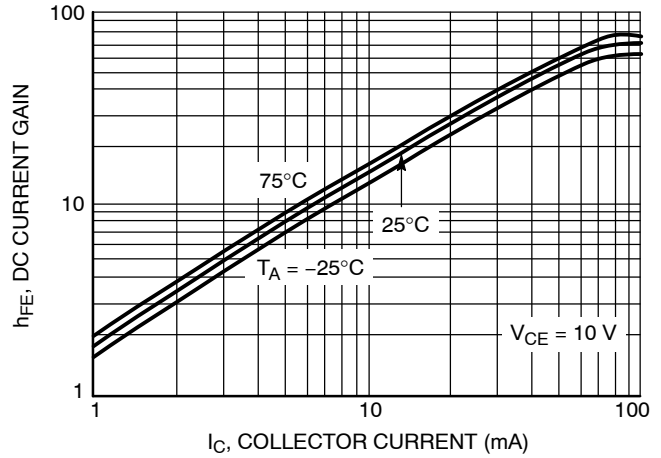


Figure 33. DC Current Gain

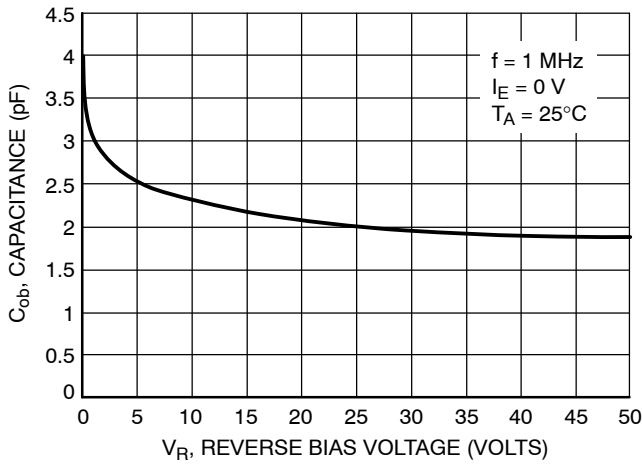


Figure 34. Output Capacitance

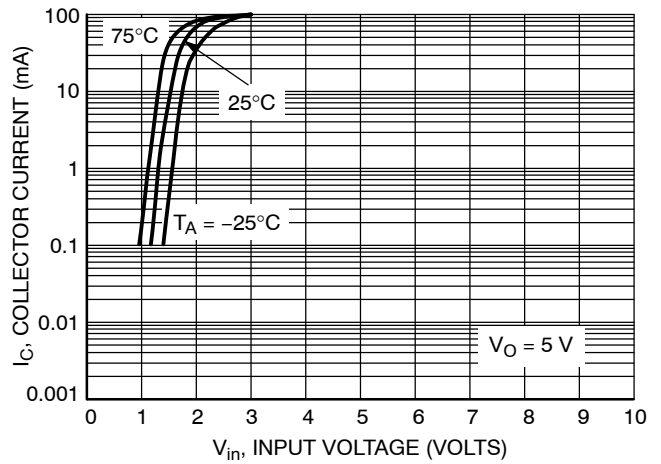


Figure 35. Output Current versus Input Voltage

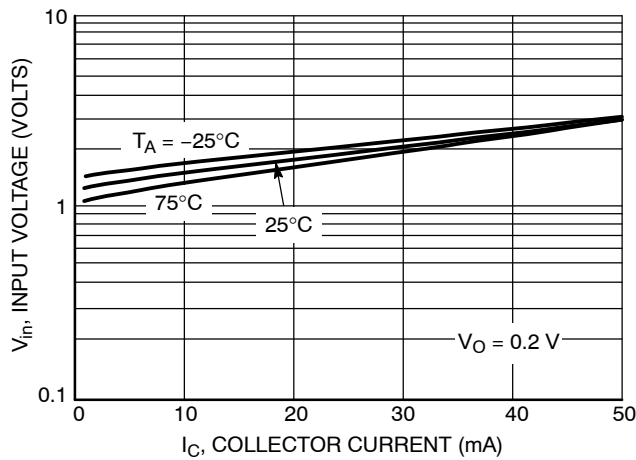


Figure 36. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5231DW1T1G

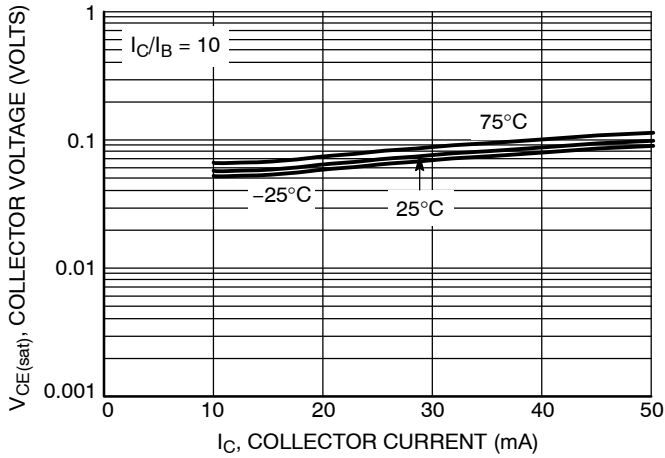


Figure 37. $V_{CE(sat)}$ versus I_C

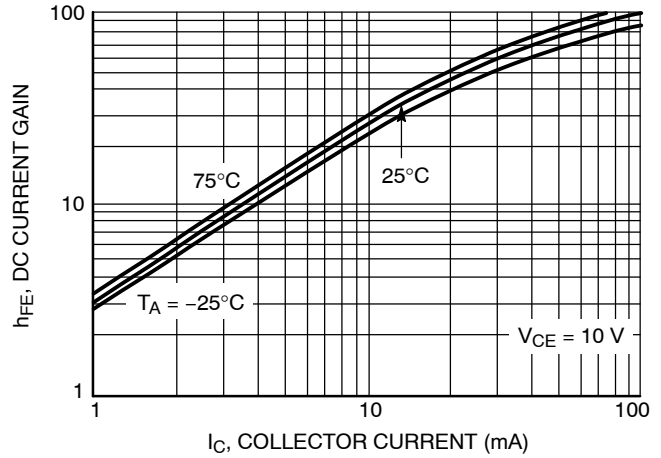


Figure 38. DC Current Gain

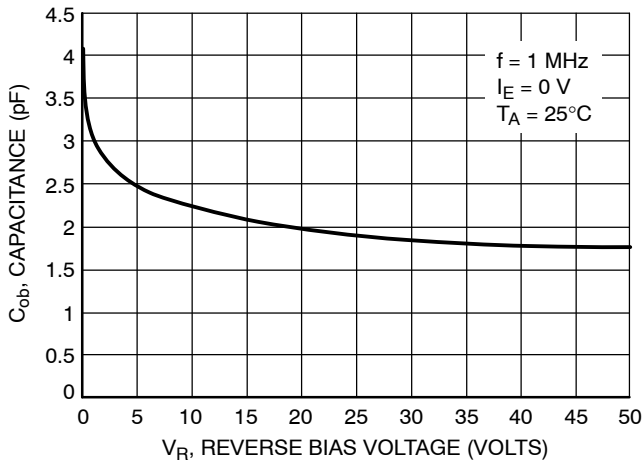


Figure 39. Output Capacitance

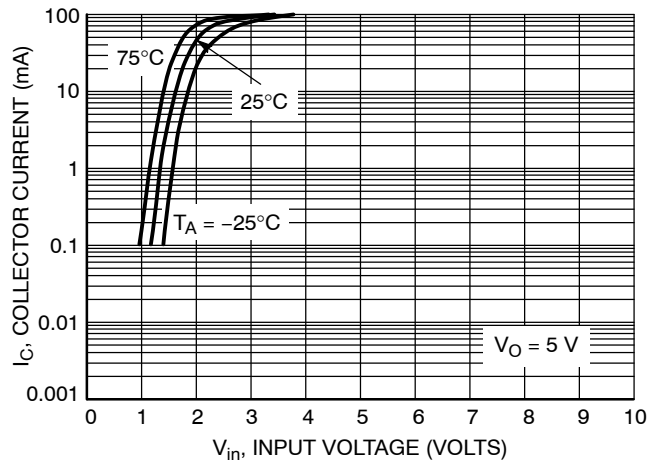


Figure 40. Output Current versus Input Voltage

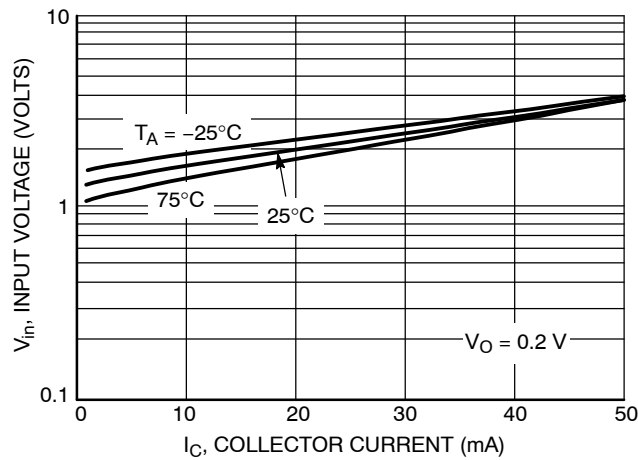


Figure 41. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5232DW1T1G

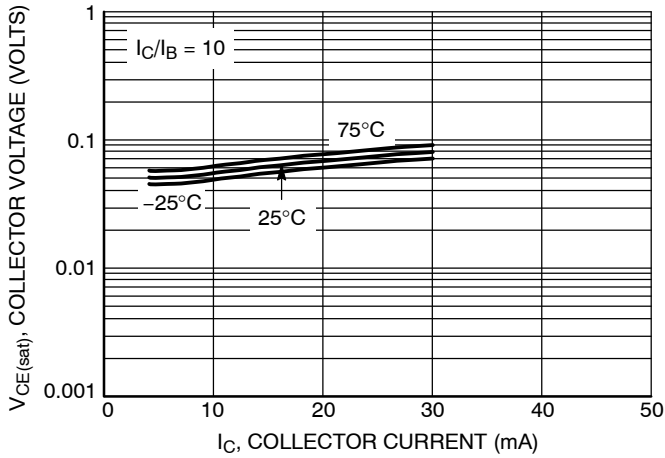


Figure 42. $V_{CE(sat)}$ versus I_C

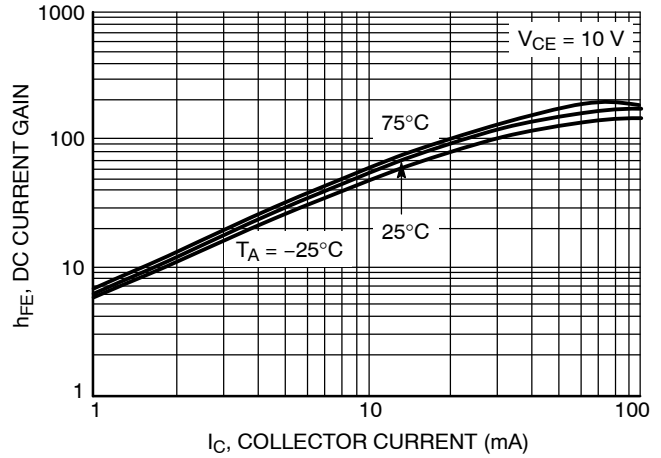


Figure 43. DC Current Gain

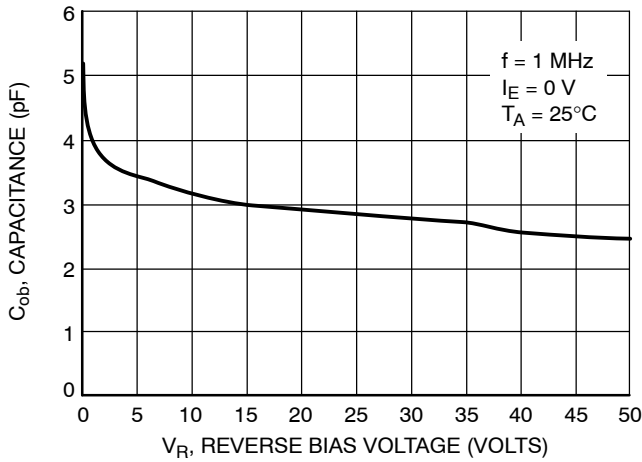


Figure 44. Output Capacitance

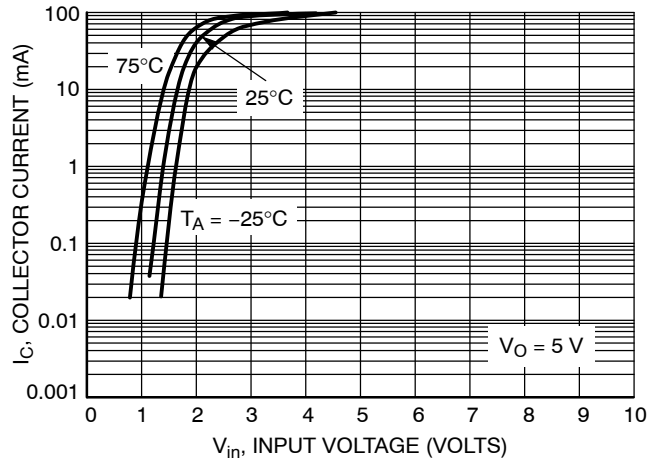


Figure 45. Output Current versus Input Voltage

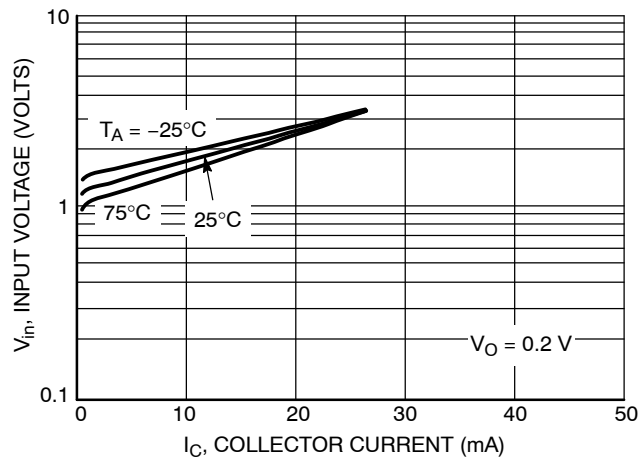


Figure 46. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5233DW1T1G

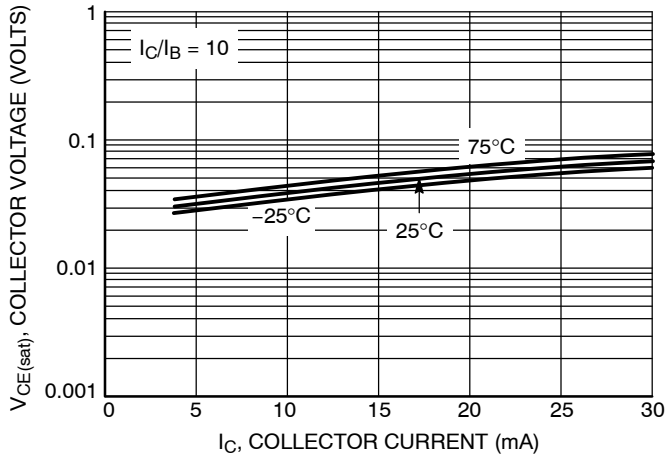


Figure 47. $V_{CE(sat)}$ versus I_C

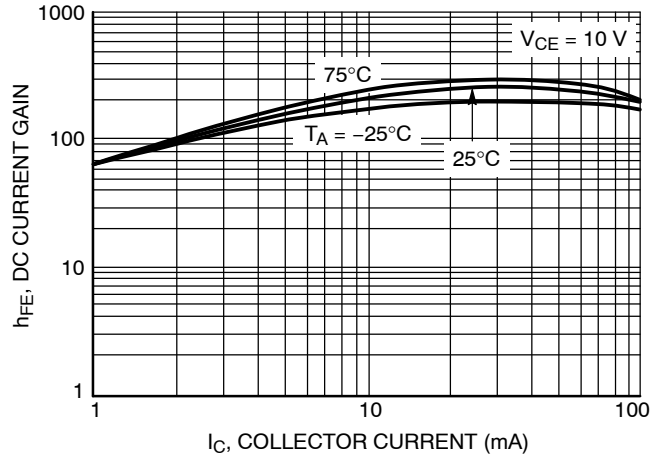


Figure 48. DC Current Gain

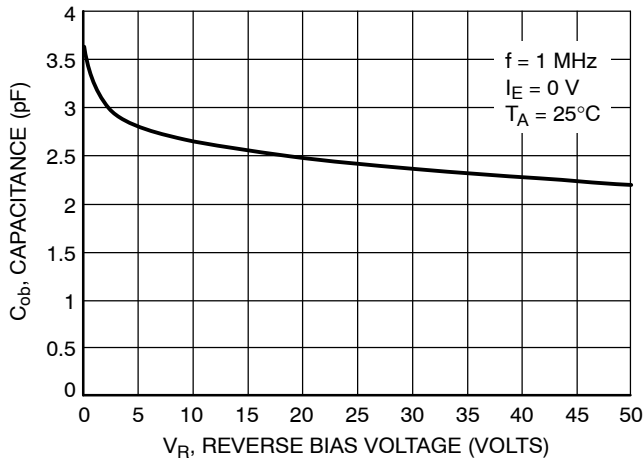


Figure 49. Output Capacitance

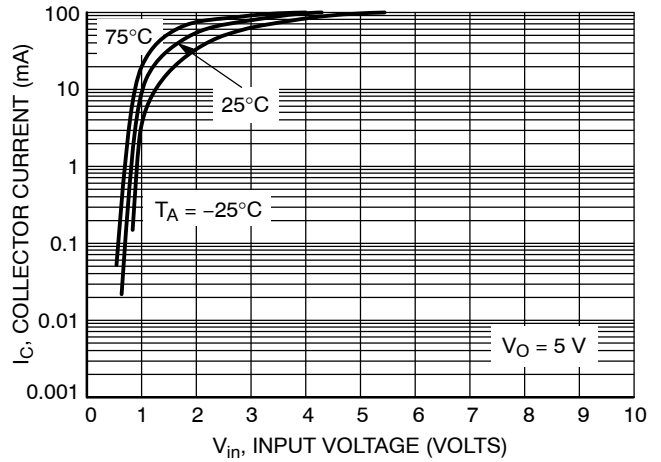


Figure 50. Output Current versus Input Voltage

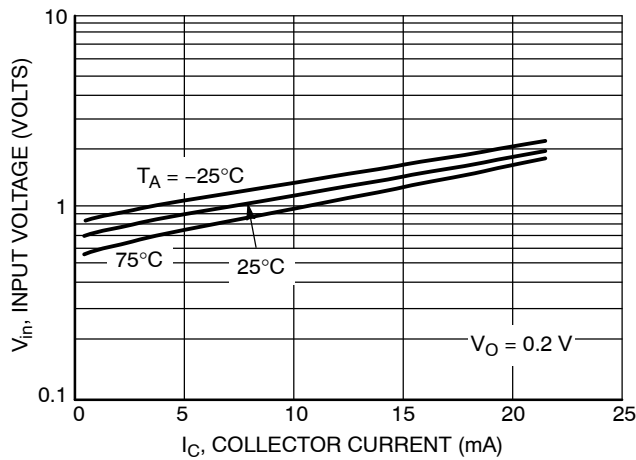


Figure 51. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5234DW1T1G

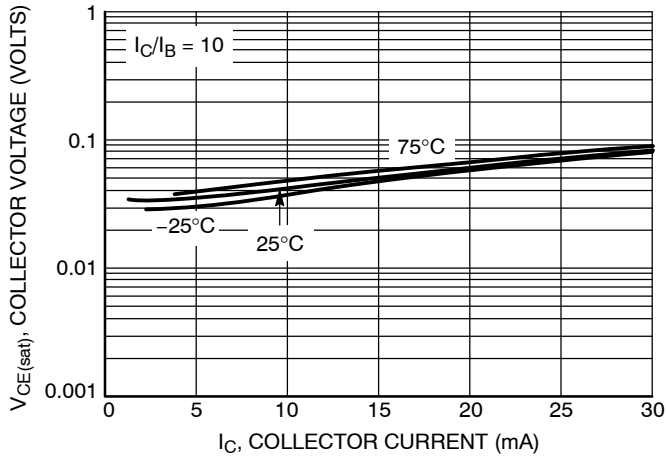


Figure 52. $V_{CE(sat)}$ versus I_C

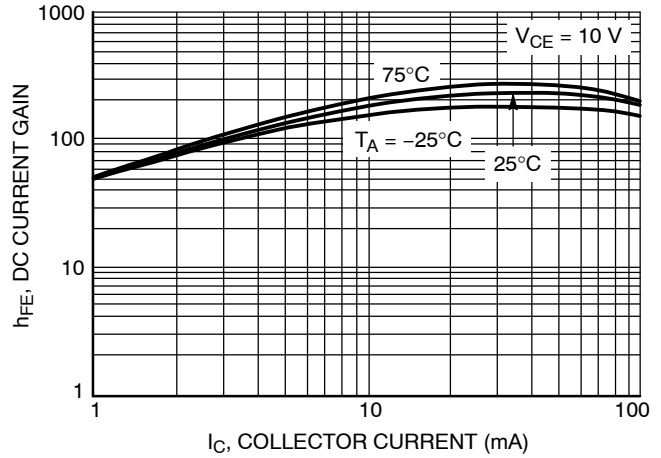


Figure 53. DC Current Gain



Figure 54. Output Capacitance



Figure 55. Output Current versus Input Voltage

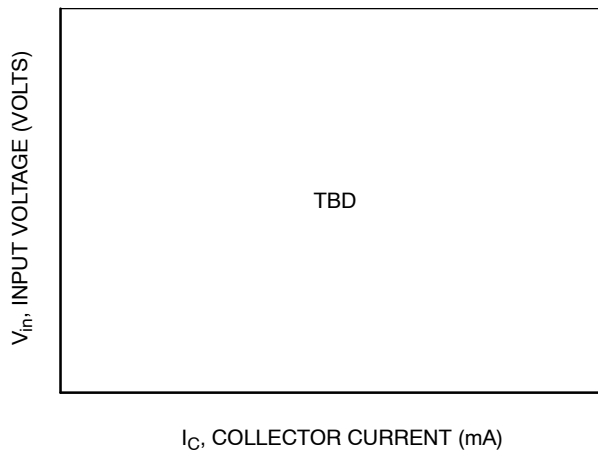


Figure 56. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5235DW1T1G

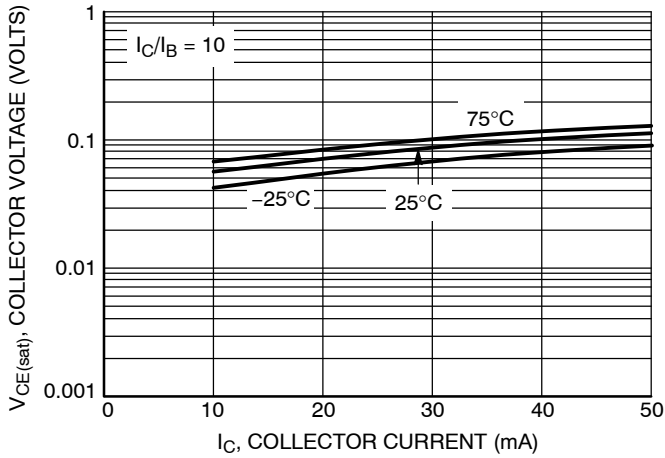


Figure 57. $V_{CE(sat)}$ versus I_C

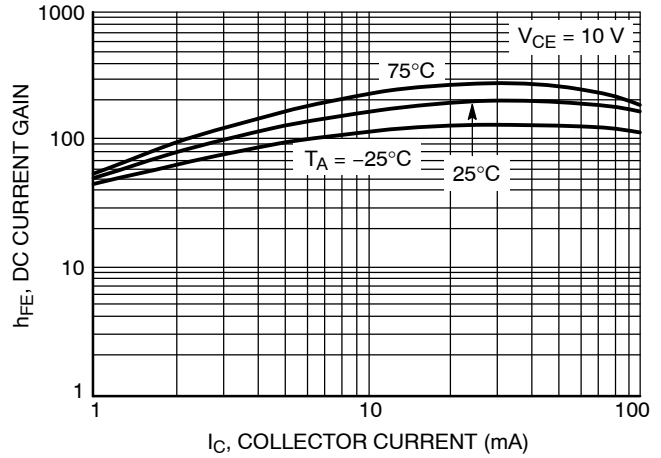


Figure 58. DC Current Gain

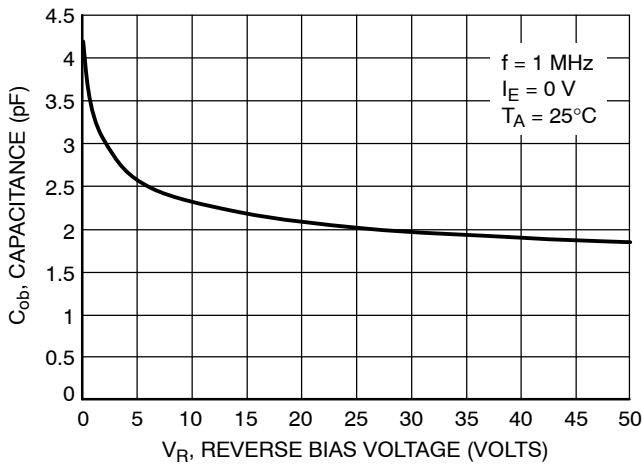


Figure 59. Output Capacitance

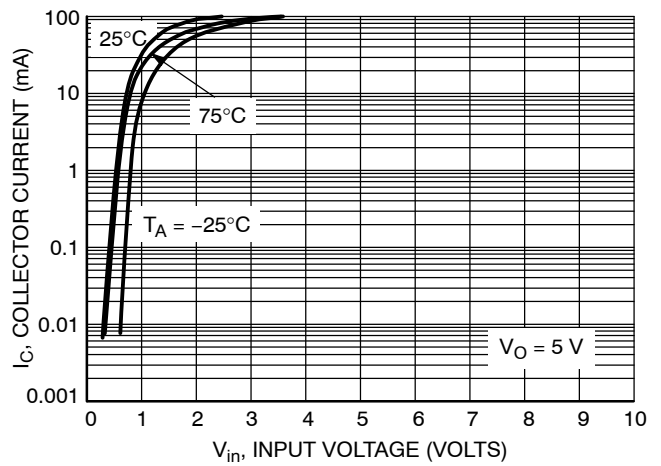


Figure 60. Output Current versus Input Voltage

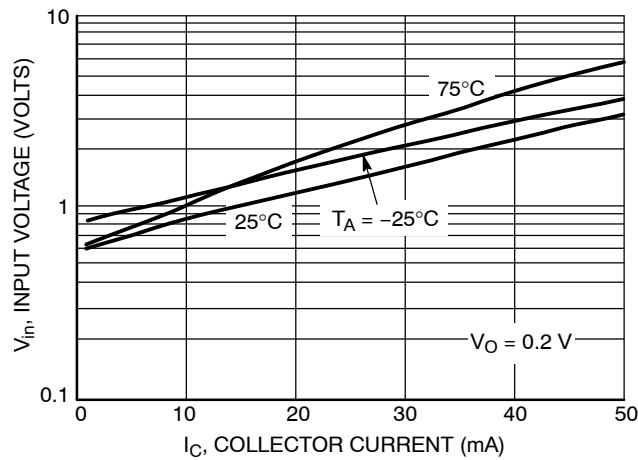


Figure 61. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5236DW1T1G

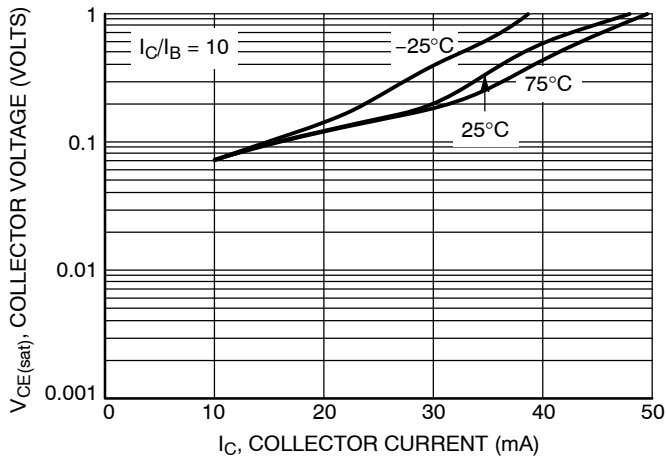


Figure 62. $V_{CE(sat)}$ versus I_C

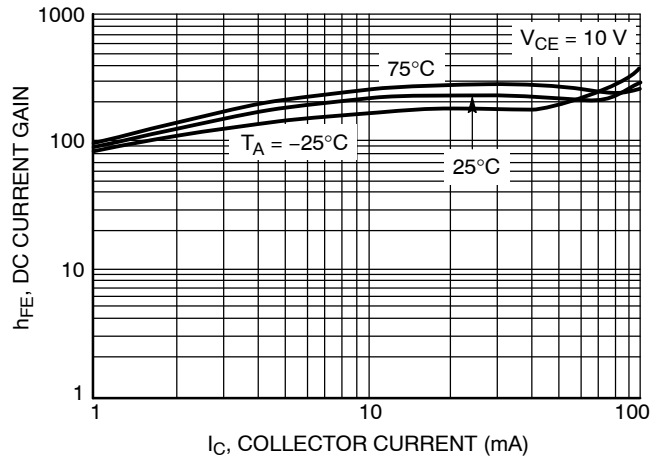


Figure 63. DC Current Gain

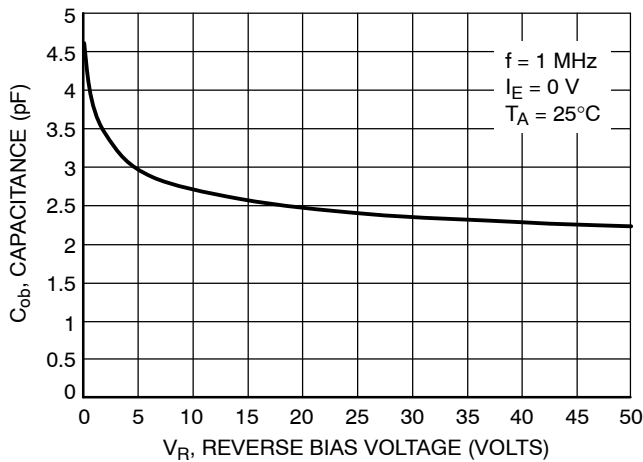


Figure 64. Output Capacitance

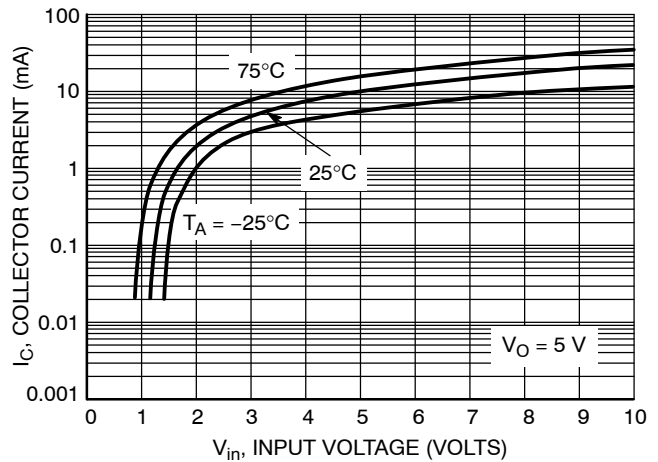


Figure 65. Output Current versus Input Voltage

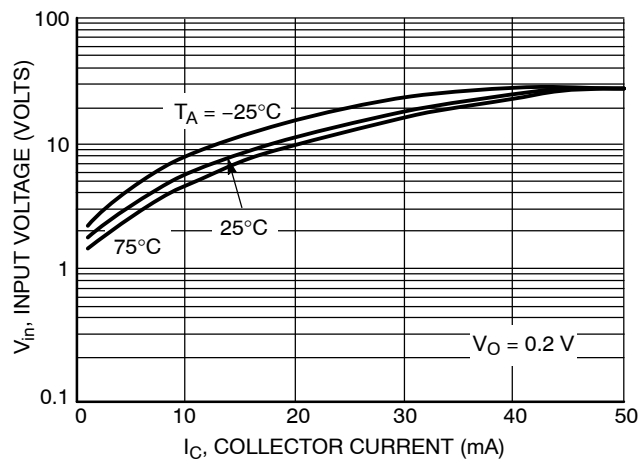


Figure 66. Input Voltage versus Output Current

MUN5211DW1T1G Series

TYPICAL ELECTRICAL CHARACTERISTICS — MUN5237DW1T1G

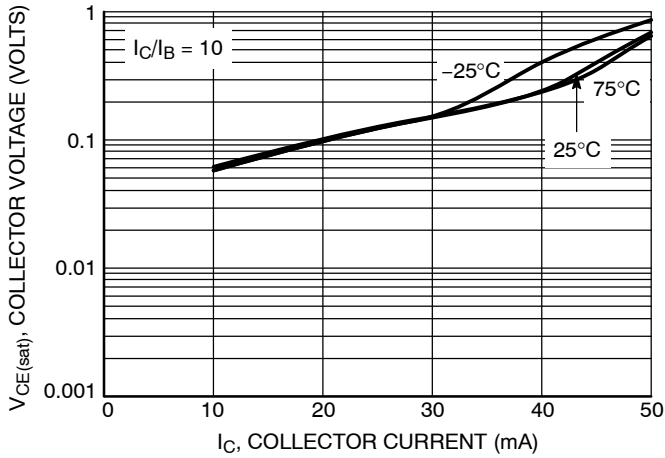


Figure 67. $V_{CE(sat)}$ versus I_C

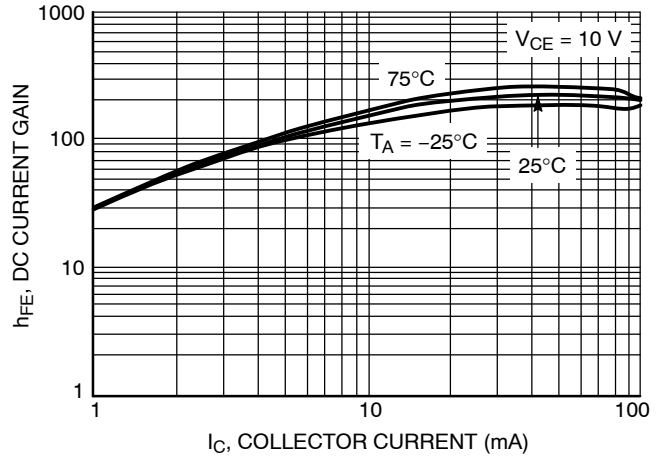


Figure 68. DC Current Gain

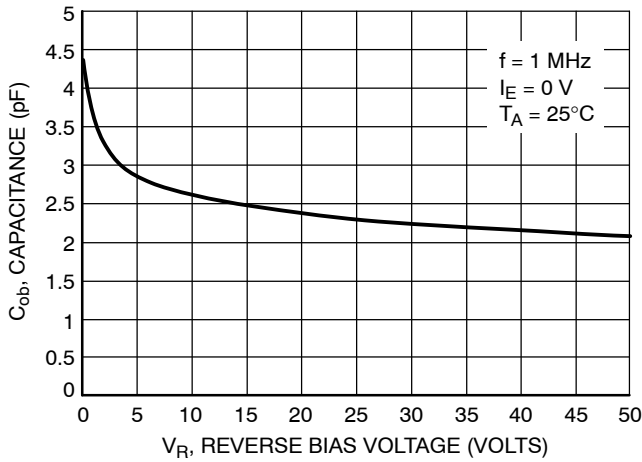


Figure 69. Output Capacitance

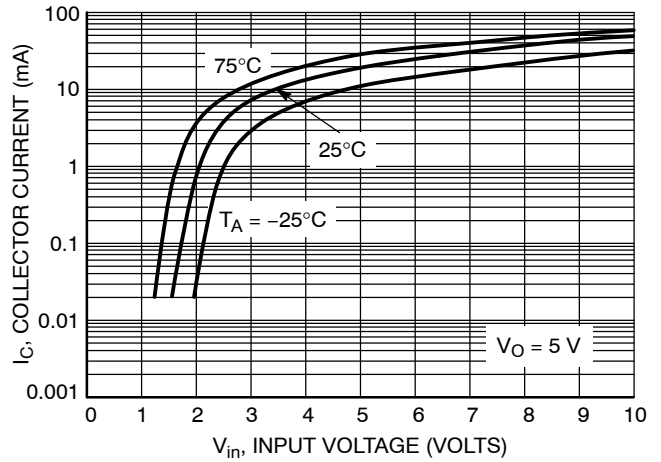


Figure 70. Output Current versus Input Voltage

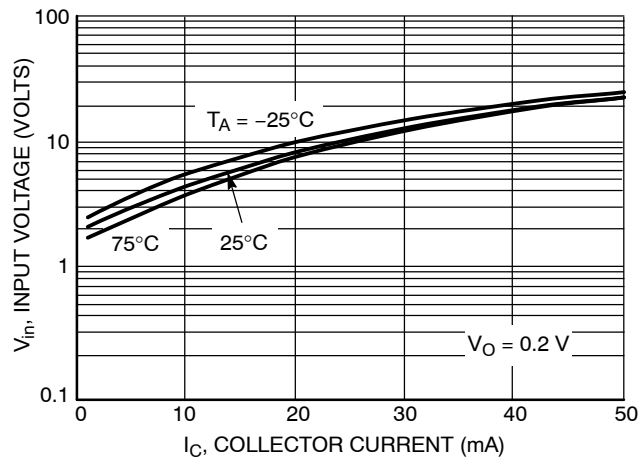
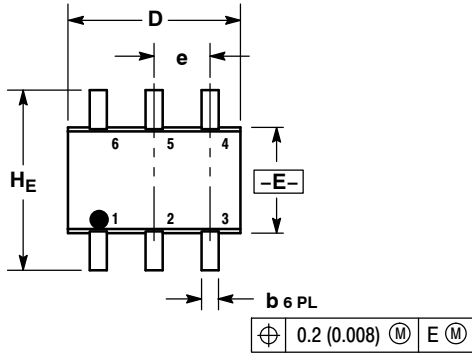


Figure 71. Input Voltage versus Output Current

MUN5211DW1T1G Series

PACKAGE DIMENSIONS

SC-88/SC70-6/SOT-363
CASE 419B-02
ISSUE W



NOTES:

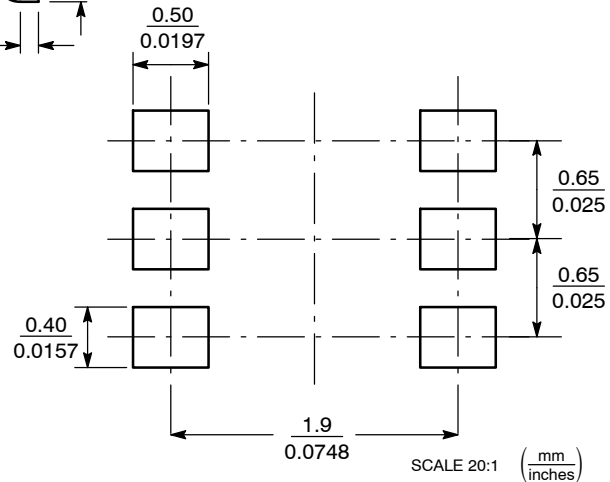
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.
3. 419B-01 OBSOLETE, NEW STANDARD 419B-02.

| DIM | MILLIMETERS | | | INCHES | | |
|-----|-------------|------|------|-----------|-------|-------|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.80 | 0.95 | 1.10 | 0.031 | 0.037 | 0.043 |
| A1 | 0.00 | 0.05 | 0.10 | 0.000 | 0.002 | 0.004 |
| A3 | 0.20 REF | | | 0.008 REF | | |
| b | 0.10 | 0.21 | 0.30 | 0.004 | 0.008 | 0.012 |
| C | 0.10 | 0.14 | 0.25 | 0.004 | 0.005 | 0.010 |
| D | 1.80 | 2.00 | 2.20 | 0.070 | 0.078 | 0.086 |
| E | 1.15 | 1.25 | 1.35 | 0.045 | 0.049 | 0.053 |
| e | 0.65 BSC | | | 0.026 BSC | | |
| L | 0.10 | 0.20 | 0.30 | 0.004 | 0.008 | 0.012 |
| HE | 2.00 | 2.10 | 2.20 | 0.078 | 0.082 | 0.086 |

STYLE 1:

- PIN 1: EMITTER 2
2: BASE 2
3: COLLECTOR 1
4: EMITTER 1
5: BASE 1
6: COLLECTOR 2

SOLDERING FOOTPRINT*



SC-88/SC70-6/SOT-363

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

ON Semiconductor and are registered trademarks of Semiconductor Components Industries, LLC (SCILLC). SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC 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. "Typical" parameters which may be provided in SCILLC 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. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC 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 SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:

Literature Distribution Center for ON Semiconductor
P.O. Box 5163, Denver, Colorado 80217 USA
Phone: 303-675-2175 or 800-344-3860 Toll Free USA/Canada
Fax: 303-675-2176 or 800-344-3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800-282-9855 Toll Free
USA/Canada
Europe, Middle East and Africa Technical Support:
Phone: 421 33 790 2910
Japan Customer Focus Center
Phone: 81-3-5773-3850

ON Semiconductor Website: www.onsemi.com

Order Literature: <http://www.onsemi.com/orderlit>

For additional information, please contact your local Sales Representative

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9