



**THE DATASHEET OF
DCX114YUQ-13R-F**



Features

- Supply Voltage $V_O = 50V$
- Range of Bias Resistors
- Surface-Mount Package Suited for Automated Assembly
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- Halogen and Antimony Free. "Green" Device (Note 3)**
- The DCX (XXXX) UQs are suitable for automotive applications requiring specific change control; these parts are AEC-Q101 qualified, PPAP capable, and manufactured in IATF 16949 certified facilities.**

<https://www.diodes.com/quality/product-definitions/>

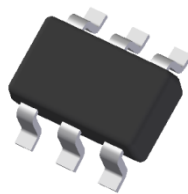
| Part Number | R1(NOM) | R2(NOM) |
|-------------|---------------|---------------|
| DCX124EU | 22k Ω | 22k Ω |
| DCX144EU | 47k Ω | 47k Ω |
| DCX114YU | 10k Ω | 47k Ω |
| DCX123JU | 2.2k Ω | 47k Ω |
| DCX114EU | 10k Ω | 10k Ω |
| DCX143EU | 4.7k Ω | 4.7k Ω |
| DCX143ZU | 4.7k Ω | 47k Ω |
| DCX115EU | 100k Ω | 100k Ω |

Mechanical Data

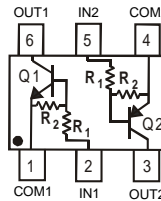
- Package: SOT363
- Package Material: Molded Plastic, "Green" Molding Compound; UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208 Ⓒ3
- Weight: 0.006 grams (Approximate)

| Part Number | R1 Only |
|-------------|---------------|
| DCX143TU | 4.7k Ω |
| DCX114TU | 10k Ω |

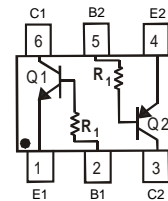
SOT363



Top View



R1, R2



R1 Only

Device Schematic

Ordering Information (Notes 4, 5)

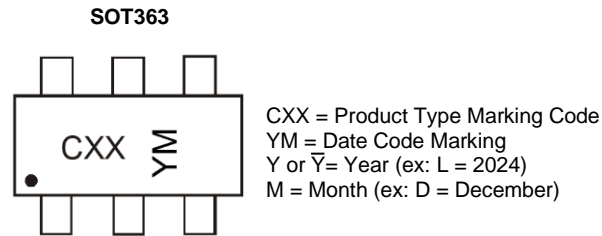
| Part Number | Status | Package | Marking | Reel Size (inches) | Tape Width (mm) | Packing | |
|-----------------|---------------------------------------|---------|---------|--------------------|-----------------|---------|---------|
| | | | | | | Qty. | Carrier |
| DCX124EU-7-F | Active | SOT363 | C17 | 7 | 8 | 3,000 | Reel |
| DCX124EU-13-F | Active | SOT363 | C17 | 13 | 8 | 10,000 | Reel |
| DCX124EUQ-7-F | NRND (Use ACX124EUQ) | SOT363 | C17 | 7 | 8 | 3,000 | Reel |
| DCX124EUQ-13-F | NRND (Use ACX124EUQ) | SOT363 | C17 | 13 | 8 | 10,000 | Reel |
| DCX124EUQ-13R-F | NRND (Use ACX124EUQ) | SOT363 | C17 | 13 | 8 | 10,000 | Reel |
| DCX144EU-7-F | Active | SOT363 | C20 | 7 | 8 | 3,000 | Reel |
| DCX144EU-7R-F | Active | SOT363 | C20 | 7 | 8 | 3,000 | Reel |
| DCX144EUQ-7-F | Active | SOT363 | C20 | 7 | 8 | 3,000 | Reel |
| DCX144EUQ-7R-F | Active | SOT363 | C20 | 7 | 8 | 3,000 | Reel |
| DCX114YU-7-F | Active | SOT363 | C14 | 7 | 8 | 3,000 | Reel |
| DCX114YU-7R-F | Active | SOT363 | C14 | 7 | 8 | 3,000 | Reel |
| DCX114YUQ-7-F | NRND (Use ACX114YUQ) | SOT363 | C14 | 7 | 8 | 3,000 | Reel |
| DCX114YUQ-13-F | NRND (Use ACX114YUQ) | SOT363 | C14 | 13 | 8 | 10,000 | Reel |
| DCX114YUQ-13R-F | NRND (Use ACX114YUQ) | SOT363 | C14 | 13 | 8 | 10,000 | Reel |
| DCX123JU-7-F | Active | SOT363 | C06 | 7 | 8 | 3,000 | Reel |
| DCX123JU-7R-F | Active | SOT363 | C06 | 7 | 8 | 3,000 | Reel |
| DCX123JUQ-7-F | Active | SOT363 | C06 | 7 | 8 | 3,000 | Reel |
| DCX114EU-7-F | Active | SOT363 | C13 | 7 | 8 | 3,000 | Reel |
| DCX114EU-13R-F | Active | SOT363 | C13 | 13 | 8 | 10,000 | Reel |

Ordering Information (Notes 4, 5) (continued)

| Part Number | Status | Package | Marking | Reel Size (inches) | Tape Width (mm) | Packing | |
|-----------------|---------------------------------------|---------|---------|--------------------|-----------------|---------|---------|
| | | | | | | Qty. | Carrier |
| DCX114EUQ-7-F | NRND (Use ACX114EUQ) | SOT363 | C13 | 7 | 8 | 3,000 | Reel |
| DCX114EUQ-13-F | NRND (Use ACX114EUQ) | SOT363 | C13 | 13 | 8 | 10,000 | Reel |
| DCX114EUQ-13R-F | NRND (Use ACX114EUQ) | SOT363 | C13 | 13 | 8 | 10,000 | Reel |
| DCX143TU-7-F | Active | SOT363 | C07 | 7 | 8 | 3,000 | Reel |
| DCX143EU-7-F | Active | SOT363 | C08 | 7 | 8 | 3,000 | Reel |
| DCX143EU-7R-F | Active | SOT363 | C08 | 7 | 8 | 3,000 | Reel |
| DCX114TU-7-F | Active | SOT363 | C12 | 7 | 8 | 3,000 | Reel |
| DCX143ZU-7-F | Active | SOT363 | C02 | 7 | 8 | 3,000 | Reel |
| DCX143ZU-7R-F | Active | SOT363 | C02 | 7 | 8 | 3,000 | Reel |
| DCX115EU-7-F | Active | SOT363 | C01 | 7 | 8 | 3,000 | Reel |

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.
 5. NRND = Not Recommended for New Design.

Marking Information



Date Code Key

| Year | 2010 | - | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 |
|------|------|---|------|------|------|------|------|------|------|------|------|------|
| Code | X | - | L | M | N | P | R | S | T | U | V | W |

| Month | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Code | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | O | N | D |

Absolute Maximum Ratings NPN Section (@ T_A = +25°C, unless otherwise specified.)

| Characteristic | | Symbol | Value | Unit |
|---------------------|------------|-----------------|------------|------|
| Supply Voltage | | V _O | 50 | V |
| Input Voltage | DCX124EU | V _I | -10 to +40 | V |
| | DCX144EU | | -10 to +40 | |
| | DCX114YU | | -6 to +40 | |
| | DCX123JU | | -5 to +12 | |
| | DCX114EU | | -10 to +40 | |
| | DCX143TU | | -5V Max | |
| | DCX143EU | | -10 to +30 | |
| | DCX114TU | | -5V Max | |
| | DCX143ZU | | -10 to +30 | |
| DCX115EU | -10 to +40 | | | |
| Output Current | DCX124EU | I _O | 30 | mA |
| | DCX144EU | | 30 | |
| | DCX114YU | | 70 | |
| | DCX123JU | | 100 | |
| | DCX114EU | | 50 | |
| | DCX143TU | | 100 | |
| | DCX143EU | | 100 | |
| | DCX114TU | | 100 | |
| | DCX143ZU | | 100 | |
| DCX115EU | 20 | | | |
| Peak Output Current | | I _{CM} | 100 | mA |

Absolute Maximum Ratings PNP Section (@ T_A = +25°C, unless otherwise specified.)

| Characteristic | | Symbol | Value | Unit |
|---------------------|------------|-----------------|------------|------|
| Supply Voltage | | V _O | 50 | V |
| Input Voltage | DCX124EU | V _I | +10 to -40 | V |
| | DCX144EU | | +10 to -40 | |
| | DCX114YU | | +6 to -40 | |
| | DCX123JU | | +5 to -12 | |
| | DCX114EU | | +10 to -40 | |
| | DCX143TU | | +5V Max | |
| | DCX143EU | | +10 to -30 | |
| | DCX114TU | | +5V Max | |
| | DCX143ZU | | +5 to -30 | |
| DCX115EU | +10 to -40 | | | |
| Output Current | DCX124EU | I _O | -30 | mA |
| | DCX144EU | | -30 | |
| | DCX114YU | | -70 | |
| | DCX123JU | | -100 | |
| | DCX114EU | | -50 | |
| | DCX143TU | | -100 | |
| | DCX143EU | | -100 | |
| | DCX114TU | | -100 | |
| | DCX143ZU | | -100 | |
| DCX115EU | -20 | | | |
| Peak Output Current | | I _{CM} | -100 | mA |

Thermal Characteristics (@ T_A = +25°C, unless otherwise specified.)

| Characteristic | Symbol | Value | Unit |
|--|-----------------------------------|-------------|------|
| Power Dissipation (Notes 6, 7) | P _D | 200 | mW |
| Thermal Resistance, Junction to Ambient Air (Note 6) | R _{θJA} | 625 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to +150 | °C |

Notes: 6. Mounted on FR-4 PC Board with minimum recommended pad layout.
7. 150mW per element must not be exceeded.

Thermal Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

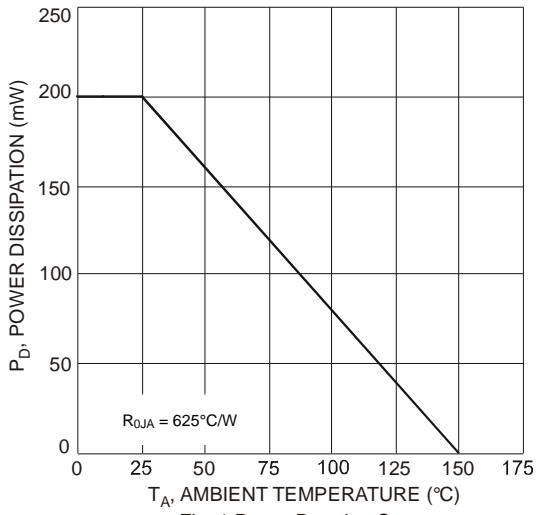


Fig. 1 Power Derating Curve

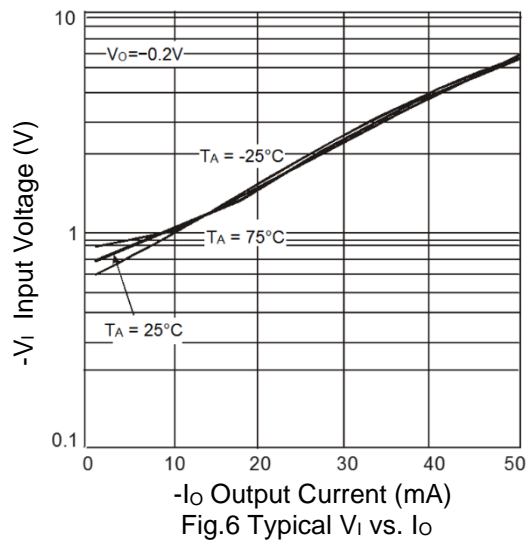
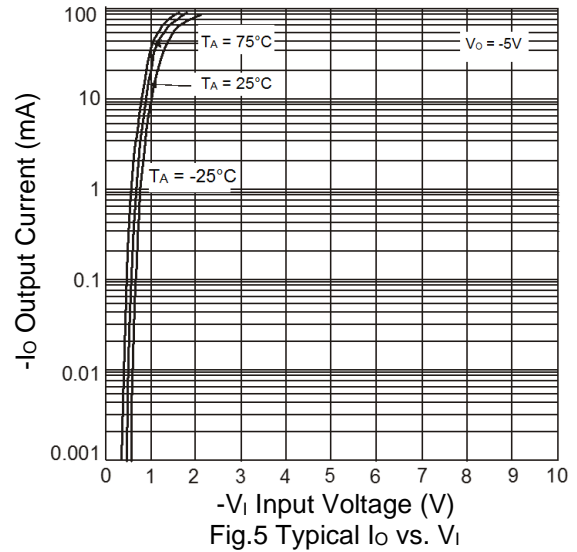
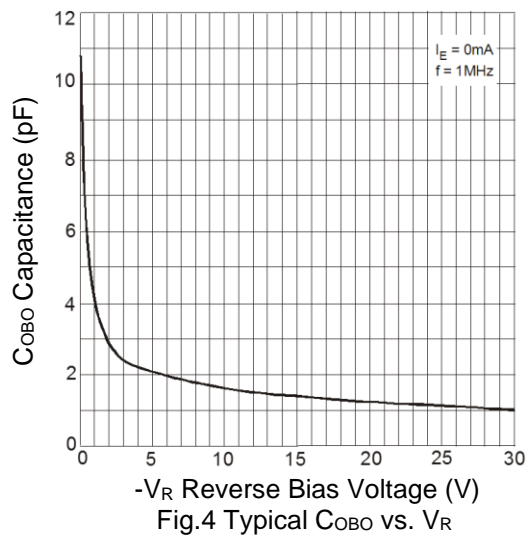
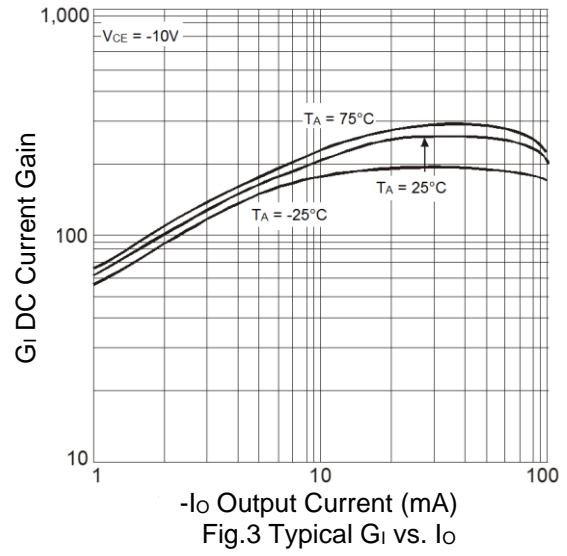
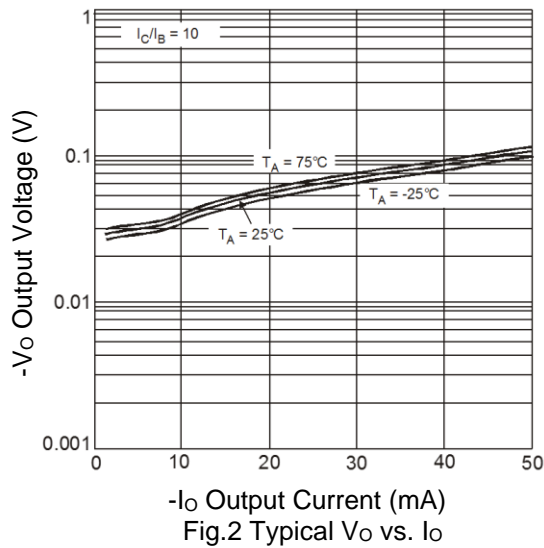
Electrical Characteristics NPN Section (@ T_A = +25°C, unless otherwise specified.)

| Characteristic | | Symbol | Min | Typ | Max | Unit | Test Condition | |
|--|-----------|---|---|------|---|------|---|--|
| R1 Only (DCX143TU & DCX114TU) | | | | | | | | |
| Collector-Base Breakdown Voltage | | BV _{CBO} | 50 | — | — | V | I _C = 50μA | |
| Collector-Emitter Breakdown Voltage | | BV _{CEO} | 50 | — | — | V | I _C = 1mA | |
| Emitter-Base Breakdown Voltage | | BV _{EBO} | 5 | — | — | V | I _E = 50μA | |
| Collector Cutoff Current | | I _{CBO} | — | — | 0.5 | μA | V _{CB} = 50V | |
| Emitter Cutoff Current | | I _{EBO} | — | — | 0.5 | μA | V _{EB} = 4V | |
| Collector-Emitter Saturation Voltage | | V _{CE(sat)} | — | — | 0.3 | V | I _C /I _B = 2.5mA / 0.25mA DCX143TU I _C /I _B = 1mA / 0.1mA DCX114TU | |
| DC Current Transfer Ratio | | h _{FE} | 100 | 250 | 600 | — | I _C = 1mA, V _{CE} = 5V | |
| Input Resistor (R ₁) Tolerance | | ΔR ₁ | -30 | — | +30 | % | — | |
| Gain-Bandwidth Product | | f _T | — | 250 | — | MHz | V _{CE} = 10V, I _E = 5mA, f = 100MHz | |
| R1/R2 Only | | | | | | | | |
| Input Voltage | DCX124EU | V _{I(off)} | 0.5 | 1.1 | — | V | V _{CC} = 5V, I _O = 100μA | |
| | DCX144EU | | 0.5 | 1.1 | | | | |
| | DCX114YU | | 0.3 | — | | | | |
| | DCX123JU | | 0.5 | — | | | | |
| | DCX114EU | | 0.5 | 1.1 | | | | |
| | DCX143EU | | 0.5 | 1.16 | | | | |
| | DCX143ZU | | 0.5 | — | | | | |
| | DCX115EU | | 0.5 | — | | | | |
| | DCX124EU | V _{I(on)} | — | 1.9 | 3.0 | V | V _O = 0.3V, I _O = 5mA | |
| | DCX144EU | | | 1.9 | 3.0 | | V _O = 0.3V, I _O = 2mA | |
| | DCX114YU | | | — | 1.4 | | V _O = 0.3V, I _O = 1mA | |
| | DCX123JU | | | — | 1.1 | | V _O = 0.3V, I _O = 5mA | |
| | DCX114EU | | | 1.9 | 3.0 | | V _O = 0.3V, I _O = 10mA | |
| | DCX143EU | | | 1.99 | 3.0 | | V _O = 0.3V, I _O = 20mA | |
| DCX143ZU | — | | | 1.3 | V _O = 0.3V, I _O = 5mA | | | |
| DCX115EU | — | 3 | V _O = 0.3V, I _O = 1mA | | | | | |
| Output Voltage | DCX124EU | V _{O(on)} | — | 0.1 | 0.3 | V | I _O /I _I = 10mA / 0.5mA | |
| | DCX144EU | | | | | | I _O /I _I = 10mA / 0.5mA | |
| | DCX114YU | | | | | | I _O /I _I = 5mA / 0.25mA | |
| | DCX123JU | | | | | | I _O /I _I = 5mA / 0.25mA | |
| | DCX114EU | | | | | | I _O /I _I = 10mA / 0.5mA | |
| | DCX143EU | | | | | | I _O /I _I = 10mA / 0.5mA | |
| | DCX143ZU | | | | | | I _O /I _I = 5mA / 0.25mA | |
| | DCX115EU | | | | | | I _O /I _I = 10mA / 0.5mA | |
| Input Current | DCX124EU | I _I | — | — | 0.36 | mA | V _I = 5V | |
| | DCX144EU | | | | | | | 0.18 |
| | DCX114YU | | | | | | | 0.88 |
| | DCX123JU | | | | | | | 3.6 |
| | DCX114EU | | | | | | | 0.88 |
| | DCX143EU | | | | | | | 0.88 |
| | DCX143ZU | | | | | | | 1.8 |
| | DCX115EU | | | | | | | 0.15 |
| Output Current | | I _{O(off)} | — | — | 0.5 | μA | V _{CC} = 50V, V _I = 0V | |
| DC Current Gain | DCX124EU | G _I | 56 | — | — | — | V _O = 5V, I _O = 5mA | |
| | DCX124EUQ | | | | | | 60 | V _O = 5V, I _O = 5mA |
| | DCX144EU | | | | | | 68 | V _O = 5V, I _O = 5mA |
| | DCX114YU | | | | | | 68 | V _O = 5V, I _O = 10mA |
| | DCX114YUQ | | | | | | 80 | V _O = 5V, I _O = 10mA |
| | DCX123JU | | | | | | 80 | V _O = 5V, I _O = 10mA |
| | DCX114EU | | | | | | 30 | V _O = 5V, I _O = 5mA |
| | DCX143EU | | | | | | 50 | V _O = 5V, I _O = 10mA |
| | DCX143ZU | | | | | | 80 | V _O = 5V, I _O = 10mA |
| DCX115EU | 82 | V _O = 5V, I _O = 5mA | | | | | | |
| Input Resistor (R ₁) Tolerance | | ΔR ₁ | -30 | — | +30 | % | — | |
| Resistance Ratio Tolerance | | ΔR ₂ /R ₁ | -20 | — | +20 | % | — | |
| Gain-Bandwidth Product | | f _T | — | 250 | — | MHz | V _{CE} = 10V, I _E = 5mA, f = 100MHz | |

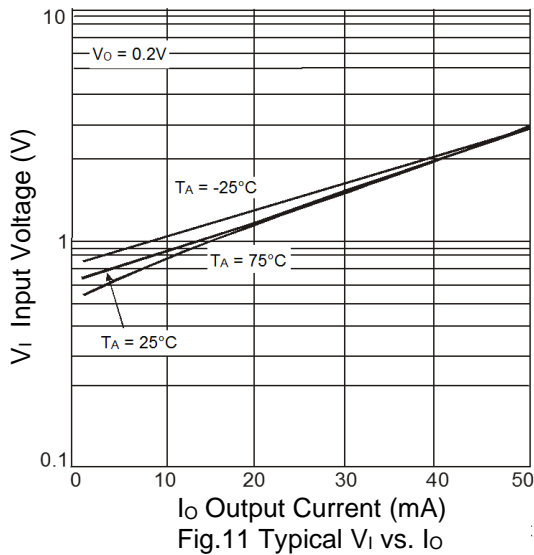
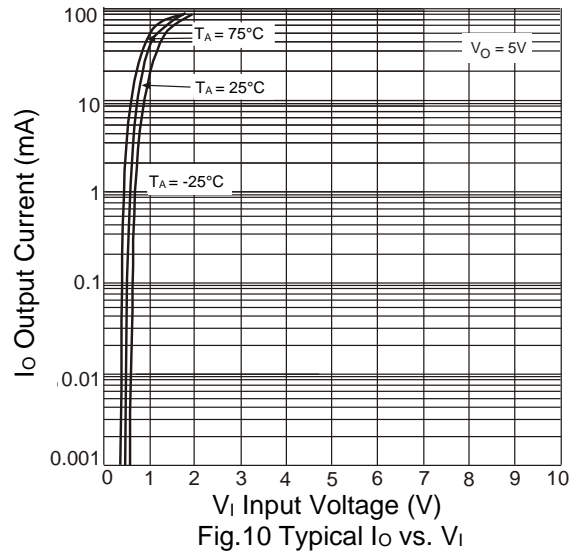
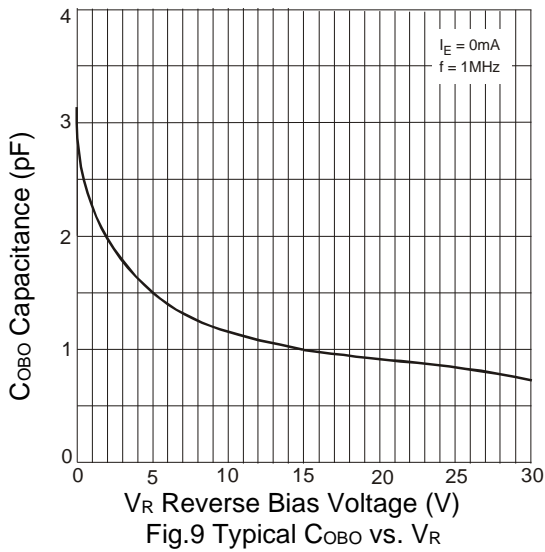
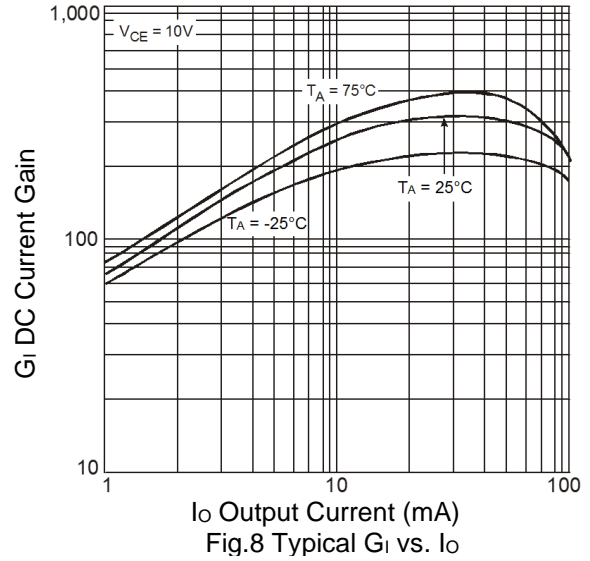
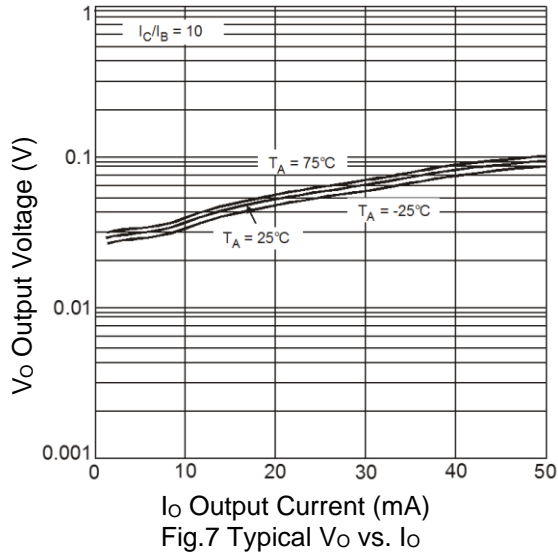
Electrical Characteristics PNP Section (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

| Characteristic | | Symbol | Min | Typ | Max | Unit | Test Condition | |
|--|-----------|------------------|------|--|--|---------------|---|---|
| R1 Only (DCX143TU & DCX114TU) | | | | | | | | |
| Collector-Base Breakdown Voltage | | BV_{CBO} | -50 | — | — | V | $I_C = -50\mu\text{A}$ | |
| Collector-Emitter Breakdown Voltage | | BV_{CEO} | -50 | — | — | V | $I_C = -1\text{mA}$ | |
| Emitter-Base Breakdown Voltage | | BV_{EBO} | -5 | — | — | V | $I_E = -50\mu\text{A}$ | |
| Collector Cutoff Current | | I_{CBO} | — | — | -0.5 | μA | $V_{CB} = -50\text{V}$ | |
| Emitter Cutoff Current | | I_{EBO} | — | — | -0.5 | μA | $V_{EB} = -4\text{V}$ | |
| Collector-Emitter Saturation Voltage | | $V_{CE(sat)}$ | — | — | -0.3 | V | $I_C/I_B = 2.5\text{mA} / 0.25\text{mA}$ DCX143TU $I_C/I_B = 1\text{mA} / 0.1\text{mA}$ DCX114TU | |
| DC Current Transfer Ratio | | h_{FE} | 100 | 250 | 600 | — | $I_C = -1\text{mA}$, $V_{CE} = -5\text{V}$ | |
| Input Resistor (R_1) Tolerance | | ΔR_1 | -30 | — | +30 | % | — | |
| Gain-Bandwidth Product | | f_T | — | 250 | — | MHz | $V_{CE} = -10\text{V}$, $I_E = -5\text{mA}$, $f = 100\text{MHz}$ | |
| R1/R2 Only | | | | | | | | |
| Input Voltage | DCX124EU | $V_{I(off)}$ | -0.5 | -1.1 | — | V | $V_{CC} = -5\text{V}$, $I_O = -100\mu\text{A}$ | |
| | DCX144EU | | -0.5 | -1.1 | | | | |
| | DCX114YU | | -0.3 | — | | | | |
| | DCX123JU | | -0.5 | — | | | | |
| | DCX114EU | | -0.5 | -1.1 | | | | |
| | DCX143EU | | -0.5 | -1.16 | | | | |
| | DCX143ZU | | -0.5 | — | | | | |
| | DCX115EU | | -0.5 | — | | | | |
| | DCX124EU | $V_{I(on)}$ | — | -1.9 | -3.0 | V | $V_O = -0.3\text{V}$, $I_O = -5\text{mA}$ | |
| | DCX144EU | | — | -1.9 | -3.0 | | $V_O = -0.3\text{V}$, $I_O = -2\text{mA}$ | |
| | DCX114YU | | — | — | -1.4 | | $V_O = -0.3\text{V}$, $I_O = -1\text{mA}$ | |
| | DCX123JU | | — | — | -1.1 | | $V_O = -0.3\text{V}$, $I_O = -5\text{mA}$ | |
| | DCX114EU | | — | -1.9 | -3.0 | | $V_O = -0.3\text{V}$, $I_O = -10\text{mA}$ | |
| | DCX143EU | | — | -2.5 | -3.0 | | $V_O = -0.3\text{V}$, $I_O = -20\text{mA}$ | |
| DCX143ZU | — | | — | -1.3 | $V_O = -0.3\text{V}$, $I_O = -5\text{mA}$ | | | |
| DCX115EU | — | — | -3 | $V_O = -0.3\text{V}$, $I_O = -1\text{mA}$ | | | | |
| Output Voltage | DCX124EU | $V_{O(on)}$ | — | -0.1 | -0.3 | V | $I_O/I_I = -10\text{mA} / -0.5\text{mA}$ | |
| | DCX144EU | | | | | | $I_O/I_I = -10\text{mA} / -0.5\text{mA}$ | |
| | DCX114YU | | | | | | $I_O/I_I = -5\text{mA} / -0.25\text{mA}$ | |
| | DCX123JU | | | | | | $I_O/I_I = -5\text{mA} / -0.25\text{mA}$ | |
| | DCX114EU | | | | | | $I_O/I_I = -10\text{mA} / -0.5\text{mA}$ | |
| | DCX143EU | | | | | | $I_O/I_I = -10\text{mA} / -0.5\text{mA}$ | |
| | DCX143ZU | | | | | | $I_O/I_I = -5\text{mA} / -0.25\text{mA}$ | |
| | DCX115EU | | | | | | $I_O/I_I = -10\text{mA} / -0.5\text{mA}$ | |
| Input Current | DCX124EU | I_I | — | — | -0.36 | mA | $V_I = -5\text{V}$ | |
| | DCX144EU | | | | | | | -0.18 |
| | DCX114YU | | | | | | | -0.88 |
| | DCX123JU | | | | | | | -3.6 |
| | DCX114EU | | | | | | | -0.88 |
| | DCX143EU | | | | | | | -0.88 |
| | DCX143ZU | | | | | | | -1.8 |
| | DCX115EU | | | | | | | -0.15 |
| Output Current | | $I_{O(off)}$ | — | — | -0.5 | μA | $V_{CC} = -50\text{V}$, $V_I = 0\text{V}$ | |
| DC Current Gain | DCX124EU | G_i | 56 | — | — | — | $V_O = -5\text{V}$, $I_O = -5\text{mA}$ | |
| | DCX124EUQ | | | | | | 60 | $V_O = -5\text{V}$, $I_O = -5\text{mA}$ |
| | DCX144EU | | | | | | 68 | $V_O = -5\text{V}$, $I_O = -5\text{mA}$ |
| | DCX114YU | | | | | | 68 | $V_O = -5\text{V}$, $I_O = -10\text{mA}$ |
| | DCX114YUQ | | | | | | 80 | $V_O = -5\text{V}$, $I_O = -10\text{mA}$ |
| | DCX123JU | | | | | | 80 | $V_O = -5\text{V}$, $I_O = -10\text{mA}$ |
| | DCX114EU | | | | | | 30 | $V_O = -5\text{V}$, $I_O = -5\text{mA}$ |
| | DCX143EU | | | | | | 40 | $V_O = -5\text{V}$, $I_O = -10\text{mA}$ |
| | DCX143ZU | | | | | | 80 | $V_O = -5\text{V}$, $I_O = -10\text{mA}$ |
| | DCX115EU | | | | | | 82 | $V_O = -5\text{V}$, $I_O = -5\text{mA}$ |
| Input Resistor (R_1) Tolerance | | ΔR_1 | -30 | — | +30 | % | — | |
| Resistance Ratio Tolerance | | $\Delta R_2/R_1$ | -20 | — | +20 | % | — | |
| Gain-Bandwidth Product | | f_T | — | 250 | — | MHz | $V_{CE} = -10\text{V}$, $I_E = -5\text{mA}$, $f = 100\text{MHz}$ | |

Typical Curves – DCX123JU PNP Section (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)



Typical Curves – DCX123JU NPN Section (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)



Typical Curves – DCX143EU PNP Section (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

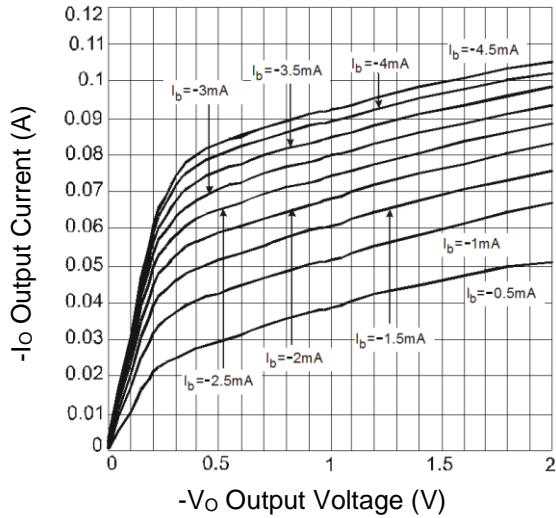


Fig. 12 Typical I_o vs. V_o

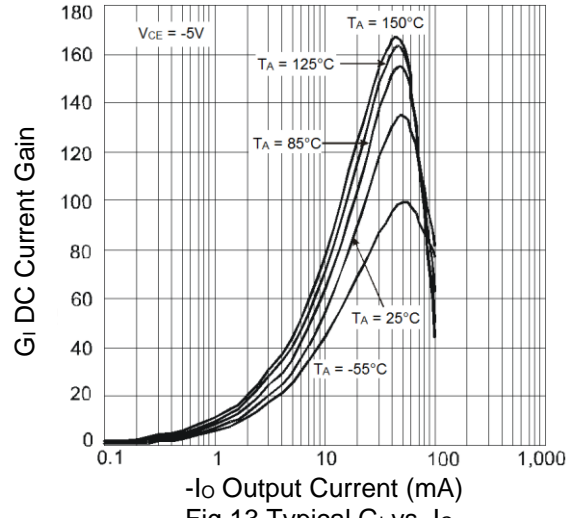


Fig. 13 Typical G_i vs. I_o

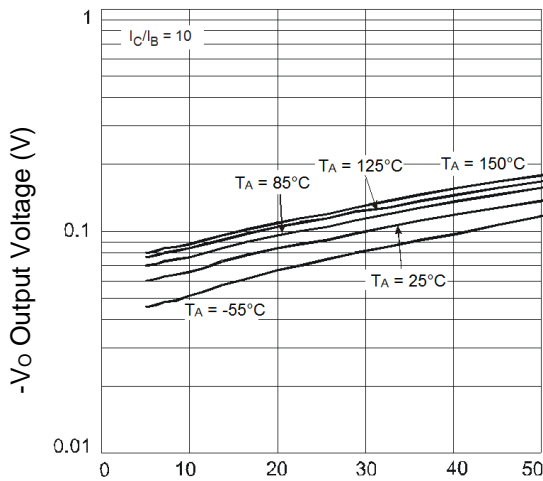


Fig. 14 Typical V_o vs. I_o

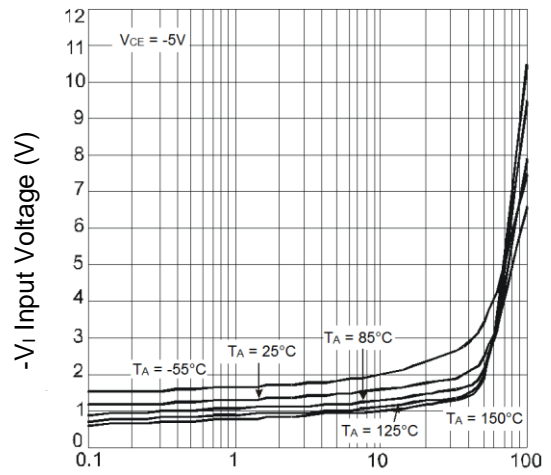


Fig. 15 Typical V_i vs. I_o

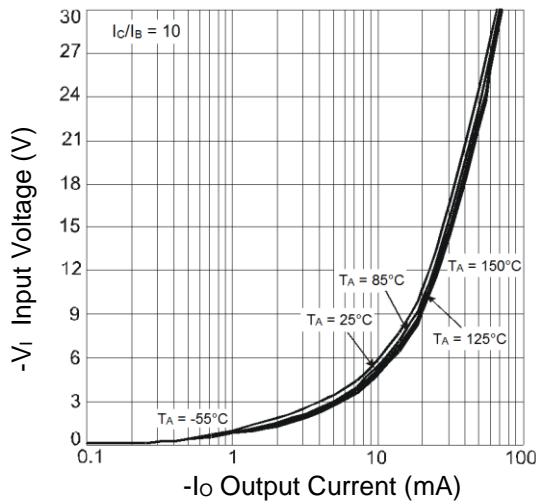


Fig. 16 Typical V_i vs. I_o

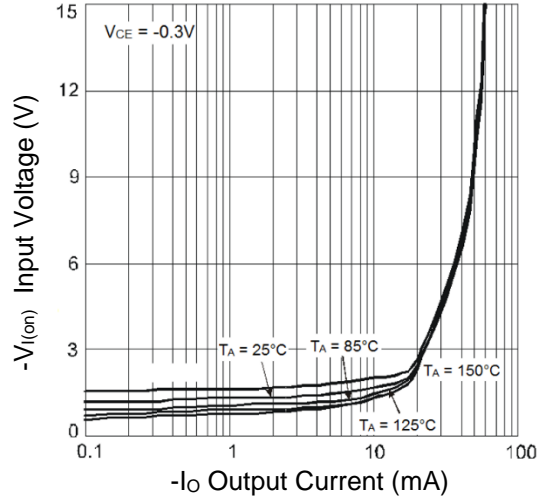
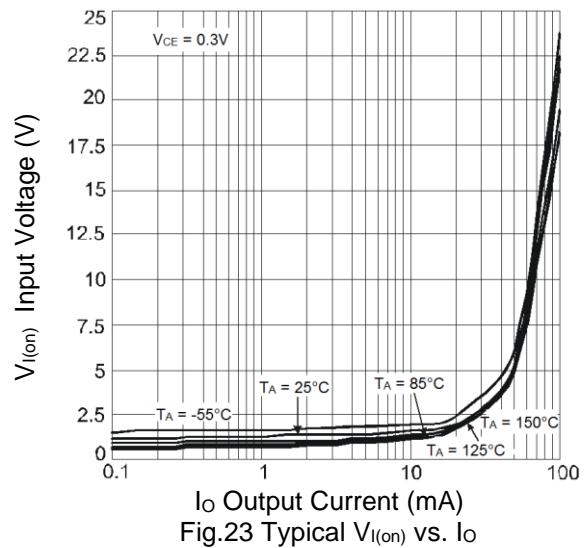
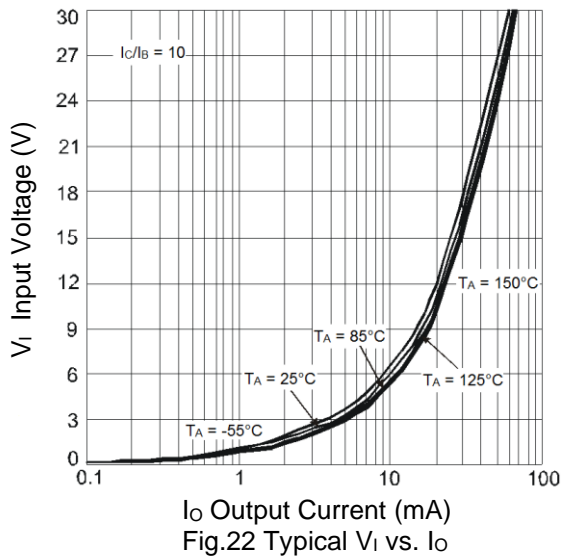
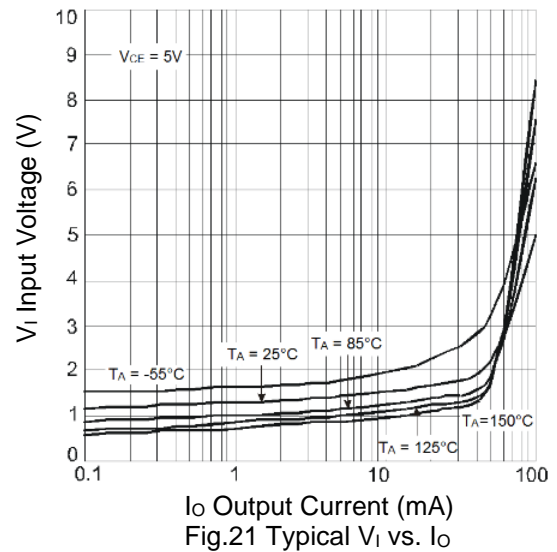
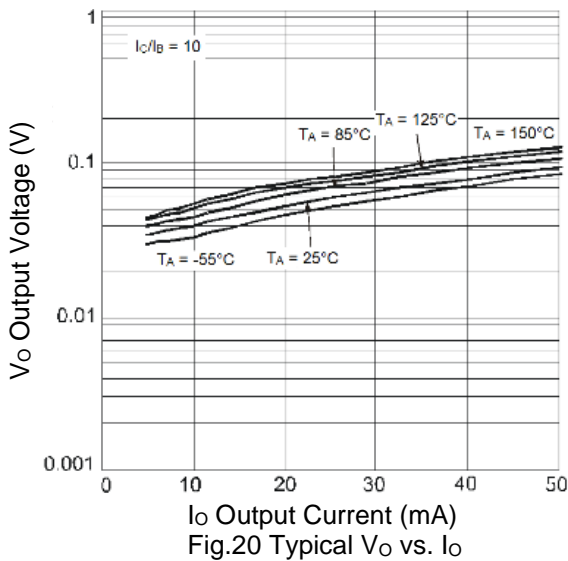
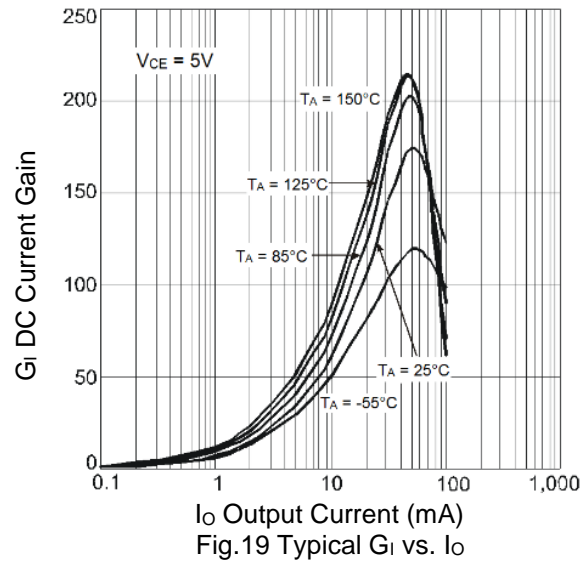
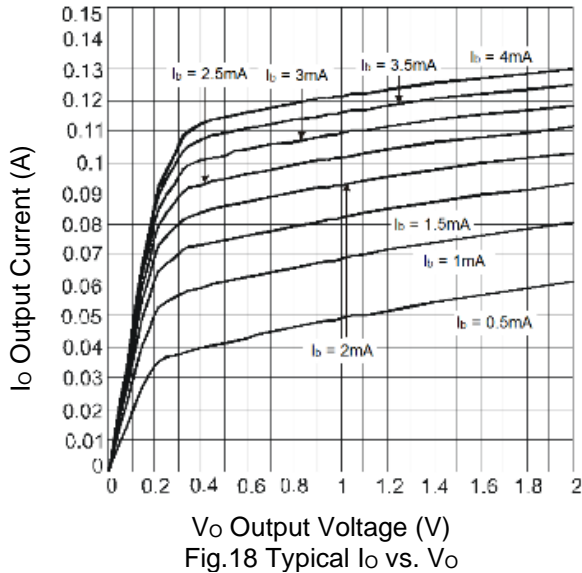


Fig. 17 Typical $V_{i(on)}$ vs. I_o

Typical Curves – DCX143EU NPN Section (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)



Typical Curves – DCX114TU PNP Section (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

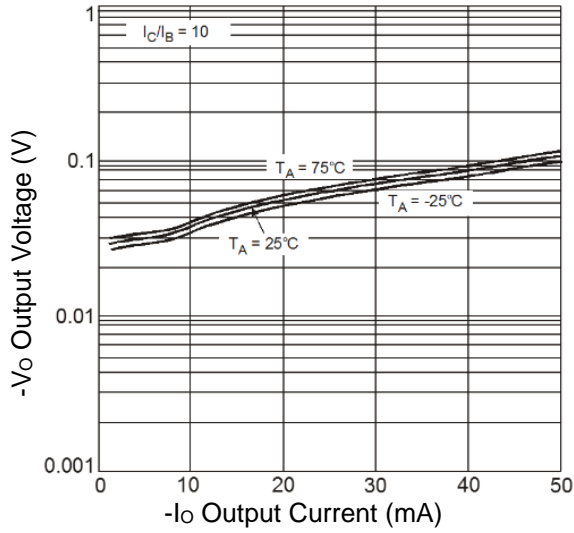


Fig.24 Typical V_O vs. I_O

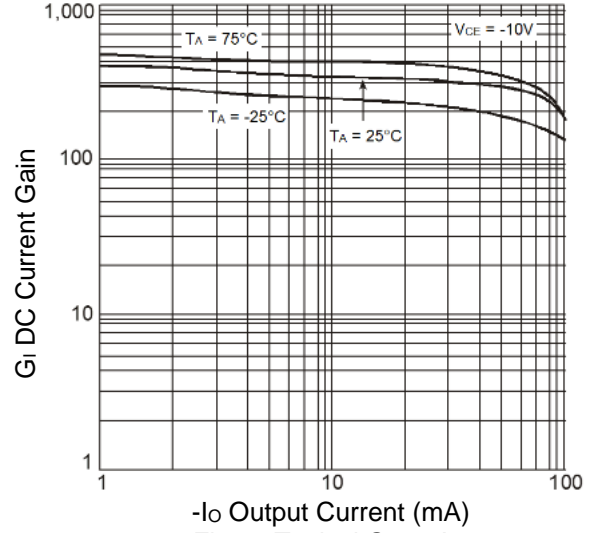


Fig.25 Typical G_I vs. I_O

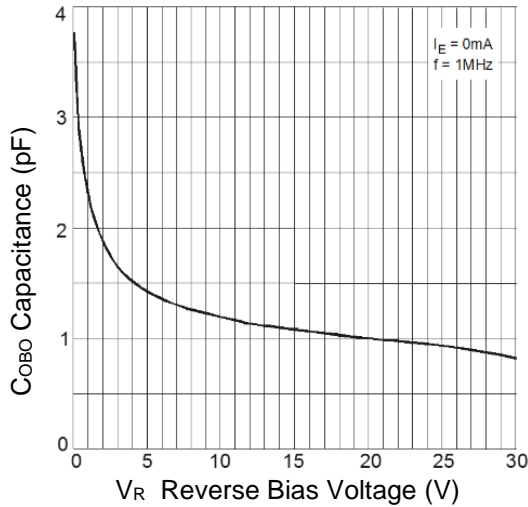


Fig.26 Typical C_{OBO} vs. V_R

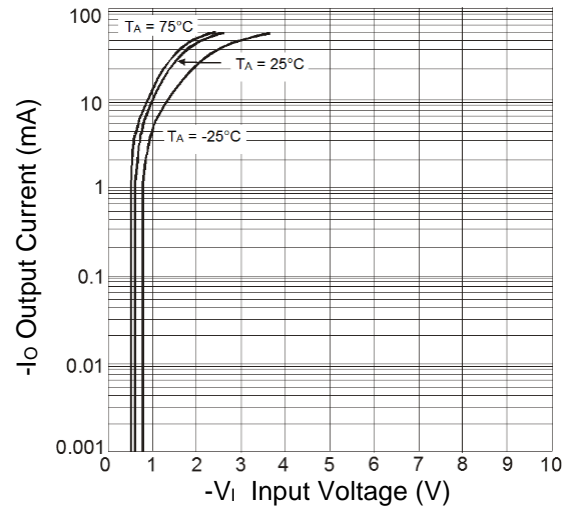


Fig.27 Typical I_O vs. V_I

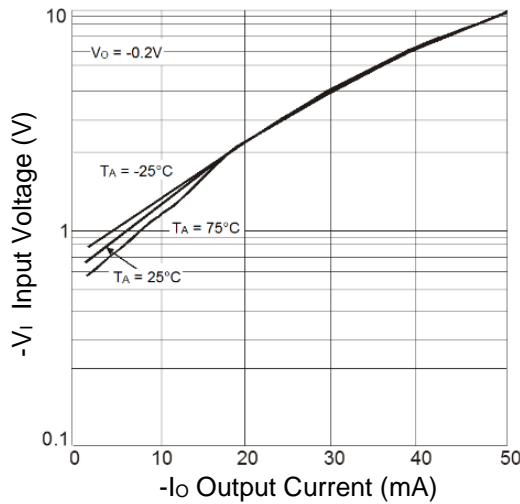
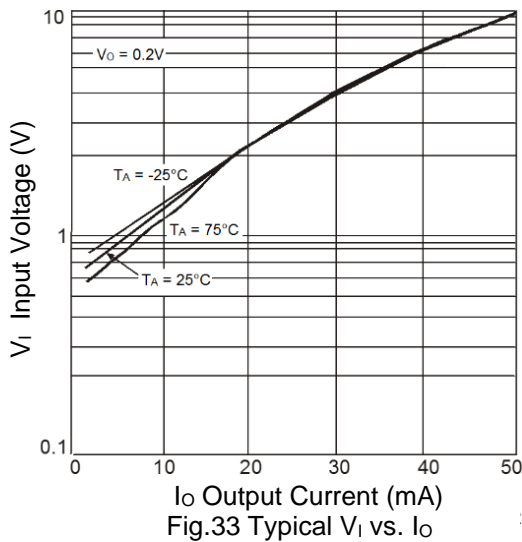
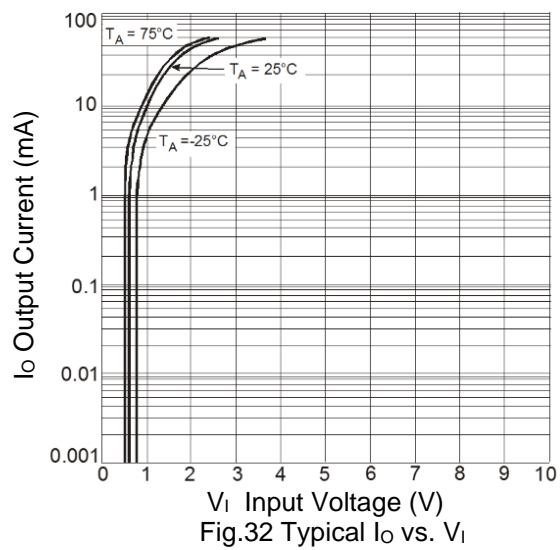
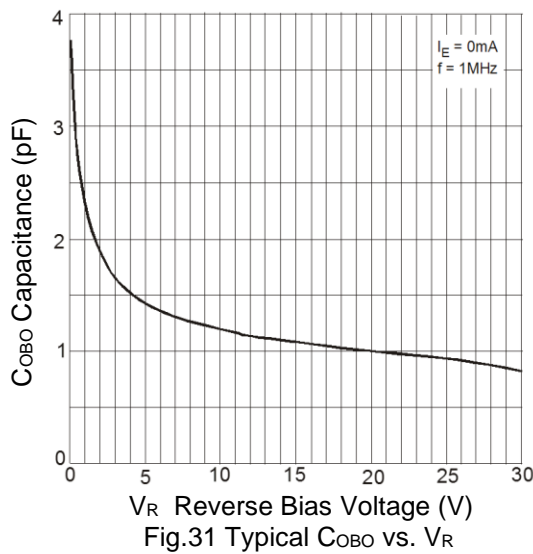
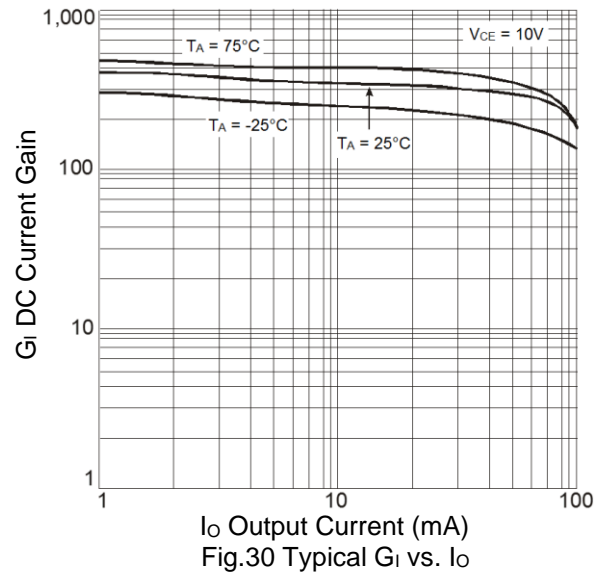
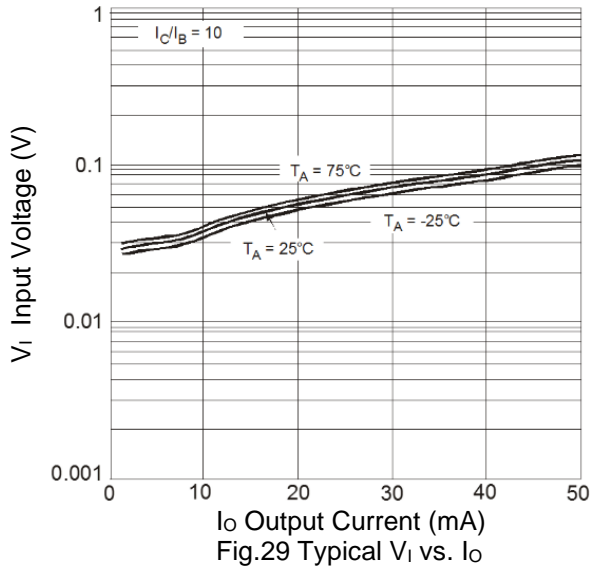


Fig.28 Typical V_I vs. I_O

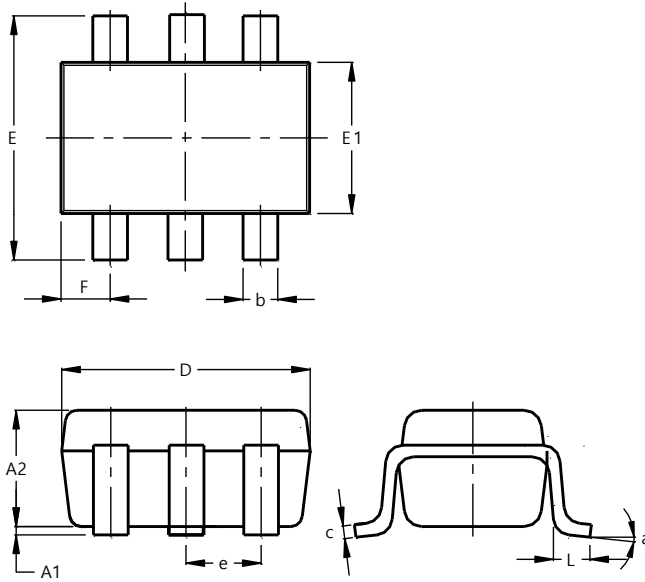
Typical Curves – DCX114TU NPN Section (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)



Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOT363

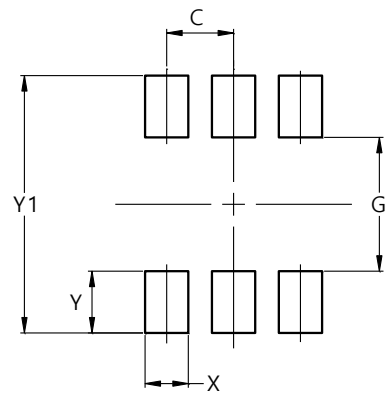


| SOT363 | | | |
|-----------------------------|-----------|------|-------|
| Dim | Min | Max | Typ |
| A1 | 0.00 | 0.10 | 0.05 |
| A2 | 0.90 | 1.00 | 0.95 |
| b | 0.10 | 0.30 | 0.25 |
| c | 0.10 | 0.22 | 0.11 |
| D | 1.80 | 2.20 | 2.15 |
| E | 2.00 | 2.20 | 2.10 |
| E1 | 1.15 | 1.35 | 1.30 |
| e | 0.650 BSC | | |
| F | 0.40 | 0.45 | 0.425 |
| L | 0.25 | 0.40 | 0.30 |
| a | 0° | 8° | -- |
| All Dimensions in mm | | | |

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SOT363



| Dimensions | Value (in mm) |
|------------|---------------|
| C | 0.650 |
| G | 1.300 |
| X | 0.420 |
| Y | 0.600 |
| Y1 | 2.500 |

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