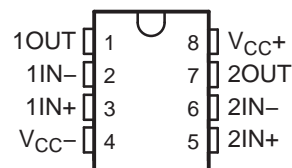


DUAL GENERAL-PURPOSE OPERATIONAL AMPLIFIER

 Check for Samples: [RC4558](#)

FEATURES

- Continuous Short-Circuit Protection
- Wide Common-Mode and Differential Voltage Ranges
- No Frequency Compensation Required
- Low Power Consumption
- No Latch-Up
- Unity-Gain Bandwidth . . . 3 MHz Typ
- Gain and Phase Match Between Amplifiers
- Low Noise . . . 8 nV/√Hz Typ at 1 kHz

 D, DGK, P, PS, OR PW PACKAGE
(TOP VIEW)


DESCRIPTION/ORDERING INFORMATION

The RC4558 device is a dual general-purpose operational amplifier, with each half electrically similar to the μ A741, except that offset null capability is not provided.

The high common-mode input voltage range and the absence of latch-up make this amplifier ideal for voltage-follower applications. The device is short-circuit protected, and the internal frequency compensation ensures stability without external components.

Table 1. ORDERING INFORMATION

| T _A | PACKAGE ⁽¹⁾ | | ORDERABLE PART NUMBER | TOP-SIDE MARKING |
|----------------|------------------------|--------------|-----------------------|--------------------|
| 0°C to 70°C | MSOP/VSSOP – DGK | Reel of 2500 | RC4558DGKR | YR_ ⁽²⁾ |
| | PDIP – P | Tube of 50 | RC4558P | RC4558P |
| | SOIC – D | Tube of 75 | RC4558D | RC4558 |
| | | Reel of 2500 | RC4558DRG3 | |
| | SOP – PS | Reel of 2000 | RC4558PSR | R4558 |
| | TSSOP – PW | Tube of 150 | RC4558PW | R4558 |
| Reel of 2000 | | RC4558PWR | | |
| –40°C to 85°C | MSOP/VSSOP – DGK | Reel of 2500 | RC4558IDGKR | YS_ ⁽²⁾ |
| | PDIP – P | Tube of 50 | RC4558IP | RC4558IP |
| | SOIC – D | Tube of 75 | RC4558ID | R4558I |
| | | Reel of 2500 | RC4558IDR | |
| | TSSOP – PW | Tube of 150 | RC4558IPW | R4558I |
| | | Reel of 2000 | RC4558IPWR | |

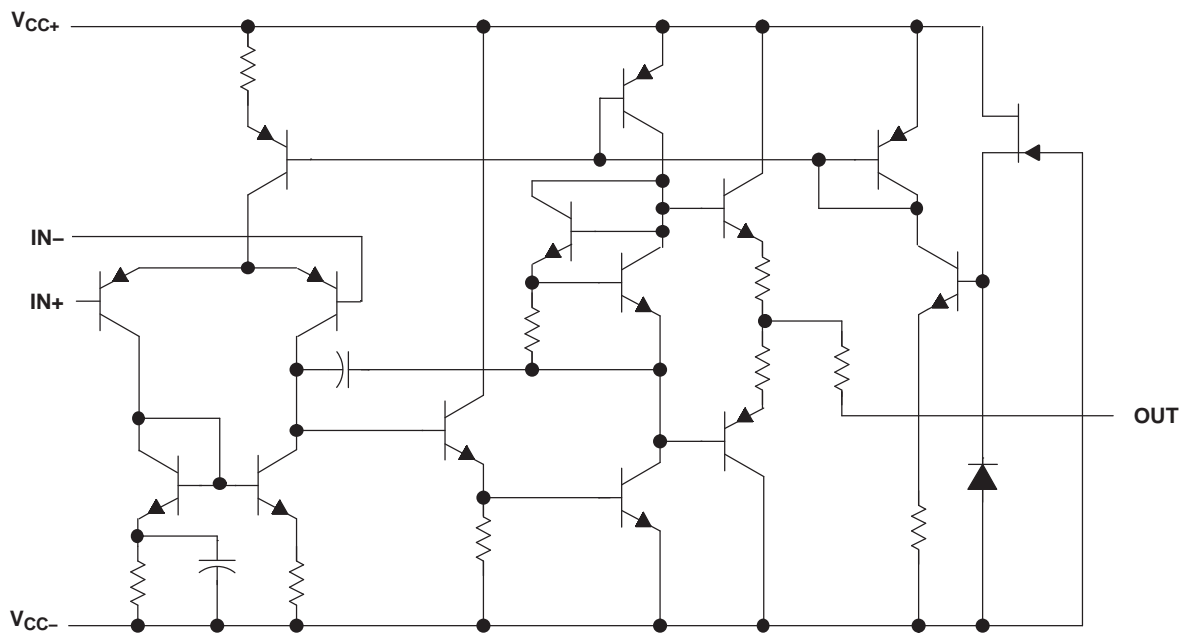
(1) Package drawings, standard packing quantities, thermal data, symbolization, and PCB design guidelines are available at www.ti.com/sc/package.

(2) The actual top-side marking has one additional character that designates the assembly/test site.



Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.

SCHEMATIC (EACH AMPLIFIER)



Absolute Maximum Ratings⁽¹⁾

over operating free-air temperature range (unless otherwise noted)

| | | MIN | MAX | UNIT |
|--|--|-------------|-----------|------|
| V _{CC+} | Supply voltage ⁽²⁾ | | 18 | V |
| V _{CC-} | | | -18 | |
| V _{ID} | Differential input voltage ⁽³⁾ | | ±30 | V |
| V _I | Input voltage (any input) ^{(2) (4)} | | ±15 | V |
| Duration of output short circuit to ground, one amplifier at a time ⁽⁵⁾ | | | Unlimited | |
| θ _{JA} | Package thermal impedance ^{(6) (7)} | D package | 97 | °C/W |
| | | DGK package | 172 | |
| | | P package | 85 | |
| | | PS package | 95 | |
| | | PW package | 149 | |
| T _J | Operating virtual junction temperature | | 150 | °C |
| T _{stg} | Storage temperature range | -65 | 150 | °C |

- (1) Stresses beyond those listed under *Absolute Maximum Ratings* may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under *Recommended Operating Conditions* is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.
- (2) All voltage values, unless otherwise noted, are with respect to the midpoint between V_{CC+} and V_{CC-}.
- (3) Differential voltages are at IN+ with respect to IN-.
- (4) The magnitude of the input voltage must never exceed the magnitude of the supply voltage or 15 V, whichever is less.
- (5) Temperature and/or supply voltages must be limited to ensure that the dissipation rating is not exceeded.
- (6) Maximum power dissipation is a function of T_J (max), θ_{JA}, and T_A. The maximum allowable power dissipation at any allowable ambient temperature is P_D = (T_J (max) – T_A)/θ_{JA}. Operating at the absolute maximum T_J of 150°C can affect reliability.
- (7) The package thermal impedance is calculated in accordance with JESD 51-7.

Recommended Operating Conditions

| | | MIN | MAX | UNIT | |
|------------------|--------------------------------|---------|-----|------|----|
| V _{CC+} | Supply voltage | 5 | 15 | V | |
| V _{CC-} | | -5 | -15 | | |
| T _A | Operating free-air temperature | RC4558 | 0 | 70 | °C |
| | | RC4558I | -40 | 85 | |

Electrical Characteristics

at specified free-air temperature, $V_{CC+} = 15\text{ V}$, $V_{CC-} = -15\text{ V}$

| PARAMETER | | TEST CONDITIONS ⁽¹⁾ | T_A ⁽²⁾ | MIN | TYP | MAX | UNIT | |
|-----------------|--|---|---|------|-----|-----|------------------------------|--|
| V_{IO} | Input offset voltage | $V_O = 0$ | 25°C | 0.5 | 6 | | mV | |
| | | | Full range | | | 7.5 | | |
| I_{IO} | Input offset current | $V_O = 0$ | 25°C | 5 | 200 | | nA | |
| | | | Full range | | | 300 | | |
| I_{IB} | Input bias current | $V_O = 0$ | 25°C | 150 | 500 | | nA | |
| | | | Full range | | | 800 | | |
| V_{ICR} | Common-mode input voltage range | | 25°C | ±12 | ±14 | | V | |
| V_{OM} | Maximum output voltage swing | $R_L = 10\text{ k}\Omega$ | 25°C | ±12 | ±14 | | V | |
| | | | Full range | 25°C | ±10 | ±13 | | |
| | | | | | ±10 | | | |
| A_{VD} | Large-signal differential voltage amplification | $R_L \geq \text{k}\Omega$, $V_O = \pm 10\text{ V}$ | 25°C | 20 | 300 | | V/mV | |
| | | | Full range | 15 | | | | |
| B_1 | Unity-gain bandwidth | | 25°C | 3 | | | MHz | |
| r_i | Input resistance | | 25°C | 0.3 | 5 | | M Ω | |
| CMRR | Common-mode rejection ratio | | 25°C | 70 | 90 | | dB | |
| k_{SVS} | Supply-voltage sensitivity ($\Delta V_{IO}/\Delta V_{CC}$) | $V_{CC} = \pm 15\text{ V}$ to $\pm 9\text{ V}$ | 25°C | 30 | 150 | | $\mu\text{V/V}$ | |
| V_n | Equivalent input noise voltage (closed loop) | $A_{VD} = 100$, $R_S = 100\ \Omega$, $f = 1\text{ kHz}$, $BW = 1\text{ Hz}$ | 25°C | 8 | | | $\text{nV}/\sqrt{\text{Hz}}$ | |
| I_{CC} | Supply current (both amplifiers) | $V_O = 0$, No load | 25°C | 2.5 | 5.6 | | mA | |
| | | | T_A min | 3 | 6.6 | | | |
| | | | T_A max | 2.3 | 5 | | | |
| P_D | Total power dissipation (both amplifiers) | $V_O = 0$, No load | 25°C | 75 | 170 | | mW | |
| | | | T_A min | 90 | 200 | | | |
| | | | T_A max | 70 | 150 | | | |
| V_{O1}/V_{O2} | Crosstalk attenuation | Open loop | $R_S = 1\text{ k}\Omega$, $f = 10\text{ kHz}$ | 25°C | 85 | | dB | |
| | | $A_{VD} = 100$ | | | 105 | | | |

(1) All characteristics are measured under open-loop conditions with zero common-mode input voltage, unless otherwise specified.

(2) Full range is 0°C to 70°C for RC4558 and -40°C to 85°C for RC4558L.

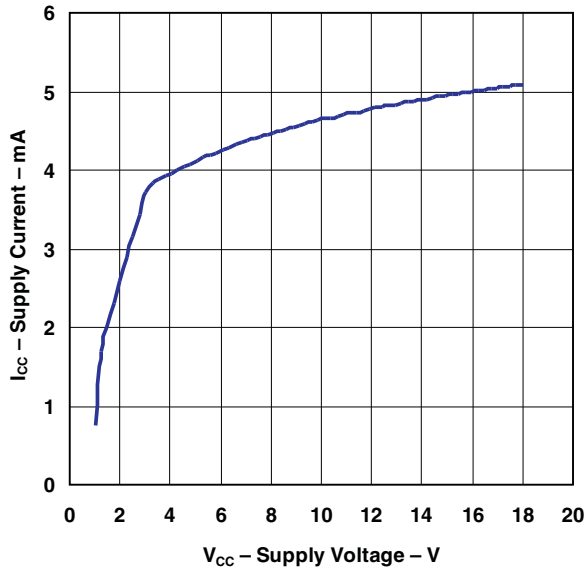
Operating Characteristics

$V_{CC+} = 15\text{ V}$, $V_{CC-} = -15\text{ V}$, $T_A = 25^\circ\text{C}$

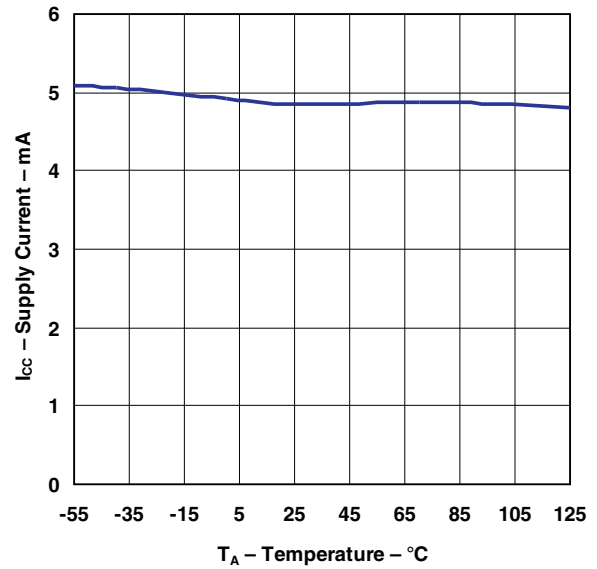
| PARAMETER | | TEST CONDITIONS | | | MIN | TYP | MAX | UNIT |
|-----------|-------------------------|------------------------|----------------------------|-----------------------|-----|------|-----|------------------------|
| t_r | Rise time | $V_I = 20\text{ mV}$, | $R_L = 2\text{ k}\Omega$, | $C_L = 100\text{ pF}$ | | 0.13 | | ns |
| | Overshoot | $V_I = 20\text{ mV}$, | $R_L = 2\text{ k}\Omega$, | $C_L = 100\text{ pF}$ | | 5 | | % |
| SR | Slew rate at unity gain | $V_I = 10\text{ V}$, | $R_L = 2\text{ k}\Omega$, | $C_L = 100\text{ pF}$ | 1.1 | 1.7 | | $\text{V}/\mu\text{s}$ |

TYPICAL CHARACTERISTICS

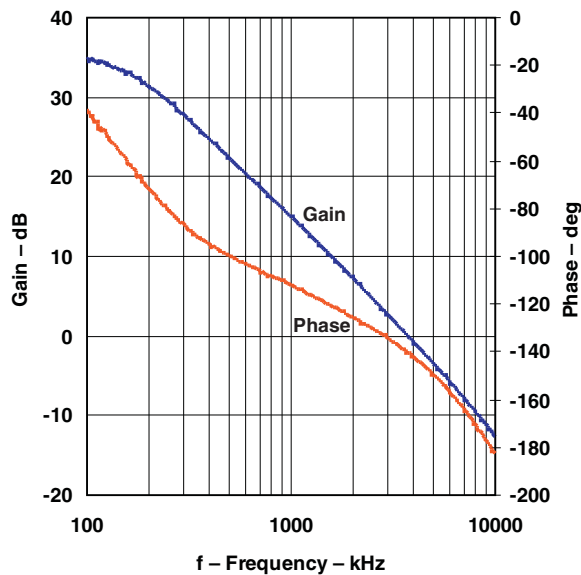
SUPPLY CURRENT
vs
SUPPLY VOLTAGE
($T_A = 25^\circ\text{C}$)



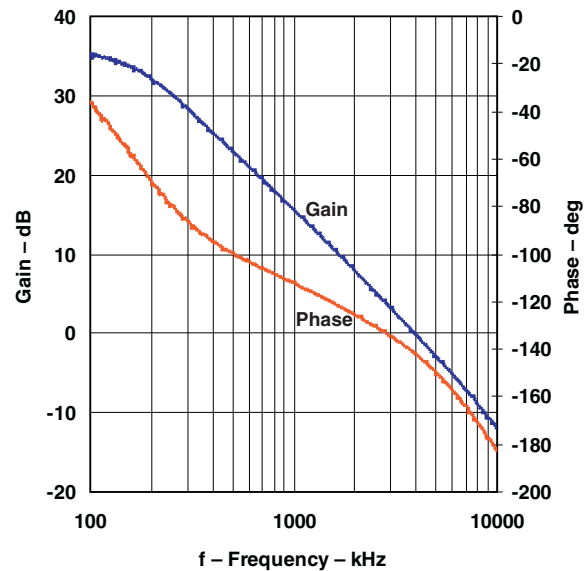
SUPPLY CURRENT
vs
TEMPERATURE
($V_{CC} = \pm 15\text{ V}$)



GAIN AND PHASE
vs
FREQUENCY
($V_{CC} = \pm 15\text{ V}$, $R_L = 2\text{ k}\Omega$, $C_L = 22\text{ pF}$)

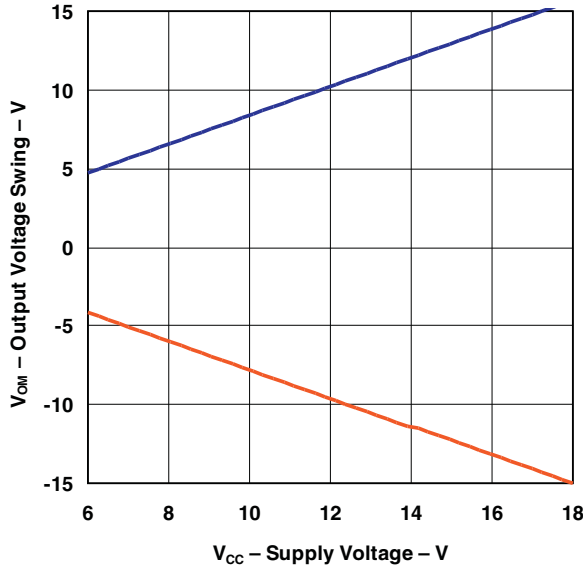


GAIN AND PHASE
vs
FREQUENCY
($V_{CC} = \pm 15\text{ V}$, $R_L = 10\text{ k}\Omega$, $C_L = 22\text{ pF}$)

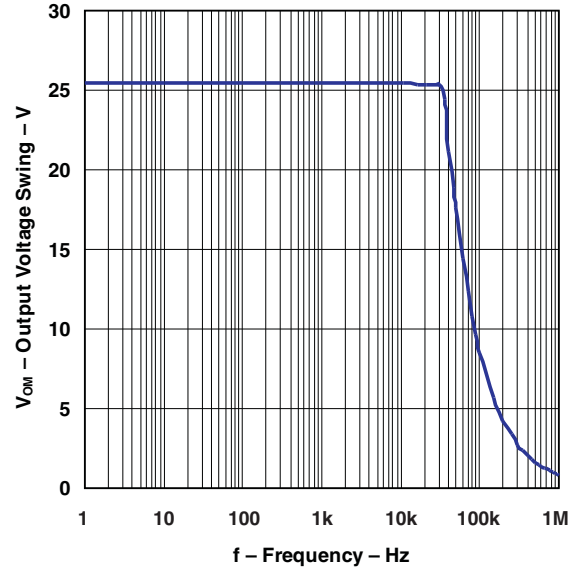


TYPICAL CHARACTERISTICS (continued)

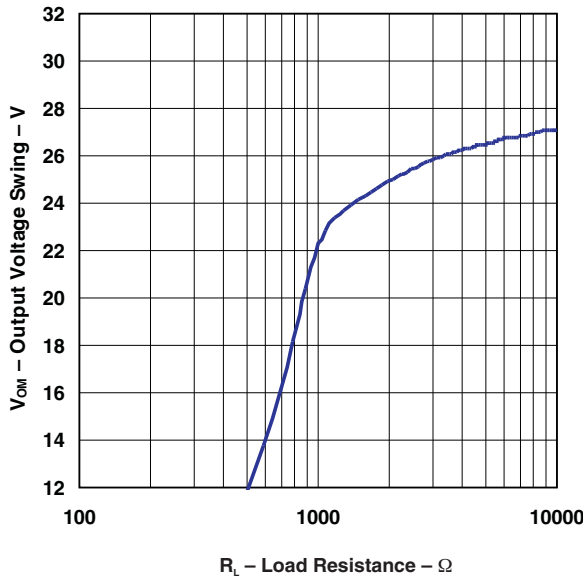
OUTPUT VOLTAGE SWING
vs
SUPPLY VOLTAGE
($R_L = 2\text{ k}\Omega$, $T_A = 25^\circ\text{C}$)



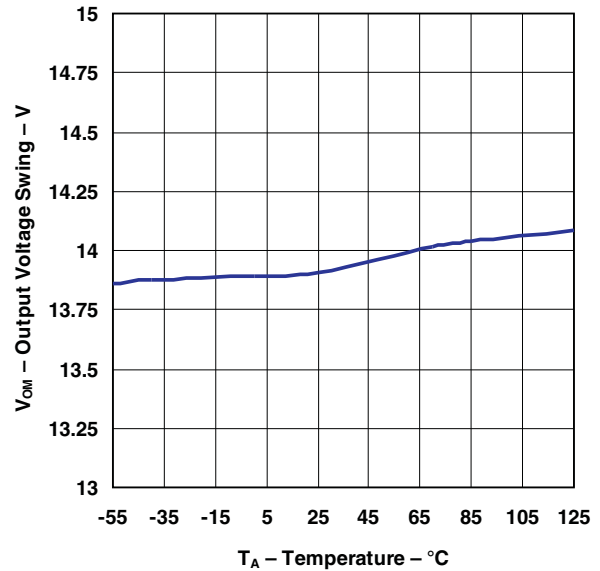
OUTPUT VOLTAGE SWING
vs
FREQUENCY
($V_{CC} = \pm 15\text{ V}$, $R_L = 2\text{ k}\Omega$, $T_A = 25^\circ\text{C}$)



OUTPUT VOLTAGE SWING
vs
LOAD RESISTANCE
($V_{CC} = \pm 15\text{ V}$, $T_A = 25^\circ\text{C}$)



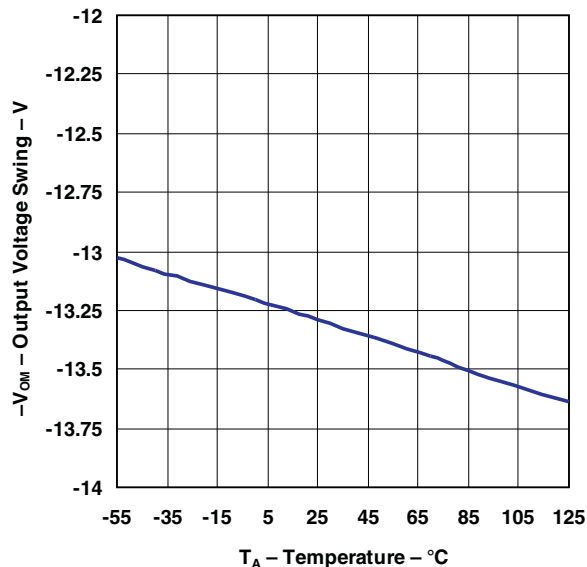
OUTPUT VOLTAGE SWING
vs
TEMPERATURE
($V_{CC} = \pm 15\text{ V}$, $R_L = 10\text{ k}\Omega$)



TYPICAL CHARACTERISTICS (continued)

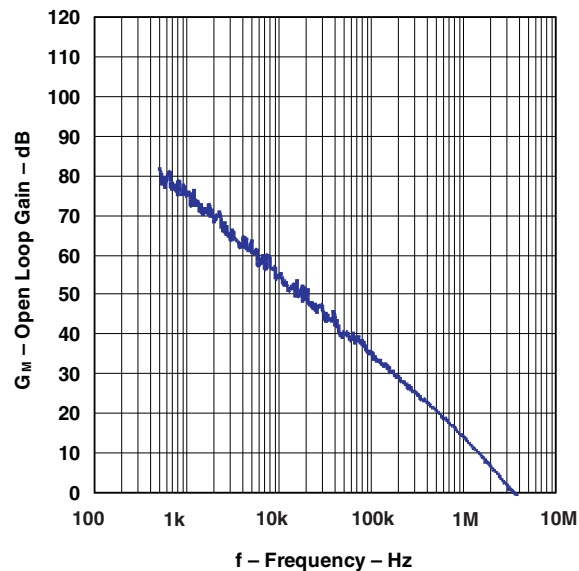
NEGATIVE OUTPUT VOLTAGE SWING

vs
TEMPERATURE
($V_{CC} = \pm 15\text{ V}$, $R_L = 10\text{ k}\Omega$)



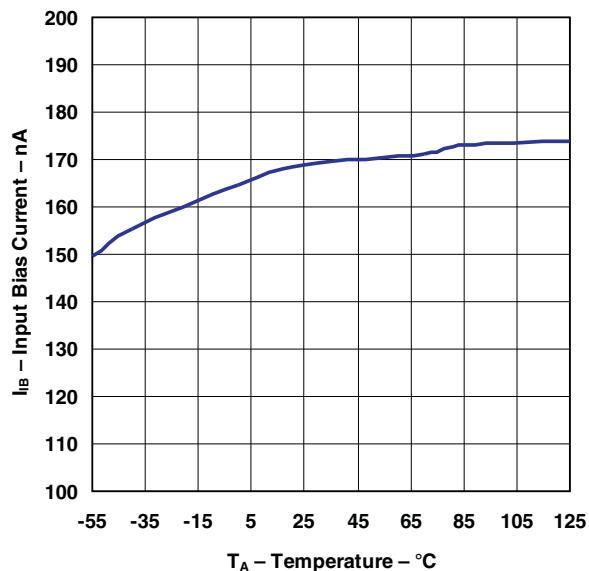
OPEN LOOP GAIN

vs
FREQUENCY
($V_{CC} = \pm 15\text{ V}$, $R_L = 2\text{ k}\Omega$, $C_L = 22\text{ pF}$, $T_A = 25^\circ\text{C}$)



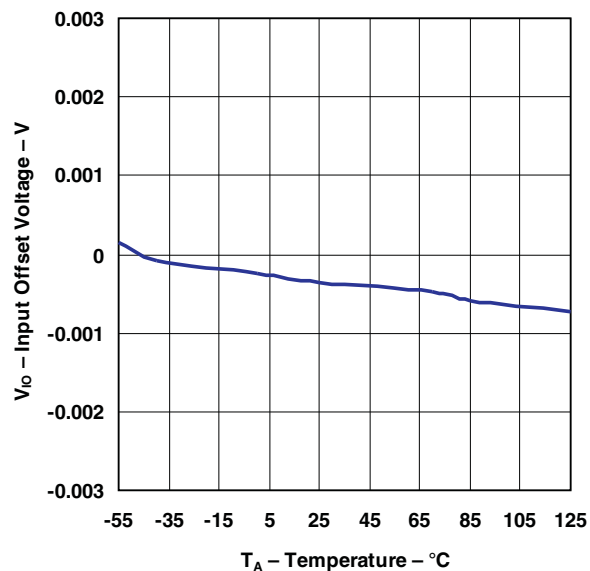
INPUT BIAS CURRENT

vs
TEMPERATURE
($V_{CC} = \pm 15\text{ V}$)

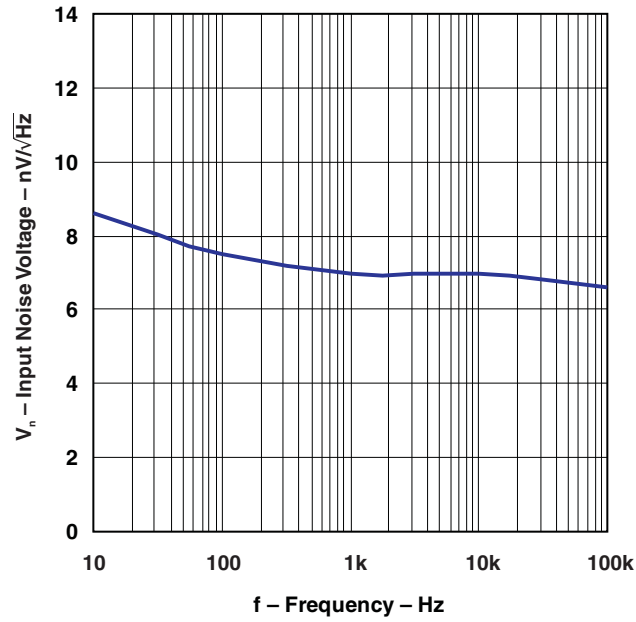


INPUT OFFSET VOLTAGE

vs
TEMPERATURE
($V_{CC} = \pm 15\text{ V}$)



TYPICAL CHARACTERISTICS (continued)
INPUT NOISE VOLTAGE
 vs
FREQUENCY
 ($V_{CC} = \pm 15\text{ V}$, $T_A = 25^\circ\text{C}$)



PACKAGING INFORMATION

| Orderable Device | Status ⁽¹⁾ | Package Type | Package Drawing | Pins | Package Qty | Eco Plan ⁽²⁾ | Lead/ Ball Finish | MSL Peak Temp ⁽³⁾ | Samples (Requires Login) |
|------------------|-----------------------|--------------|-----------------|------|-------------|----------------------------|----------------------|------------------------------|---|
| RC4558D | ACTIVE | SOIC | D | 8 | 75 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558DE4 | ACTIVE | SOIC | D | 8 | 75 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558DG4 | ACTIVE | SOIC | D | 8 | 75 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558DGKR | ACTIVE | MSOP | DGK | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558DGKRG4 | ACTIVE | MSOP | DGK | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558DR | ACTIVE | SOIC | D | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558DRE4 | ACTIVE | SOIC | D | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558DRG3 | ACTIVE | SOIC | D | 8 | 2500 | Green (RoHS & no Sb/Br) | CU SN | Level-1-260C-UNLIM | Request Free Samples |
| RC4558DRG4 | ACTIVE | SOIC | D | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558ID | ACTIVE | SOIC | D | 8 | 75 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558IDE4 | ACTIVE | SOIC | D | 8 | 75 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558IDG4 | ACTIVE | SOIC | D | 8 | 75 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558IDGKR | ACTIVE | MSOP | DGK | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558IDGKRG4 | ACTIVE | MSOP | DGK | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558IDR | ACTIVE | SOIC | D | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558IDRE4 | ACTIVE | SOIC | D | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558IDRG4 | ACTIVE | SOIC | D | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |



www.ti.com

PACKAGE OPTION ADDENDUM

6-Dec-2010

| Orderable Device | Status ⁽¹⁾ | Package Type | Package Drawing | Pins | Package Qty | Eco Plan ⁽²⁾ | Lead/ Ball Finish | MSL Peak Temp ⁽³⁾ | Samples (Requires Login) |
|------------------|-----------------------|--------------|-----------------|------|-------------|-------------------------|----------------------|------------------------------|--|
| RC4558IP | ACTIVE | PDIP | P | 8 | 50 | Pb-Free (RoHS) | CU NIPDAU | N / A for Pkg Type | Contact TI Distributor or Sales Office |
| RC4558IPE4 | ACTIVE | PDIP | P | 8 | 50 | Pb-Free (RoHS) | CU NIPDAU | N / A for Pkg Type | Contact TI Distributor or Sales Office |
| RC4558IPW | ACTIVE | TSSOP | PW | 8 | 150 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558IPWE4 | ACTIVE | TSSOP | PW | 8 | 150 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558IPWG4 | ACTIVE | TSSOP | PW | 8 | 150 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558IPWR | ACTIVE | TSSOP | PW | 8 | 2000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558IPWRE4 | ACTIVE | TSSOP | PW | 8 | 2000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558IPWRG4 | ACTIVE | TSSOP | PW | 8 | 2000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558P | ACTIVE | PDIP | P | 8 | 50 | Pb-Free (RoHS) | CU NIPDAU | N / A for Pkg Type | Contact TI Distributor or Sales Office |
| RC4558PE4 | ACTIVE | PDIP | P | 8 | 50 | Pb-Free (RoHS) | CU NIPDAU | N / A for Pkg Type | Contact TI Distributor or Sales Office |
| RC4558PSLE | OBSOLETE | SO | PS | 8 | | TBD | Call TI | Call TI | Samples Not Available |
| RC4558PSR | ACTIVE | SO | PS | 8 | 2000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558PSRE4 | ACTIVE | SO | PS | 8 | 2000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558PSRG4 | ACTIVE | SO | PS | 8 | 2000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558PW | ACTIVE | TSSOP | PW | 8 | 150 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558PWE4 | ACTIVE | TSSOP | PW | 8 | 150 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558PWG4 | ACTIVE | TSSOP | PW | 8 | 150 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Purchase Samples |
| RC4558PWLE | OBSOLETE | TSSOP | PW | 8 | | TBD | Call TI | Call TI | Samples Not Available |
| RC4558PWR | ACTIVE | TSSOP | PW | 8 | 2000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |



www.ti.com

PACKAGE OPTION ADDENDUM

6-Dec-2010

| Orderable Device | Status ⁽¹⁾ | Package Type | Package Drawing | Pins | Package Qty | Eco Plan ⁽²⁾ | Lead/ Ball Finish | MSL Peak Temp ⁽³⁾ | Samples (Requires Login) |
|------------------|-----------------------|--------------|-----------------|------|-------------|-------------------------|-------------------|------------------------------|--|
| RC4558PWRE4 | ACTIVE | TSSOP | PW | 8 | 2000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558PWRG4 | ACTIVE | TSSOP | PW | 8 | 2000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-1-260C-UNLIM | Contact TI Distributor or Sales Office |
| RC4558Y | OBSOLETE | DIESALE | Y | 0 | | TBD | Call TI | Call TI | Samples Not Available |

⁽¹⁾ The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSOLETE: TI has discontinued the production of the device.

⁽²⁾ Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.

Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

⁽³⁾ MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

Important Information and Disclaimer: The information provided on this page represents TI's knowledge and belief as of the date that it is provided. TI bases its knowledge and belief on information provided by third parties, and makes no representation or warranty as to the accuracy of such information. Efforts are underway to better integrate information from third parties. TI has taken and continues to take reasonable steps to provide representative and accurate information but may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers consider certain information to be proprietary, and thus CAS numbers and other limited information may not be available for release.

In no event shall TI's liability arising out of such information exceed the total purchase price of the TI part(s) at issue in this document sold by TI to Customer on an annual basis.

TAPE AND REEL INFORMATION



QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE



*All dimensions are nominal

| Device | Package Type | Package Drawing | Pins | SPQ | Reel Diameter (mm) | Reel Width W1 (mm) | A0 (mm) | B0 (mm) | K0 (mm) | P1 (mm) | W (mm) | Pin1 Quadrant |
|-------------|--------------|-----------------|------|------|--------------------|--------------------|---------|---------|---------|---------|--------|---------------|
| RC4558DGKR | MSOP | DGK | 8 | 2500 | 330.0 | 12.4 | 5.3 | 3.4 | 1.4 | 8.0 | 12.0 | Q1 |
| RC4558DGKR | MSOP | DGK | 8 | 2500 | 330.0 | 12.4 | 5.3 | 3.3 | 1.3 | 8.0 | 12.0 | Q1 |
| RC4558DR | SOIC | D | 8 | 2500 | 330.0 | 12.4 | 6.4 | 5.2 | 2.1 | 8.0 | 12.0 | Q1 |
| RC4558DR | SOIC | D | 8 | 2500 | 330.0 | 12.4 | 6.4 | 5.2 | 2.1 | 8.0 | 12.0 | Q1 |
| RC4558DRG4 | SOIC | D | 8 | 2500 | 330.0 | 12.4 | 6.4 | 5.2 | 2.1 | 8.0 | 12.0 | Q1 |
| RC4558IDGKR | MSOP | DGK | 8 | 2500 | 330.0 | 12.4 | 5.3 | 3.4 | 1.4 | 8.0 | 12.0 | Q1 |
| RC4558IDGKR | MSOP | DGK | 8 | 2500 | 330.0 | 12.4 | 5.3 | 3.3 | 1.3 | 8.0 | 12.0 | Q1 |
| RC4558IDR | SOIC | D | 8 | 2500 | 330.0 | 12.4 | 6.4 | 5.2 | 2.1 | 8.0 | 12.0 | Q1 |
| RC4558IPWR | TSSOP | PW | 8 | 2000 | 330.0 | 12.4 | 7.0 | 3.6 | 1.6 | 8.0 | 12.0 | Q1 |
| RC4558PSR | SO | PS | 8 | 2000 | 330.0 | 16.4 | 8.2 | 6.6 | 2.5 | 12.0 | 16.0 | Q1 |
| RC4558PWR | TSSOP | PW | 8 | 2000 | 330.0 | 12.4 | 7.0 | 3.6 | 1.6 | 8.0 | 12.0 | Q1 |
| RC4558PWR | TSSOP | PW | 8 | 2000 | 330.0 | 12.4 | 7.0 | 3.6 | 1.6 | 8.0 | 12.0 | Q1 |

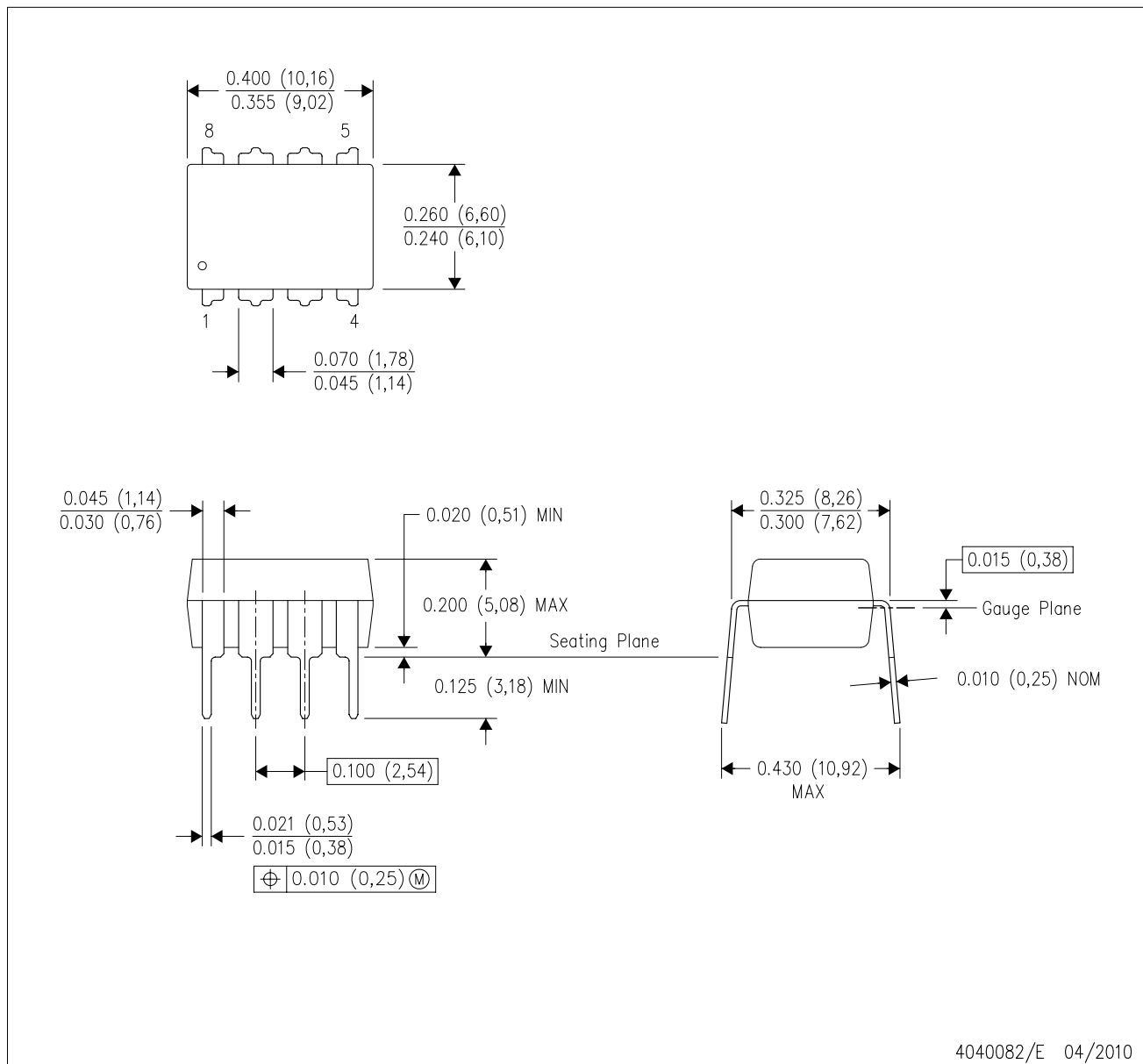
TAPE AND REEL BOX DIMENSIONS


*All dimensions are nominal

| Device | Package Type | Package Drawing | Pins | SPQ | Length (mm) | Width (mm) | Height (mm) |
|-------------|--------------|-----------------|------|------|-------------|------------|-------------|
| RC4558DGKR | MSOP | DGK | 8 | 2500 | 358.0 | 335.0 | 35.0 |
| RC4558DGKR | MSOP | DGK | 8 | 2500 | 370.0 | 355.0 | 55.0 |
| RC4558DR | SOIC | D | 8 | 2500 | 340.5 | 338.1 | 20.6 |
| RC4558DR | SOIC | D | 8 | 2500 | 346.0 | 346.0 | 29.0 |
| RC4558DRG4 | SOIC | D | 8 | 2500 | 346.0 | 346.0 | 29.0 |
| RC4558IDGKR | MSOP | DGK | 8 | 2500 | 358.0 | 335.0 | 35.0 |
| RC4558IDGKR | MSOP | DGK | 8 | 2500 | 370.0 | 355.0 | 55.0 |
| RC4558IDR | SOIC | D | 8 | 2500 | 340.5 | 338.1 | 20.6 |
| RC4558IPWR | TSSOP | PW | 8 | 2000 | 346.0 | 346.0 | 29.0 |
| RC4558PSR | SO | PS | 8 | 2000 | 346.0 | 346.0 | 33.0 |
| RC4558PWR | TSSOP | PW | 8 | 2000 | 346.0 | 346.0 | 29.0 |
| RC4558PWR | TSSOP | PW | 8 | 2000 | 364.0 | 364.0 | 27.0 |

P (R-PDIP-T8)

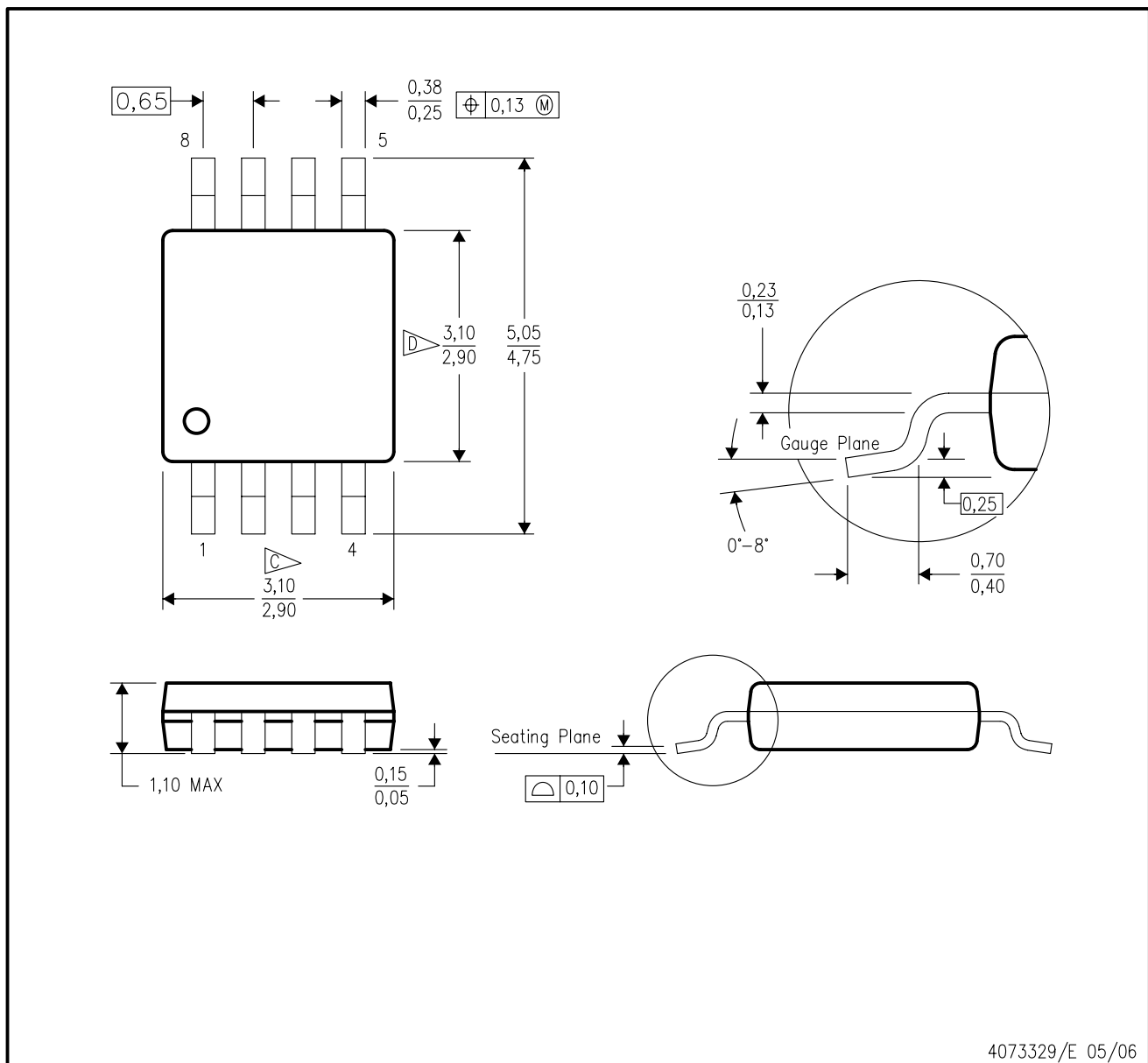
PLASTIC DUAL-IN-LINE PACKAGE



- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. Falls within JEDEC MS-001 variation BA.

DGK (S-PDSO-G8)

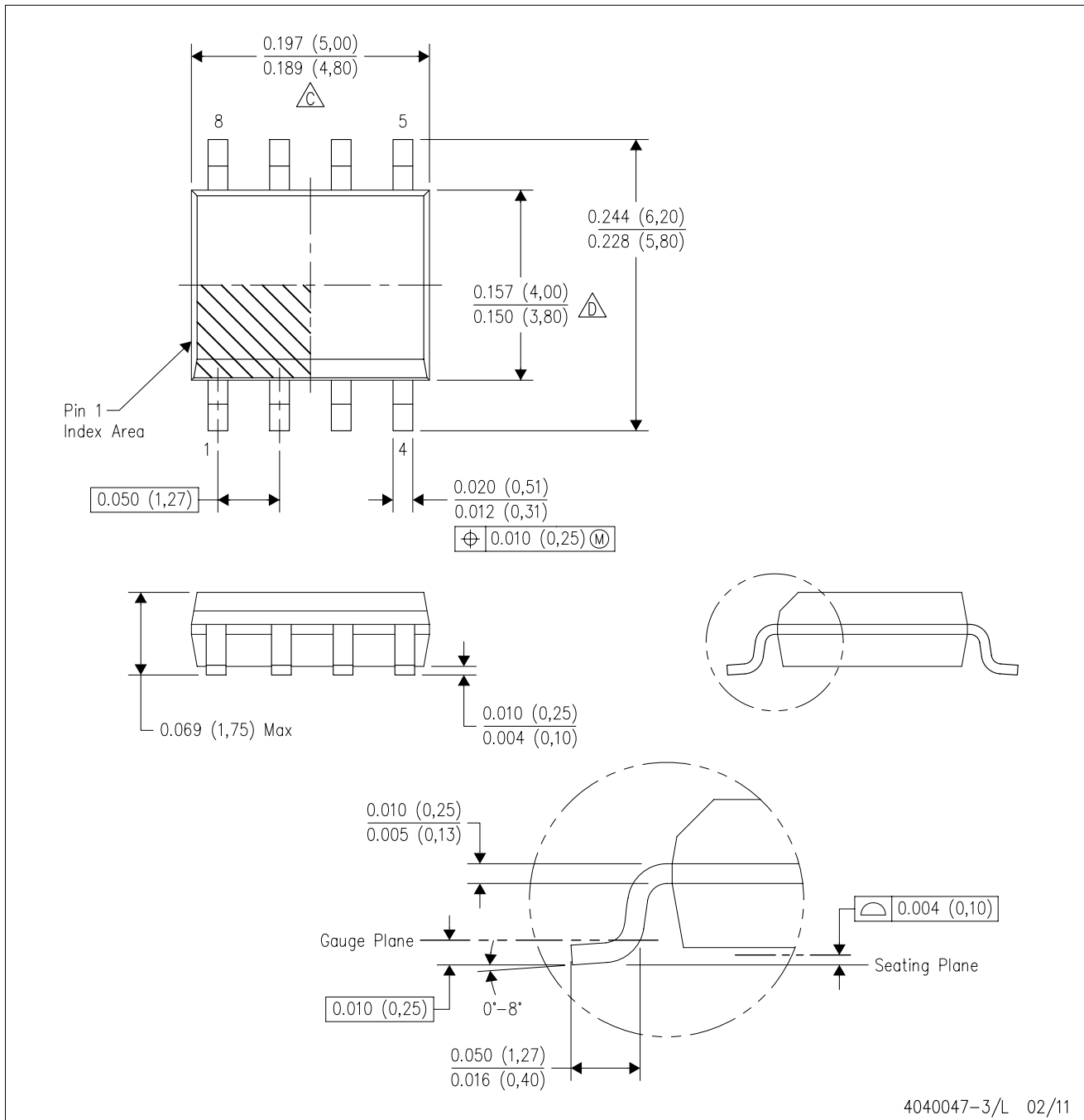
PLASTIC SMALL-OUTLINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters.
 - B. This drawing is subject to change without notice.
 - C. Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.15 per end.
 - D. Body width does not include interlead flash. Interlead flash shall not exceed 0.50 per side.
 - E. Falls within JEDEC MO-187 variation AA, except interlead flash.

D (R-PDSO-G8)

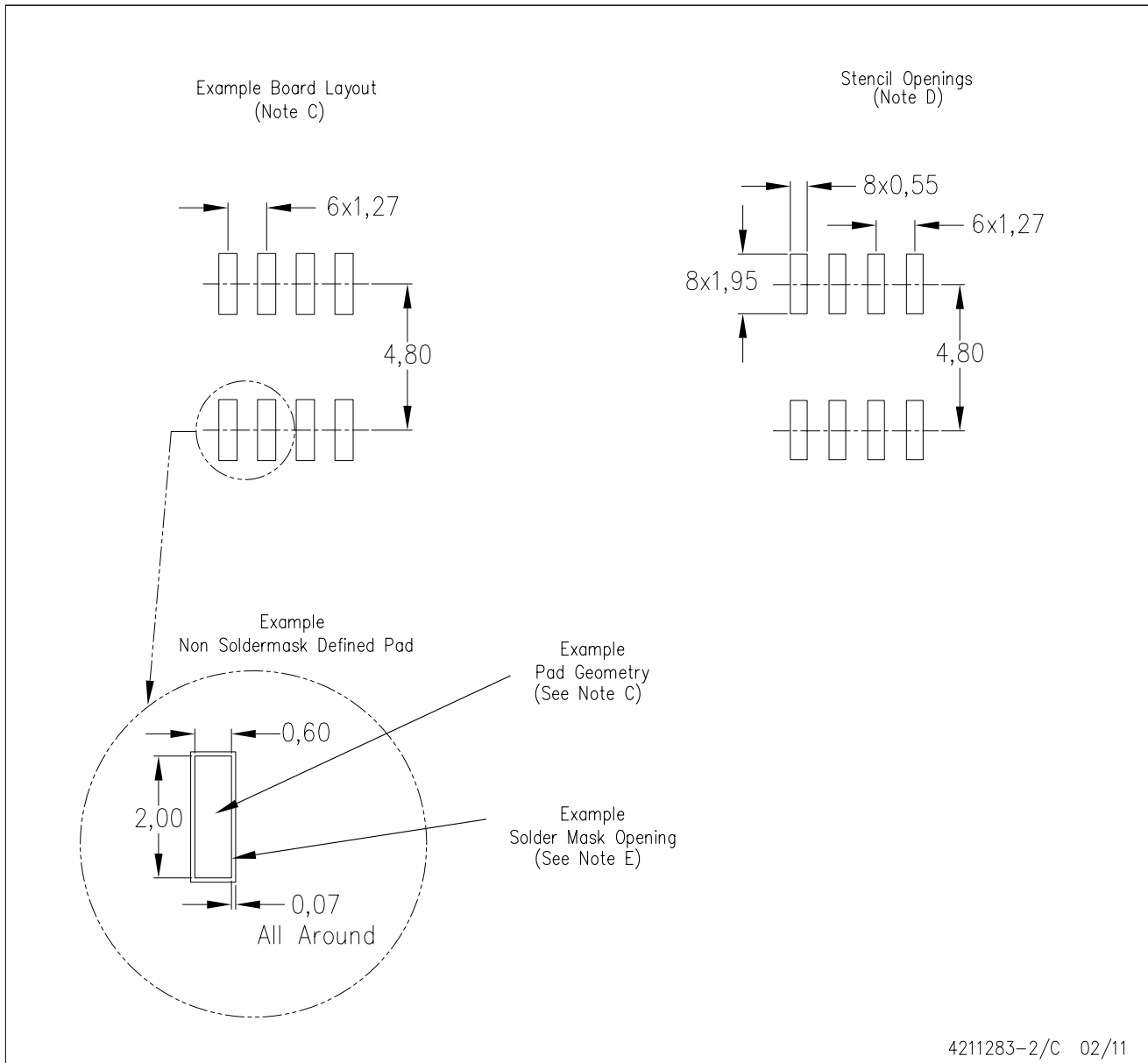
PLASTIC SMALL OUTLINE



- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0.006 (0,15) each side.
 - D. Body width does not include interlead flash. Interlead flash shall not exceed 0.017 (0,43) each side.
 - E. Reference JEDEC MS-012 variation AA.

D (R-PDSO-G8)

PLASTIC SMALL OUTLINE

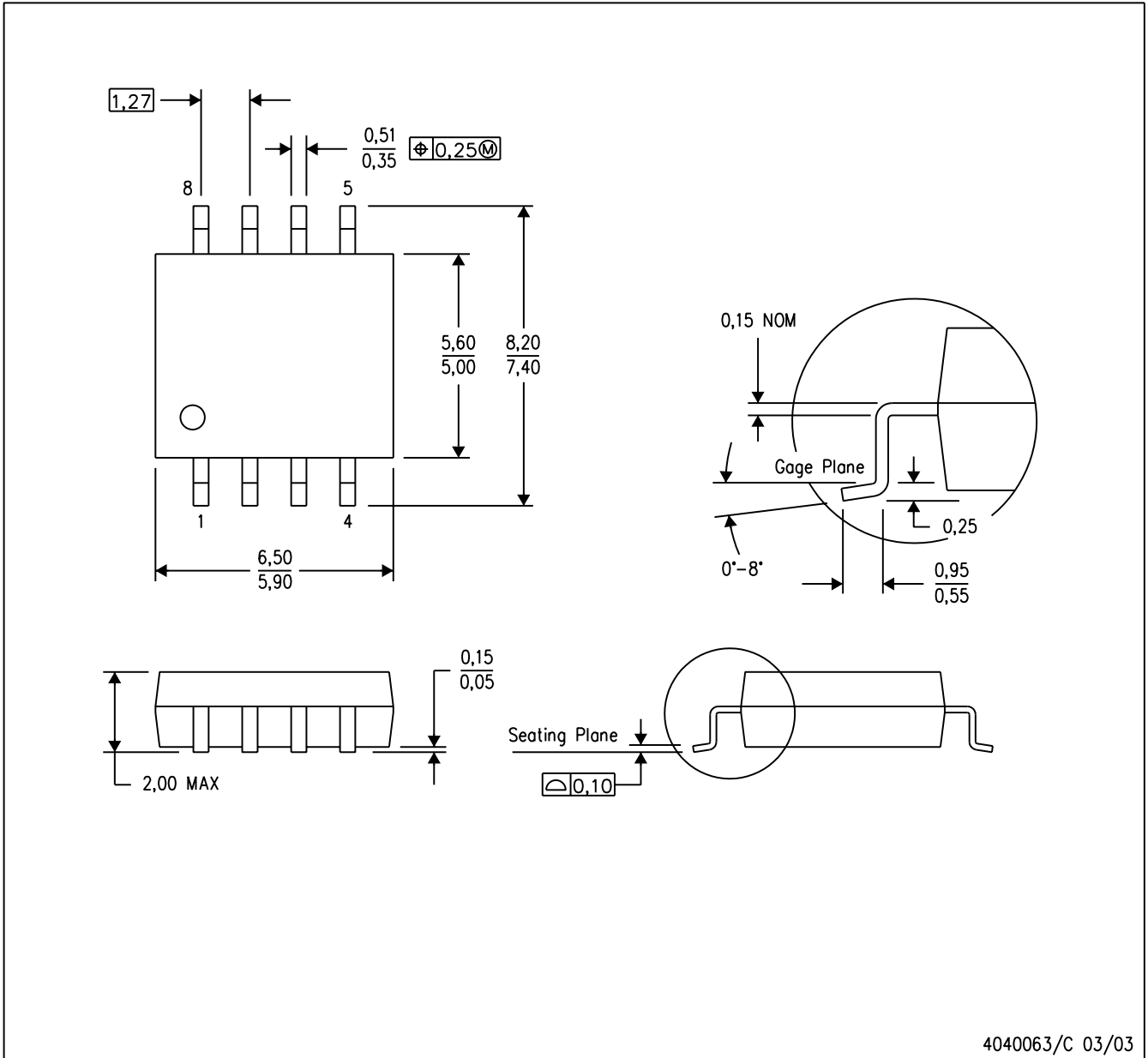


- NOTES:
- All linear dimensions are in millimeters.
 - This drawing is subject to change without notice.
 - Publication IPC-7351 is recommended for alternate designs.
 - Laser cutting apertures with trapezoidal walls and also rounding corners will offer better paste release. Customers should contact their board assembly site for stencil design recommendations. Refer to IPC-7525 for other stencil recommendations.
 - Customers should contact their board fabrication site for solder mask tolerances between and around signal pads.

MECHANICAL DATA

PS (R-PDSO-G8)

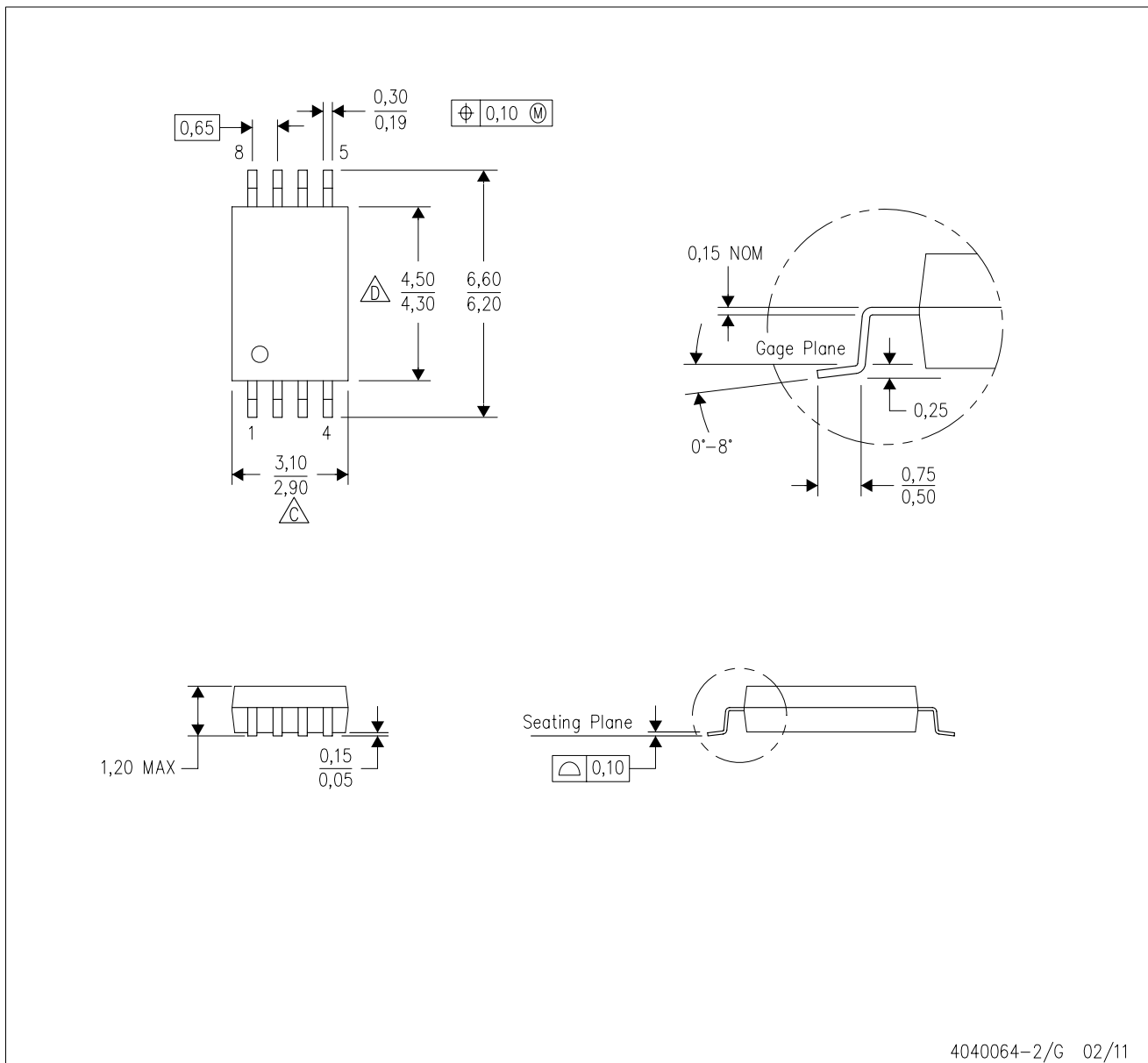
PLASTIC SMALL-OUTLINE PACKAGE



- NOTES:
- A. All linear dimensions are in millimeters.
 - B. This drawing is subject to change without notice.
 - C. Body dimensions do not include mold flash or protrusion, not to exceed 0,15.

PW (R-PDSO-G8)

PLASTIC SMALL OUTLINE



4040064-2/G 02/11

- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - C. Body length does not include mold flash, protrusions, or gate burrs. Mold flash, protrusions, or gate burrs shall not exceed 0,15 each side.
 - D. Body width does not include interlead flash. Interlead flash shall not exceed 0,25 each side.
 - E. Falls within JEDEC MO-153

IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

TI warrants performance of its hardware products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are used to the extent TI deems necessary to support this warranty. Except where mandated by government requirements, testing of all parameters of each product is not necessarily performed.

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

TI products are not authorized for use in safety-critical applications (such as life support) where a failure of the TI product would reasonably be expected to cause severe personal injury or death, unless officers of the parties have executed an agreement specifically governing such use. Buyers represent that they have all necessary expertise in the safety and regulatory ramifications of their applications, and acknowledge and agree that they are solely responsible for all legal, regulatory and safety-related requirements concerning their products and any use of TI products in such safety-critical applications, notwithstanding any applications-related information or support that may be provided by TI. Further, Buyers must fully indemnify TI and its representatives against any damages arising out of the use of TI products in such safety-critical applications.

TI products are neither designed nor intended for use in military/aerospace applications or environments unless the TI products are specifically designated by TI as military-grade or "enhanced plastic." Only products designated by TI as military-grade meet military specifications. Buyers acknowledge and agree that any such use of TI products which TI has not designated as military-grade is solely at the Buyer's risk, and that they are solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI products are neither designed nor intended for use in automotive applications or environments unless the specific TI products are designated by TI as compliant with ISO/TS 16949 requirements. Buyers acknowledge and agree that, if they use any non-designated products in automotive applications, TI will not be responsible for any failure to meet such requirements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

Products

| | |
|-----------------------------|--|
| Audio | www.ti.com/audio |
| Amplifiers | amplifier.ti.com |
| Data Converters | dataconverter.ti.com |
| DLP® Products | www.dlp.com |
| DSP | dsp.ti.com |
| Clocks and Timers | www.ti.com/clocks |
| Interface | interface.ti.com |
| Logic | logic.ti.com |
| Power Mgmt | power.ti.com |
| Microcontrollers | microcontroller.ti.com |
| RFID | www.ti-rfid.com |
| RF/IF and ZigBee® Solutions | www.ti.com/lprf |

Applications

| | |
|-------------------------------|--|
| Communications and Telecom | www.ti.com/communications |
| Computers and Peripherals | www.ti.com/computers |
| Consumer Electronics | www.ti.com/consumer-apps |
| Energy and Lighting | www.ti.com/energy |
| Industrial | www.ti.com/industrial |
| Medical | www.ti.com/medical |
| Security | www.ti.com/security |
| Space, Avionics and Defense | www.ti.com/space-avionics-defense |
| Transportation and Automotive | www.ti.com/automotive |
| Video and Imaging | www.ti.com/video |
| Wireless | www.ti.com/wireless-apps |

TI E2E Community Home Page

e2e.ti.com

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2011, Texas Instruments Incorporated