| PCN N | lumber: | | 2018 | 05310 | 000 |) | P | CN Date: | May | / 31, 20 | 018 | | |
|--|--|---|---|--|-------------|--|--|---|--|---|--|---|--|
| Title: | Datash | neet fo | or OPA35 | 54-OP | A43 | 354, | OPA357 | -OPA2357, | OPA3 | 55-OP | \3355 | | |
| Custo | mer Cont | act: | PCN Ma | nager | | | | | D | ept: | Qualit | y Services | |
| Chang | ge Type: | | | | | | | | • | _ | | | |
| | ssembly Si | ite | | | | Des | ign | | | Wafe | er Bump | Site | |
| _ As | ssembly Pr | rocess | 5 | | \boxtimes | Data | a Sheet | | | Wafe | Wafer Bump Material | | |
| As | ssembly Ma | ateria | ıls | | | Part | number | r change | | Wafe | Wafer Bump Process | | |
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| Pa | acking/Shij | pping | /Labeling | g | Ш | Test | t Process | 5 | | | er Fab Ma | | |
| | | | | | | | | | | _ Waf | er Fab Pr | ocess | |
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| | iption of | | | | | | | sheet upda | | | | | |
| | ation. The ed below. | produ | uct datas | sheets | ar ar | e bei | ing upda | ted as sum | mariz | ed in th | ne revisio | on history | |
| | TEXAS OPA354, OPA354, OPA4354 INSTRUMENTS SBOS233G – MARCH 2002 – REVISED APRIL 2018 | | | | | | | | | | | | |
| 40 | Texas Instrume | NTS | | | | | | | SB | | , | , | |
| Change | TEXAS INSTRUME | | (June 201 | 6) to Re | evis | ion G | | | SB | | , | , | |
| | es from Revis | sion F | | | | | | olute Maximum | | OS233G - N | MARCH 2002- | REVISED APRIL 2018 | |
| • Dele | es from Revis | sion F e abou | t input pins | and in | put s | signals | s from Abso | | | OS233G - N | MARCH 2002- | REVISED APRIL 2018 Page | |
| • Dele Link to Affecte | es from Reviseted table note | sion F e about | t input pins : http:// | WWW. | put s | om/p | oroduct/(| OPA354 Lead/Ball Finish | Rating | OS233G - N | MARCH 2002- | Page 6 | |
| - Dele Link to Affecte | es from Revise eted table note o Full Datas | sion F e about | t input pins : http:// | and in | put s | signals | Eco Plan Green (RoHS) | OPA354 | Rating MSL | os233G - N | MARCH 2002- | Page Device Marking OPA | |
| - Dele Link to Affecte | es from Revise eted table note o Full Datas ed Products | sion F e about sheet s: Status (1) ACTIVE | t input pins : http:// | WWW. Package Drawing DDA | ti.C | om/p | Eco Plan (2) Green (RoHS 8. eno Sb/Br) Green (RoHS | OPA354 Lead/Ball Finish | MSL Level-1 | os233G - M | Op Temp (°C) -40 to 125 | Page Page Device Marking OPA 2364A OPA | |
| Link to Affecte | es from Reviseted table note Full Datas ed Products rable Device | sheet s: Status (1) ACTIVE | t input pins : http:// Package Type SO PowerPAD | WWW. Package Drawing DDA DDA | put s | om/r | Eco Plan (2) Green (RoHS & no Sb/Br) Green (RoHS & no Sb/Br) Green (RoHS Green (RoHS) | OPA354 Lead/Ball Finish (6) CU SN | MSL Level-1 | OS233G - N gs table . | Op Temp (°C) -40 to 125 | Page Page Device Marking OPA 2354A OPA 2354A OPA OPA | |
| Link to Affecte Order OPA: OPA: | es from Reviseted table note Full Datas ed Products rable Device 2354AIDDA 354AIDDAG3 | sion F e about sheet s: Status ACTIVE ACTIVE | t input pins : http:// Package Type SO PowerPAD | WWW. Package Drawing DDA DDA DDA | ti.c | om/p | Eco Plan (2) Green (RoHS & no Sb/Br) Green (RoHS | Lead/Ball Finish (6) CU SN | MSL Level-1 Level-1 | OS233G - N IS table . | Op Temp (°C) -40 to 125 -40 to 125 | Device Marking OPA 2354A OPA 2354A OPA 2354A OPA 2354A OPA 2354A OPA | |
| Dele Link to Affecte Order OPA23 OPA23 | es from Revise eted table note o Full Datas ed Products rable Device 2254AIDDA 3354AIDDAG3 | sion F e about sheet s: Status ACTIVE ACTIVE | t input pins http:// Package Type SO PowerPAD SO PowerPAD | WWW. Package Drawing DDA DDA DDA | put s | om/r | Eco Plan (2) Green (RoHS & no Sb/Br) | Lead/Ball Finish (6) CU SN CU SN CU SN | MSL Level-1 Level-1 Level-1 Level-1 | OS233G - N as table . Peak Temp (3) (260C-UNLIM) (260C-UNLIM) | Op Temp (*C) -40 to 125 -40 to 125 -40 to 125 -40 to 125 | Page Page Device Marking OPA 2364A OPA 2364A OPA 2364A OPA 2364A | |
| Dele Link to Affecte Order OPA23 OPA23 OPA23 OPA24 | es from Revis eted table note Full Datas ed Products rable Device 2254AIDDA 3354AIDDAR 354AIDDAR | sion F e about sheet S: Status (1) ACTIVE ACTIVE | t input pins : http:// Package Type SO PowerPAD SO PowerPAD SO PowerPAD | Package Drawing DDA DDA DDA DDA | put s | om/p Package Qty 75 75 2500 | Eco Plan (2) Green (RoHS & no Sb/Br) Green (RoHS | Lead/Ball Finish (6) CU SN CU SN CU SN | MSL Level-1 Level-1 Level-1 Level-1 Level-2 | OS233G - N as table . Peak Temp (3) 260C-UNLIM 260C-UNLIM 260C-UNLIM | Op Temp (°C) -40 to 125 | Page Page Device Marking OPA 2354A OPA 2354A OPA 2354A OPA 2354A OPA 2354A | |
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| Dele Link to Affecte Order OPA2 OPA23 OPA23 OPA23 OPA23 | es from Revis eted table note Full Datas ed Products rable Device 2254AIDDA 354AIDDAR 354AIDDAR 354AIDDAR 354AIDDAR 354AIDDAR 354AIDDAR 354AIDDAR 354AIDGKR 354AIDGKR 354AIDGKR 354AIDGKR 354AIDGKR 354AIDGKR 354AIDGKR | sion F e about sheet S: Status (1) ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE | t input pins : http:// Package Type SO PowerPAD SO PowerPAD SO PowerPAD VSSOP VSSOP VSSOP | Package Drawing DDA DDA DDA DDA DDA DDA DGK DGK DGK | put s | Om/r Package Qty 75 75 2500 2500 2500 2500 2500 | Eco Plan (2) Green (RoHS & no Sb/Br) Green (RoHS | CU SN CU NIPDAUAG CU NIPDAUAG | MSL Level-1 Level-1 Level-2 Level-2 Level-2 Level-2 | OS233G - M AS table . Peak Temp (3) 260C-UNLIM 260C-UNLIM 260C-UNLIM 260C-UNLIM 260C-1 YEAR 260C-1 YEAR | Op Temp (°C) -40 to 125 | Page Page Device Marking OPA 2354A OACI OACI | |
| Dele Link to Affecte Order OPA2 OPA23 OPA23 OPA23 OPA23 OPA23 OPA2 OPA23 OPA24 | es from Revis eted table note Full Data: ed Product: rable Device 12354AIDDA 1354AIDDAR 1354AIDDAR 1354AIDDAR 1354AIDGKR | sion F le about sheet S: Status (1) ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE | t input pins http:// Package Type SO PowerPAD SO PowerPAD SO PowerPAD VSSOP VSSOP VSSOP VSSOP | Package Drawing DDA DDA DDA DDA DGK DGK DGK | put s ti.c | om/p Package Oty 75 75 2500 2500 2500 2500 250 250 | Eco Plan (2) Green (RoHS & no Sb/Br) Green (RoHS | CU SN CU NIPDAUAG CU NIPDAUAG CU NIPDAUAG | MSL Level-1 Level-1 Level-2 Level-2 Level-2 Level-2 Level-2 | OS233G - N Peak Temp (3) 260C-UNLIM 260C-UNLIM 260C-UNLIM 260C-UNLIM 260C-1 YEAR 260C-1 YEAR 260C-1 YEAR | Op Temp (°C) -40 to 125 | Page Device Marking OPA 2354A OACI OACI OACI | |
| Dele Link to Affecte Order OPA23 OPA23 OPA23 OPA23 OPA23 OPA23 OPA23 OPA23 OPA23 | es from Revis eted table note o Full Datas ed Products rable Device 2354AIDDA 3354AIDDAG3 2354AIDDARG3 2354AIDBARG3 2354AIDBKRG4 2354AIDGKT 2354AIDGKTG4 2354AIDGKTG4 3354AIDBVR | sion F de about sheet S: Status (1) ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE ACTIVE | t input pins http:// Package Type SO PowerPAD SO PowerPAD SO PowerPAD VSSOP VSSOP VSSOP VSSOP SOT-23 | Package Drawing DDA DDA DDA DDA DGK DGK DGK DBV | put s ti.c | Om/p Package Qty 75 75 2500 2500 2500 2500 250 3000 | Eco Plan (2) Green (RoHS & no Sb/Br) | CU NIPDAUAG | MSL Level-1: Level-1: Level-2: Level-2: Level-2: Level-2: Level-2: Level-2: Level-2: | OS233G - N 28 table . 28 table . 280C-UNLIM 280C-UNLIM 280C-UNLIM 280C-1 YEAR 280C-1 YEAR 280C-1 YEAR | Op Temp (°C) -40 to 125 -40 to 125 | Page Page Device Marking OPA 2354A OPA 2354A OPA 2354A OPA 2354A OPA 2354A OACI OACI OACI OACI OACI | |

8 no Sb/Br)

ACTIVE SO PowerPAD DDA 8 75 Green (RoHS CU SN Level-1-260C-UNLIM -40 to 125 8 no Sb/Br)

ACTIVE SO PowerPAD DDA 8 75 Green (RoHS CU SN Level-1-260C-UNLIM -40 to 125 8 no Sb/Br)

Green (RoHS & no Sb/Br)

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Level-1-260C-UNLIM -40 to 125

Level-2-260C-1 YEAR -40 to 125

Level-2-260C-1 YEAR -40 to 125

OPA 354A OPA 354A

OPA4354A

OPA4354A

| Orderable Device | Status (1) | Package Type | Package Drawing | Pins | Package Qty | Eco Plan | Lead/Ball Finish | MSL Peak Temp | Op Temp (°C) | Device Marking (4/5) |
|------------------|---------------|--------------|--------------------|------|----------------|----------------------------|------------------|---------------------|--------------|-------------------------|
| OPA4354AIDR | ACTIVE | SOIC | D | 14 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA4354A |
| OPA4354AIDRG4 | ACTIVE | SOIC | D | 14 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA4354A |
| OPA4354AIPWR | ACTIVE | TSSOP | PW | 14 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 4354A |
| OPA4354AIPWRG4 | ACTIVE | TSSOP | PW | 14 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 4354A |
| OPA4354AIPWT | ACTIVE | TSSOP | PW | 14 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 4354A |
| OPA4354AIPWTG4 | ACTIVE | TSSOP | PW | 14 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 4354A |

Datasheet Update# 2

Literature Number Update- From: SBOS235E To: SBOS235F



OPA357, OPA2357

SBOS235F - MARCH 2002-REVISED APRIL 2018

Changes from Revision E (May 2009) to Revision F

Page

Added Device Information table, Pin Functions table, ESD Ratings table, Recommended Operating Conditions
table, Thermal Information table, Overview section, Functional Block Diagram section, Feature Description section,
Device Functional Modes section, Application and Implementation section, Power Supply Recommendations
section, Layout section, Device and Documentation Support section, and Mechanical, Packaging, and Orderable
Information section

Link to Full Datasheet: http://www.ti.com/product/OPA2357

Affected Products:

| Orderable Device | Status | Package Type | Package | Pins | Package | Eco Plan | Lead/Ball Finish | MSL Peak Temp | Op Temp (°C) | Device Marking |
|------------------|--------|--------------|---------|------|---------|----------------------------|------------------|---------------------|--------------|----------------|
| | (1) | | Drawing | | Qty | (2) | (6) | (3) | | (4/5) |
| OPA2357AIDGSR | ACTIVE | VSSOP | DGS | 10 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAUAG | Level-2-260C-1 YEAR | -40 to 125 | BBG |
| OPA2357AIDGSRG4 | ACTIVE | VSSOP | DGS | 10 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAUAG | Level-2-260C-1 YEAR | -40 to 125 | BBG |
| OPA2357AIDGST | ACTIVE | VSSOP | DGS | 10 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAUAG | Level-2-260C-1 YEAR | -40 to 125 | BBG |
| OPA2357AIDGSTG4 | ACTIVE | VSSOP | DGS | 10 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAUAG | Level-2-260C-1 YEAR | -40 to 125 | BBG |
| OPA357AIDBVR | ACTIVE | SOT-23 | DBV | 6 | 3000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OADI |
| OPA357AIDBVRG4 | ACTIVE | SOT-23 | DBV | 6 | 3000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OADI |
| OPA357AIDBVT | ACTIVE | SOT-23 | DBV | 6 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OADI |
| OPA357AIDBVTG4 | ACTIVE | SOT-23 | DBV | 6 | 250 | Green (RoHS | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OADI |

Datasheet Update# 3

Literature Number Update- From: SBOS195D To: SBOS195E



OPA355, OPA2355, OPA3355

SBOS195E - MARCH 2001-REVISED APRIL 2018

| CI | nanges from Revision D (January 2004) to Revision E | Page |
|----|--|------|
| | Updated data sheet to latest TIS documentation and translation standards | |
| | Changed pin type typo from MSOP to VSSOP in Description section | |
| • | Added Device Information table | |
| • | Changed pin 1 of OPA355 D (SOIC) pinout drawing from "OUT" to "NC" | |
| | Deleted the Absolute Maximum Ratings tablenote: Input terminals are diode-clamped to the power-supply rails. Input signals that can swing more than 0.5V beyond the supply rails should be current limited to 10mA or less | |
| • | Added ESD Ratings table | |
| | Added Recommended Operating Conditions table | |
| | Added Thermal Information tables | |
| | Changed pin type typo from MSOP to VSSOP in Electrical Characteristics section | 11 |
| | Deleted the test conditions statement from Typical Characteristics graphs and moved the conditions to tablenotes below the graphs | 1 |
| | Added Detailed Description section | 1 |
| | Added Functional Block Diagram graphic | 1 |
| | Deleted Input and ESD Protection section | 1 |
| | Added Application and Implementation section | 1 |
| | Deleted Internal ESD Protection application | 1 |
| | Added Power Supply Recommendations section | 2 |
| | Added Layout Guidelines section | 2 |

Link to Full Datasheet: http://www.ti.com/product/OPA355

Affected Products:

| Orderable Device | Status (1) | Package Type | Package Drawing | Pins | Package Qty | Eco Plan | Lead/Ball Finish | MSL Peak Temp | Op Temp (°C) | Device Marking (4/5) |
|-------------------|---------------|--------------|--------------------|------|----------------|----------------------------|------------------|---------------------|--------------|-------------------------|
| OPA2355DGSA/250 | ACTIVE | VSSOP | DGS | 10 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAUAG | Level-2-260C-1 YEAR | -40 to 125 | D55 |
| OPA2355DGSA/250G4 | ACTIVE | VSSOP | DGS | 10 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAUAG | Level-2-260C-1 YEAR | -40 to 125 | D55 |
| OPA3355EA/250 | ACTIVE | TSSOP | PW | 14 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 3355EA |
| OPA3355EA/250G4 | ACTIVE | TSSOP | PW | 14 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 3355EA |
| OPA3355EA/2K5 | ACTIVE | TSSOP | PW | 14 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 3355EA |
| OPA3355UA | ACTIVE | SOIC | D | 14 | 50 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA3355UA |
| OPA3355UAG4 | ACTIVE | SOIC | D | 14 | 50 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA3355UA |
| OPA355NA/250 | ACTIVE | SOT-23 | DBV | 6 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | C55 |
| OPA355NA/250G4 | ACTIVE | SOT-23 | DBV | 6 | 250 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | C55 |
| OPA355NA/3K | ACTIVE | SOT-23 | DBV | 6 | 3000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | C55 |
| OPA355NA/3KG4 | ACTIVE | SOT-23 | DBV | 6 | 3000 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | C55 |
| OPA355UA | ACTIVE | SOIC | D | 8 | 75 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 355UA |
| OPA355UA/2K5 | ACTIVE | SOIC | D | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 355UA |
| OPA355UA/2K5G4 | ACTIVE | SOIC | D | 8 | 2500 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 355UA |
| OPA355UAG4 | ACTIVE | SOIC | D | 8 | 75 | Green (RoHS & no Sb/Br) | CU NIPDAU | Level-2-260C-1 YEAR | -40 to 125 | OPA 355UA |

Reason for Change:

To accurately reflect device characteristics.

Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):

No anticipated impact. This is a specification change announcement only. There are no changes to the actual device.

Changes to product identification resulting from this PCN:

None.

For TI datasheet updates, please consider mapping the TI device to a customer "Alert". Alerts can be managed from the ti.com website at https://www.ti.com/myti/docs/maintainalert.tsp

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

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