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# **DUAL GENERAL-PURPOSE OPERATIONAL AMPLIFIER**

Check for Samples: MC1558-DIE

## **FEATURES**

- Short-Circuit Protection
- Wide Common-Mode and Differential Voltage Ranges
- No Frequency Compensation Required
- Low Power Consumption
- No Latch-Up

## **DESCRIPTION**

The MC1558-DIE is a dual general-purpose operational amplifier, with each half electrically similar to the µA741, 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 MC1558-DIE is short-circuit protected and the internal frequency compensation ensures stability without external components.

## ORDERING INFORMATION(1)

PRODUCT	PACKAGE DESIGNATOR	PACKAGE	ORDERABLE PART NUMBER	PACKAGE QUANTITY	
MC4FF0	TD	Bare die in waffle pack <sup>(2)</sup>	MC1558TDC1	400	
MC1558	טו		MC1558TDC2	10	

<sup>(1)</sup> For the most current package and ordering information, see the Package Option Addendum at the end of this document, or see the TI web site at www.ti.com.



<sup>(2)</sup> Processing is per the Texas Instruments commercial production baseline and is in compliance with the Texas Instruments Quality Control System in effect at the time of manufacture. Electrical screening consists of DC parametric and functional testing at room temperature only. Unless otherwise specified by Texas Instruments AC performance and performance over temperature is not warranted. Visual Inspection is performed in accordance with MIL-STD-883 Test Method 2010 Condition B at 75X minimum.



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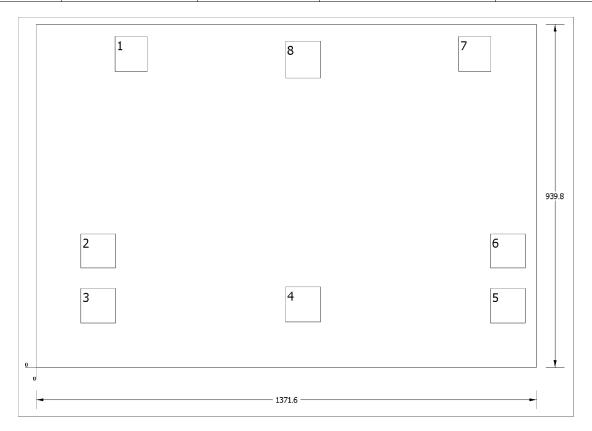


This integrated circuit can be damaged by ESD. Texas Instruments recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage.

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.

## **BARE DIE INFORMATION**

DIE THICKNESS BACKSIDE FINISH		BACKSIDE POTENTIAL	BOND PAD METALLIZATION COMPOSITION	BOND PAD THICKNESS	
10.5 mils.	Silicon with backgrind	Floating	AlCuTiW	1627 nm	



**Table 1. Bond Pad Coordinates in Microns** 

DESCRIPTION	PAD NUMBER	X MIN	Y MIN	X MAX	Y MAX
1OUT	1	215.9	810.26	304.8	906.78
1IN-	2	121.92	271.78	218.44	365.76
1IN+	3	121.92	120.65	218.44	217.17
VCC-	4	683.26	124.46	779.78	220.98
2IN+	5	1244.6	120.65	1341.12	217.17
2IN-	6	1244.6	271.78	1341.12	365.76
2OUT	7	1158.24	810.26	1247.14	906.78
VCC+	8	683.26	792.48	779.78	894.08

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## **PACKAGE OPTION ADDENDUM**

10-Oct-2013

#### PACKAGING INFORMATION

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Orderable Device	Status	Package Type	_	Pins	Package	Eco Plan	Lead/Ball Finish	MSL Peak Temp	Op Temp (°C)	Device Marking	Samples
	(1)		Drawing		Qty	(2)		(3)		(4/5)	
MC1558TDC1	ACTIVE			0	374	TBD	Call TI	N / A for Pkg Type	0 to 0		Samples
MC1558TDC2	ACTIVE			0	10	TBD	Call TI	N / A for Pkg Type	0 to 0		Samples

(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.
- (4) There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.
- (5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.

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