



### TS12011ITD1022T Information

Part Number TS12011ITD1022T

Manufacturer Touchstone Semiconductor
Category Integrated Circuits (ICs)

Linear - Amplifiers - Instrumentation, OP Amps,

**Buffer Amps** 

**Description** IC OPAMP GP 15KHZ RRO 10TDFN

Package 10-UFDFN Exposed Pad

For the pricing/inventory/lead time, please contact

us

Website: https://www.heisener.com E-mail: salesdept@heisener.com



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# **Certified Quality**

For Reference Only

Heisener's commitment to quality has shaped our processes for sourcing, testing, shipping, and every step in between. This foundation underlies each component we sell.









## **TS12011ITD1022T Specifications**

Manufacturer Part Number         TS12011ITD1022T           Manufacturer         Touchstone Semiconductor           Category         Integrated Circuits (ICs)           Linear - Amplifiers - Instrumentation, OP Amps, Buffer Amps           Package         10-UFDFN Exposed Pad           Series         -           Amplifier Type         General Purpose           Number of Circuits         1           Output Type         Push-Pull           Slew Rate         0.006 V/µs           Gain Bandwidth Product         15kHz           -3db Bandwidth         -           Current - Input Bias         20nA           Voltage - Input Offset         3.5mV           Current - Supply         1.1µA           Current - Output / Channel         500µA           Voltage - Supply, Single/Dual (±)         0.8 V ~ 2.5 V           Operating Temperature         -40°C ~ 85°C           Mounting Type         Surface Mount           Package / Case         10-UFDFN Exposed Pad           Supplier Device Package         10-TDFN (2x2)		
Category         Integrated Circuits (ICs)           Linear - Amplifiers - Instrumentation, OP Amps, Buffer Amps           Package         10-UFDFN Exposed Pad           Series         -           Amplifier Type         General Purpose           Number of Circuits         1           Output Type         Push-Pull           Slew Rate         0.006 V/μs           Gain Bandwidth Product         15kHz           -3db Bandwidth         -           Current - Input Bias         20nA           Voltage - Input Offset         3.5mV           Current - Supply         1.1μA           Current - Output / Channel         500μA           Voltage - Supply, Single/Dual (±)         0.8 V ~ 2.5 V           Operating Temperature         -40°C ~ 85°C           Mounting Type         Surface Mount           Package / Case         10-UFDFN Exposed Pad           Supplier Device Package         10-TDFN (2x2)	Manufacturer Part Number	TS12011ITD1022T
PackageLinear - Amplifiers - Instrumentation, OP Amps, Buffer AmpsPackage $10$ -UFDFN Exposed PadSeries-Amplifier TypeGeneral PurposeNumber of Circuits $1$ Output TypePush-PullSlew Rate $0.006 \text{ V/µs}$ Gain Bandwidth Product $15\text{kHz}$ -3db Bandwidth-Current - Input Bias $20\text{nA}$ Voltage - Input Offset $3.5\text{mV}$ Current - Supply $1.1\text{µA}$ Current - Output / Channel $500\text{µA}$ Voltage - Supply, Single/Dual ( $\pm$ ) $0.8 \text{ V} \sim 2.5 \text{ V}$ Operating Temperature $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$ Mounting TypeSurface MountPackage / Case $10$ -UFDFN Exposed PadSupplier Device Package $10$ -TDFN ( $2x2$ )	Manufacturer	Touchstone Semiconductor
Package10-UFDFN Exposed PadSeries-Amplifier TypeGeneral PurposeNumber of Circuits1Output TypePush-PullSlew Rate0.006 V/μsGain Bandwidth Product15kHz-3db Bandwidth-Current - Input Bias20nAVoltage - Input Offset3.5mVCurrent - Supply1.1μACurrent - Output / Channel500μAVoltage - Supply, Single/Dual (±)0.8 V ~ 2.5 VOperating Temperature-40°C ~ 85°CMounting TypeSurface MountPackage / Case10-UFDFN Exposed PadSupplier Device Package10-TDFN (2x2)	Category	Integrated Circuits (ICs)
Series         -           Amplifier Type         General Purpose           Number of Circuits         1           Output Type         Push-Pull           Slew Rate         0.006 V/μs           Gain Bandwidth Product         15kHz           -3db Bandwidth         -           Current - Input Bias         20nA           Voltage - Input Offset         3.5mV           Current - Supply         1.1μA           Current - Output / Channel         500μA           Voltage - Supply, Single/Dual (±)         0.8 V ~ 2.5 V           Operating Temperature         -40°C ~ 85°C           Mounting Type         Surface Mount           Package / Case         10-UFDFN Exposed Pad           Supplier Device Package         10-TDFN (2x2)		Linear - Amplifiers - Instrumentation, OP Amps, Buffer Amps
Amplifier TypeGeneral PurposeNumber of Circuits1Output TypePush-PullSlew Rate0.006 V/μsGain Bandwidth Product15kHz-3db Bandwidth-Current - Input Bias20nAVoltage - Input Offset3.5mVCurrent - Supply1.1μACurrent - Output / Channel500μAVoltage - Supply, Single/Dual (±)0.8 V ~ 2.5 VOperating Temperature-40°C ~ 85°CMounting TypeSurface MountPackage / Case10-UFDFN Exposed PadSupplier Device Package10-TDFN (2x2)	Package	10-UFDFN Exposed Pad
Number of Circuits         1           Output Type         Push-Pull           Slew Rate         0.006 V/μs           Gain Bandwidth Product         15kHz           -3db Bandwidth         -           Current - Input Bias         20nA           Voltage - Input Offset         3.5mV           Current - Supply         1.1μA           Current - Output / Channel         500μA           Voltage - Supply, Single/Dual (±)         0.8 V ~ 2.5 V           Operating Temperature         -40°C ~ 85°C           Mounting Type         Surface Mount           Package / Case         10-UFDFN Exposed Pad           Supplier Device Package         10-TDFN (2x2)	Series	-
Output Type Push-Pull Slew Rate 0.006 V/ $\mu$ s  Gain Bandwidth Product 15kHz -3db Bandwidth - Current - Input Bias 20nA Voltage - Input Offset 3.5mV  Current - Supply 1.1 $\mu$ A  Current - Output / Channel 500 $\mu$ A  Voltage - Supply, Single/Dual ( $\pm$ ) 0.8 V ~ 2.5 V  Operating Temperature -40°C ~ 85°C  Mounting Type Surface Mount Package / Case 10-UFDFN Exposed Pad  Supplier Device Package 10-TDFN (2x2)	Amplifier Type	General Purpose
Slew Rate $0.006 \text{ V/}\mu\text{s}$ Gain Bandwidth Product $15\text{kHz}$ -3db Bandwidth -  Current - Input Bias $20\text{nA}$ Voltage - Input Offset $3.5\text{mV}$ Current - Supply $1.1\mu\text{A}$ Current - Output / Channel $500\mu\text{A}$ Voltage - Supply, Single/Dual ( $\pm$ ) $0.8 \text{ V} \sim 2.5 \text{ V}$ Operating Temperature $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$ Mounting Type Surface Mount Package / Case $10\text{-UFDFN Exposed Pad}$ Supplier Device Package $10\text{-TDFN }(2\text{x2})$	Number of Circuits	1
Gain Bandwidth Product -3db Bandwidth - Current - Input Bias 20nA Voltage - Input Offset 3.5mV Current - Supply 1.1μA Current - Output / Channel 500μA Voltage - Supply, Single/Dual (±) 0.8 V ~ 2.5 V Operating Temperature -40°C ~ 85°C Mounting Type Surface Mount Package / Case 10-UFDFN Exposed Pad Supplier Device Package 10-TDFN (2x2)	Output Type	Push-Pull
-3db Bandwidth  Current - Input Bias  20nA  Voltage - Input Offset  3.5mV  Current - Supply  1.1μA  Current - Output / Channel  500μA  Voltage - Supply, Single/Dual (±)  Operating Temperature  -40°C ~ 85°C  Mounting Type  Surface Mount  Package / Case  10-UFDFN Exposed Pad  Supplier Device Package	Slew Rate	0.006 V/μs
Current - Input Bias 20nA  Voltage - Input Offset 3.5mV  Current - Supply 1.1 $\mu$ A  Current - Output / Channel 500 $\mu$ A  Voltage - Supply, Single/Dual ( $\pm$ ) 0.8 V ~ 2.5 V  Operating Temperature -40°C ~ 85°C  Mounting Type Surface Mount  Package / Case 10-UFDFN Exposed Pad  Supplier Device Package 10-TDFN (2x2)	Gain Bandwidth Product	15kHz
Voltage - Input Offset $3.5 mV$ Current - Supply $1.1 μA$ Current - Output / Channel $500μA$ Voltage - Supply, Single/Dual (±) $0.8 V \sim 2.5 V$ Operating Temperature $-40 °C \sim 85 °C$ Mounting TypeSurface MountPackage / Case $10$ -UFDFN Exposed PadSupplier Device Package $10$ -TDFN ( $2x2$ )	-3db Bandwidth	-
Current - Supply $1.1\mu A$ Current - Output / Channel $500\mu A$ Voltage - Supply, Single/Dual (±) $0.8 \text{ V} \sim 2.5 \text{ V}$ Operating Temperature $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$ Mounting TypeSurface MountPackage / Case $10\text{-UFDFN Exposed Pad}$ Supplier Device Package $10\text{-TDFN } (2x2)$	Current - Input Bias	20nA
Current - Output / Channel $500\mu A$ Voltage - Supply, Single/Dual (±) $0.8 \text{ V} \sim 2.5 \text{ V}$ Operating Temperature $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$ Mounting TypeSurface MountPackage / Case $10\text{-UFDFN Exposed Pad}$ Supplier Device Package $10\text{-TDFN } (2x2)$	Voltage - Input Offset	3.5mV
Voltage - Supply, Single/Dual ( $\pm$ ) 0.8 V ~ 2.5 V  Operating Temperature -40°C ~ 85°C  Mounting Type Surface Mount  Package / Case 10-UFDFN Exposed Pad  Supplier Device Package 10-TDFN ( $2x2$ )	Current - Supply	1.1μΑ
Operating Temperature -40°C ~ 85°C  Mounting Type Surface Mount  Package / Case 10-UFDFN Exposed Pad  Supplier Device Package 10-TDFN (2x2)	Current - Output / Channel	500μΑ
Mounting Type Surface Mount Package / Case 10-UFDFN Exposed Pad Supplier Device Package 10-TDFN (2x2)	Voltage - Supply, Single/Dual (±)	0.8 V ~ 2.5 V
Package / Case 10-UFDFN Exposed Pad Supplier Device Package 10-TDFN (2x2)	Operating Temperature	-40°C ~ 85°C
Supplier Device Package 10-TDFN (2x2)	Mounting Type	Surface Mount
	Package / Case	10-UFDFN Exposed Pad
Report errors?	Supplier Device Package	10-TDFN (2x2)
		Report errors?

#### TS12011ITD1022T Guarantees



#### **Quality Guarantees**

We provide 90 days warranty. \*

If the items you received were not in perfect quality, we would be responsible for your refund or replacement, but the items must be returned in their original condition.



#### **Service Guarantees**

We guarantee 100% customer satisfaction.

Our experienced sales team and tech support team back our services to satisfy all our customers.

## TS12011ITD1022T Payment Methods





















### TS12011ITD1022T Shipping Methods













If you have any question about TS12011ITD1022T, please do not hesitate to contact us!

Website: https://www.heisener.com E-mail: salesdept@heisener.com