

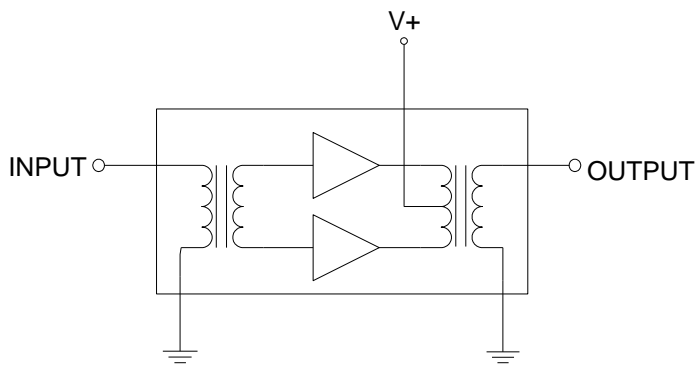
Product Description

The QPA3358 is a Push Pull amplifier module. The part employs GaAs die and is operated from 47 MHz to 1218 MHz. It provides excellent linearity and superior return loss performance with low noise and optimal reliability.



Package: SOT-115J

Functional Block Diagram



Product Features

- High Gain: 34dB at 1218MHz
- Excellent Linearity
- Superior Return Loss Performance
- Optimal Reliability
- Low Noise: 4.0dB
- Unconditionally stable under all Terminations
- 290 mA typ. at 24 VDC

Applications

- 47 – 1218 MHz CATV Amplifier Systems
- DOCSIS 3.1 Applications

Ordering Information

Part No.	Description
QPA3358	Box with 50 pcs

QPA3358 Absolute Maximum Ratings

Parameter	Value / Range
RF Input Voltage (single tone)	+70 dBmV
DC Supply over-voltage (5 minutes)	+30 V
Storage Temperature	-40 to 100 °C
Operating Mounting Base Temperature	-30 to 100 °C

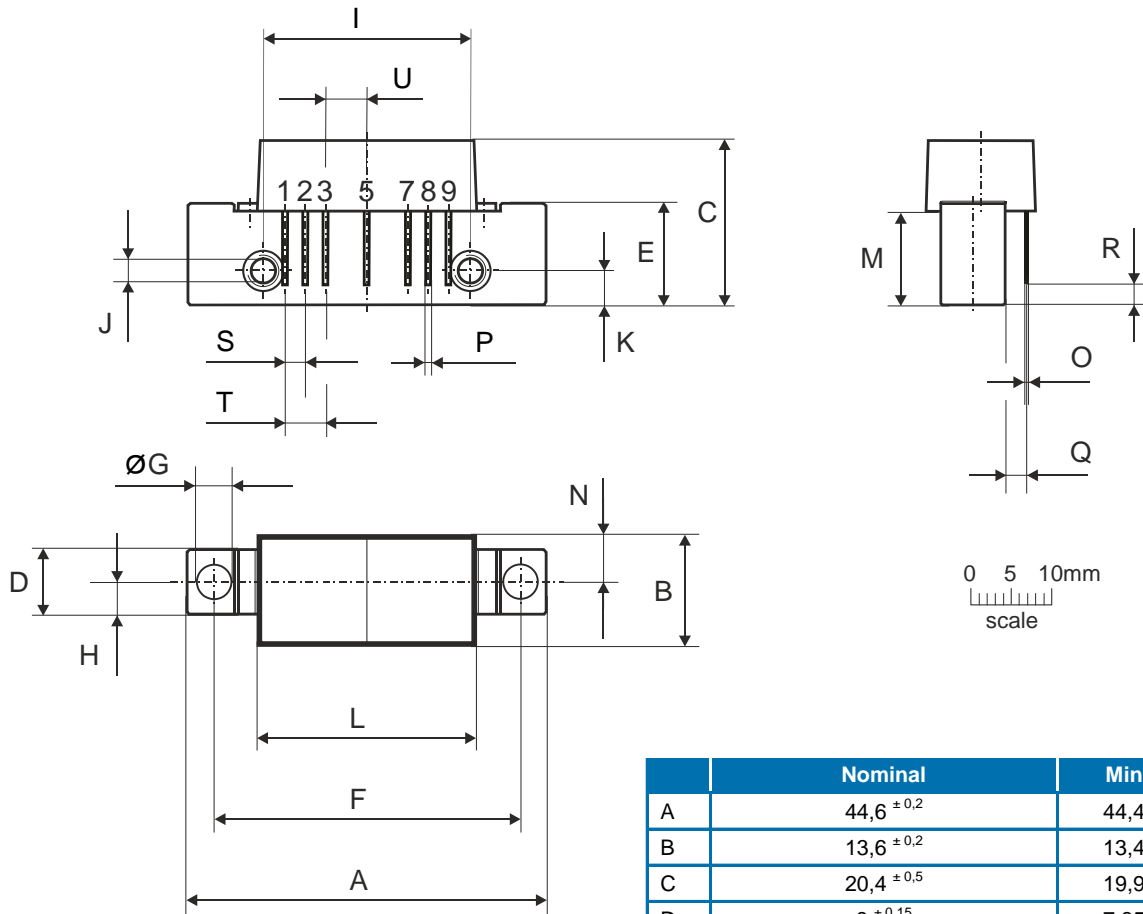
Operation of this device outside the parameter ranges given above may cause permanent damage.

Electrical Specifications

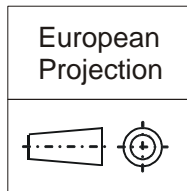
Parameter	Test Conditions: $V_+ = 24V$, $T_{MB} = 30^\circ C$, $Z_S = Z_L = 75\Omega$	Min	Typ	Max	Unit
Operational Frequency Range		47		1218	MHz
Gain	$f_o = 1218$ MHz		34.0		dB
Gain Slope	47 to 1218 MHz ^[1]		1.0		
Gain Flatness	47 to 1218 MHz		1.0		
Input Return Loss	$f_o = 50$ to 1003 MHz		18		dB
	$f_o = 1003$ to 1218 MHz		20		
Output Return Loss	$f_o = 50$ to 1003 MHz		19		dB
Output Return Loss	$f_o = 1003$ to 1218 MHz		17		
Noise Figure	$f_o = 50$ to 1218 MHz		4.0		dB
IDC			290		mA
CTB			-75		dBc
XMOD	$V_o = 47$ dBmV flat, 79 analog channels plus 111 digital channels (-6dB offset) ^{[2][3]}		-66		dBc
CSO			-70		dBc
CCN			65		dB

1. The slope is defined as the difference between the gain at the start frequency and the gain at the stop frequency.
2. 79 analog channels, NTSC frequency raster: 55.25MHz to 547.25MHz, +47.0dBmV flat, plus 111 digital channels, -6dB offset relative to the equivalent analog carrier.
3. Composite Triple Beat (CTB) - The CTB parameter is defined by ANSI/SCTE 6.
 Composite Second Order (CSO) - The CSO parameter (both sum and difference products) is defined by ANSI/SCTE 6.
 Cross Modulation (XMOD) - Cross modulation (XMOD) is defined by ANSI/SCTE 58, measured at baseband (selective voltmeter method), referenced to 100% modulation of the carrier being tested.
 Carrier to Composite Noise (CCN) - The CCN parameter is defined by ANSI/SCTE 17 (Test procedure for carrier to noise).

Package Drawing (Dimensions in millimeters)



Notes:



Pinning:

Pin	Name
1	Input
2-3	GND
4	
5	V+
6	
7-8	GND
9	Output

	Nominal	Min	Max
A	44,6 ^{±0,2}	44,4	44,8
B	13,6 ^{±0,2}	13,4	13,8
C	20,4 ^{±0,5}	19,9	20,9
D	8 ^{±0,15}	7,85	8,15
E	12,6 ^{±0,15}	12,45	12,75
F	38,1 ^{±0,2}	37,9	38,3
G	4 ^{+0,2/-0,05}	3,95	4,2
H	4 ^{±0,2}	3,8	4,2
I	25,4 ^{±0,2}	25,2	25,6
J	UNC 6-32	-	-
K	4,2 ^{±0,2}	4,0	4,4
L	27,2 ^{±0,2}	27,0	27,4
M	11,6 ^{±0,5}	11,1	12,1
N	5,8 ^{±0,4}	5,4	6,2
O	0,25 ^{±0,02}	0,23	0,27
P	0,45 ^{±0,03}	0,42	0,48
Q	2,54 ^{±0,3}	2,24	2,84
R	2,54 ^{±0,5}	2,04	3,04
S	2,54 ^{±0,25}	2,29	2,79
T	5,08 ^{±0,25}	4,83	5,33
U	5,08 ^{±0,25}	4,83	5,33

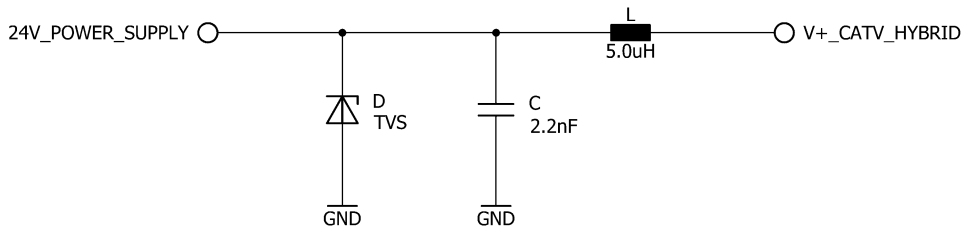
Handling Precautions

Parameter	Rating	Standard
ESD – Human Body Model (HBM)	1C	ANSI/ESD/JEDEC JS-001-2012
ESD – Charged Device Model (CDM)	C3	JEDEC JS-002



Caution!
ESD-Sensitive Device

Application Recommendation (V+)



TVS Diode PTVS28VS1UR is recommended in V+ Line for Transient Surge Protection

RoHS Compliance

This part is compliant with 2011/65/EU RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) as amended by Directive 2015/863/EU.

Contact Information

For the latest specifications, additional product information, worldwide sales and distribution locations:

Web: www.qorvo.com

Tel: 1-844-890-8163

Email: customer.support@qorvo.com

Important Notice

The information contained herein is believed to be reliable; however, Qorvo makes no warranties regarding the information contained herein and assumes no responsibility or liability whatsoever for the use of the information contained herein. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for Qorvo products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information. **THIS INFORMATION DOES NOT CONSTITUTE A WARRANTY WITH RESPECT TO THE PRODUCTS DESCRIBED HEREIN, AND QORVO HEREBY DISCLAIMS ANY AND ALL WARRANTIES WITH RESPECT TO SUCH PRODUCTS WHETHER EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

Without limiting the generality of the foregoing, Qorvo products are not warranted or authorized for use as critical components in medical, life-saving, or life-sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.

Copyright 2016 © Qorvo, Inc. | Qorvo is a registered trademark of Qorvo, Inc.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [RF Amplifier](#) category:

Click to view products by [Qorvo](#) manufacturer:

Other Similar products are found below :

[A82-1](#) [BGA622H6820XTSA1](#) [BGA 728L7 E6327](#) [BGB719N7ESDE6327XTMA1](#) [HMC397-SX](#) [HMC405](#) [HMC561-SX](#) [HMC8120-SX](#)
[HMC8121-SX](#) [HMC-ALH382-SX](#) [HMC-ALH476-SX](#) [SE2433T-R](#) [SMA3101-TL-E](#) [SMA39](#) [A66-1](#) [A66-3](#) [A67-1](#) [LX5535LQ](#) [LX5540LL](#)
[MAAM02350](#) [HMC3653LP3BETR](#) [HMC549MS8GETR](#) [HMC-ALH435-SX](#) [SMA101](#) [SMA32](#) [SMA411](#) [SMA531](#) [SST12LP19E-QX6E](#)
[WPM0510A](#) [HMC5929LS6TR](#) [HMC5879LS7TR](#) [HMC1126](#) [HMC1087F10](#) [HMC1086](#) [HMC1016](#) [SMA1212](#) [MAX2689EWS+T](#)
[MAAMSS0041TR](#) [MAAM37000-A1G](#) [LTC6430AIUF-15#PBF](#) [CHA5115-QDG](#) [SMA70-2](#) [SMA4011](#) [A231](#) [HMC-AUH232](#) [LX5511LQ](#)
[LX5511LQ-TR](#) [HMC7441-SX](#) [HMC-ALH310](#) [XD1001-BD-000V](#)