



# List of Component

No. PN000240 Rev.A

Date 2020/08/23

Item	Transistor
Part No.	QST9TR
Product mass	14 mg

Company Name	ROHM Co., Ltd.
Address	21, Saiin Mizosaki-cho, Ukyo-ku, Kyoto 615-8585, Japan

No.	Part Name	Substance Name	CAS No.	Mass (mg)	Concentration (wt%)	Remark
1	Mold compound	Silica	60676-86-0	4.620640	82.85171	
2		Epoxy resin	-	0.404292	7.24928	
3		Phenol resin	-	0.404292	7.24928	
4		Epoxy resin bromide	-	0.057995	1.03990	
5		Antimony trioxide	1309-64-4	0.028998	0.51995	
6		Organic phosphorus compounds	-	0.043497	0.77992	
7		Bismuth compounds	-	0.017286	0.30996	
8	Lead frame	Copper	7440-50-8	7.393701	99.90000	
9		Iron	7439-89-6	0.007400	0.10000	
10	Leadframe surface treatment	Silver	7440-22-4	0.121899	100.00000	
11	External plating	Tin	7440-31-5	0.226485	96.50000	
12		Silver	7440-22-4	0.007041	3.00000	
13		Copper	7440-50-8	0.001173	0.50000	
14	Die	Silicon	7440-21-3	0.471808	97.28000	
15		Nickel	7440-02-0	0.007081	1.46000	
16		Silver	7440-22-4	0.004123	0.85000	
17		Gold	7440-57-5	0.001988	0.41000	
18	Die attach (In)	Silver	7440-22-4	0.047961	83.70000	
19		Epoxy resin	9003-36-5	0.009339	16.30000	
20	Bonding wire	Gold	7440-57-5	0.123001	100.00000	

## Remarks

- All information in this document is furnished for exploratory or indicative purposes only.
- This information provides estimates of the average weights and content of component materials. And does not include impurities or metals diffused in the silicon.
- The contained volume/mass is a calculated value. For this reason, there are cases when the total volume/mass may differ from the product volume/mass.
- ROHM strives for the accuracy of the information,  
however, ROHM does not give any representations or warranties as to the accuracy or completeness of such information  
and shall have no liability for the consequences of use of such information.
- ROHM may make changes to information published in this document at any time and without notice.

## Notes

- 1) The information contained herein is subject to change without notice.
- 2) Before you use our Products, please contact our sales representative and verify the latest specifications :
- 3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors.  
Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. ROHM shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by ROHM.
- 4) Examples of application circuits, circuit constants and any other information contained herein are provided only to illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.
- 5) The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM or any other parties. ROHM shall have no responsibility whatsoever for any dispute arising out of the use of such technical information.
- 6) The Products are intended for use in general electronic equipment (i.e. AV/OA devices, communication, consumer systems, gaming/entertainment sets) as well as the applications indicated in this document.
- 7) The Products specified in this document are not designed to be radiation tolerant.
- 8) For use of our Products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a ROHM representative : transportation equipment (i.e. cars, ships, trains), primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, servers, solar cells, and power transmission systems.
- 9) Do not use our Products in applications requiring extremely high reliability, such as aerospace equipment, nuclear power control systems, and submarine repeaters.
- 10) ROHM shall have no responsibility for any damages or injury arising from non-compliance with the recommended usage conditions and specifications contained herein.
- 11) ROHM has used reasonable care to ensure the accuracy of the information contained in this document. However, ROHM does not warrant that such information is error-free, and ROHM shall have no responsibility for any damages arising from any inaccuracy or misprint of such information.
- 12) Please use the Products in accordance with any applicable environmental laws and regulations, such as the RoHS Directive. For more details, including RoHS compatibility, please contact a ROHM sales office. ROHM shall have no responsibility for any damages or losses resulting from non-compliance with any applicable laws or regulations.
- 13) When providing our Products and technologies contained in this document to other countries, you must abide by the procedures and provisions stipulated in all applicable export laws and regulations, including without limitation the US Export Administration Regulations and the Foreign Exchange and Foreign Trade Act.
- 14) This document, in part or in whole, may not be reprinted or reproduced without prior consent of ROHM.



Thank you for your accessing to ROHM product informations.  
More detail product informations and catalogs are available, please contact us.

## ROHM Customer Support System

<http://www.rohm.com/contact/>