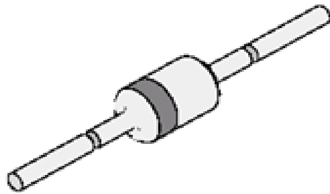
SEMICONDUCTOR
Small Signal Products

MATERIAL CONTENT LIST

PACKAGE FAMILY: **DO-41**
DATE: **20-May-2021**
REVISION: **11**



HALOGEN FREE

RoHS COMPLIANT

MATERIAL CONTENT					
Part	**Material**	**CAS N°**	**weight mg**	**% of weight**	**ppm of total weight**
Leads	Fe	7439-89-6	166.58	63.1%	531830
84.3%	Cu	7440-50-8	73.86	28.0%	235808
	Ni	7440-02-0	23.38	8.9%	74644
	CuO	1317-38-0	0.27	0.1%	862
	TOTAL		**264.1**		
Terminal finish	Sn	7440-31-5	4.34	96.5%	13856
1.4%	Ag	7440-22-4	0.16	3.5%	504
	TOTAL		**4.5**		
package	PbO *)	1317-36-8	27.15	61.3%	86671
glass	SiO_2	14808-60-7	14.12	31.9%	45089
14.1%	K_2O	12136-45-7	1.55	3.5%	4950
	Na_2O	1313-59-3	0.01	0.02%	28
	Al_2O_3	1344-28-1	0.05	0.12%	170
	B2O3	1303-86-2	1.33	3.0%	4243
	Sb^{3+} ***)	7440-36-0	0.09	0.2%	283
	TOTAL		**44.3**		
Silicon	Si	7440-21-3	0.25	100.0%	806
0.1%			**0.252**		
Chip	SiO_2	14808-60-7	0.005	55.2%	17
Passivation	PbO *)	1317-36-8	0.004	44.8%	14
0.003%			**0.010**		
chip	Ag	7440-22-4	0.05	98.8%	151
metallization	Ni	7440-02-0	0.0006	1.3%	2
0.02%	**TOTAL**		**0.05**		
Ink	Carbon black	1333-86-4	0.0077	34.3%	25
0.01%	Phenol	108-95-2	0.0011	5.0%	4
	Tributyl phosphate	126-73-8	0.0136	60.6%	43
	TOTAL		**0.022**		
Total weight			**313**		

Remarks: Total weight range ± 10%
*) Pb in glass of electronic components acc. RoHS exempted; Lead Monoxide just raw ingredient for glass production, but not present as such in glass anymore
**) Not detected
***) Antimony present as ion
Wave Soldering acc. CECC00802
Material Analyses Reports available on request