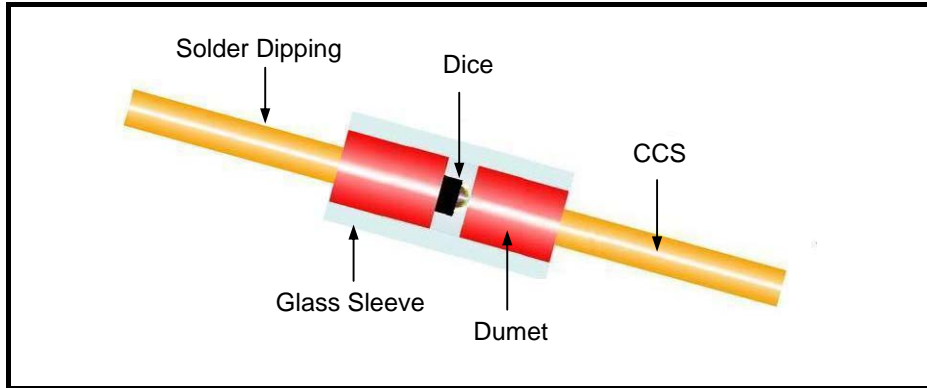


Chemical Composition of Diode (DO-34)



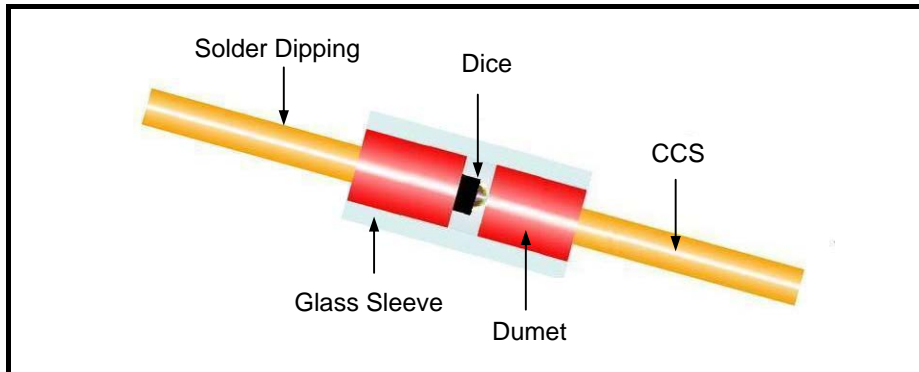
Weight: 92 mg / pc

15-Nov-07

Make up of material	Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Solder Dipping (0.4 mg)	Sn	7440-31-5	99.95 min.	99.97	0.39988
	Others	—	0.05 max.	0.03	0.00012
Glass Sleeve (26.08 mg)	PbO	1317-36-8	50 min.	60.5	15.7784
	SiO ₂	7631-86-9	10-50	33	8.6064
	K ₂ O	12136-45-7	1-10	4	1.0432
	B ₂ O ₃	1303-86-2	1-10	2.5	0.652
Lead Wire-Dumet (8.1 mg)	Core material (6.156 mg)	Ni	7440-02-0	41-43	2.594754
		Fe	7439-89-6	balance	3.561246
	Cladding copper (1.944 mg)	Cu	7440-50-8	100	100
Lead Wire-CCS (57.22 mg)	Fe	7439-89-6	82	82	46.9204
	Cu	7440-50-8	18	18	10.2996
Dice (0.05 mg)	Si	7440-21-3	70.9	70.9	0.03545
	Al	7429-90-5	0.1	0.1	0.00005
	Ag	7440-22-4	28.6	28.6	0.0143
	Ni	7440-02-0	0.4	0.4	0.00020
Ink (0.15 mg)	C	7440-44-0	100	100	0.15

Note: Lead (Pb) in glass of electronic components is exempted from RoHS directive (EU Directive 2002/95/EC)

Chemical Composition of Diode (DO-35)



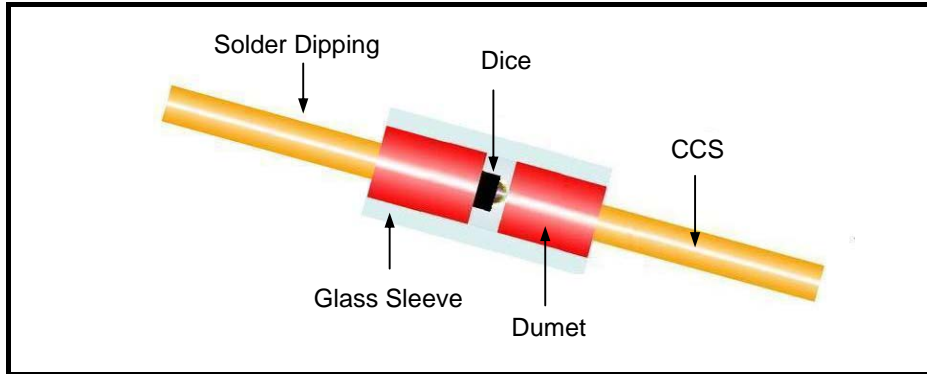
Weight: 125 mg / pc

15-Nov-07

Make up of material		Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Solder Dipping (1 mg)		Sn	7440-31-5	99.95 min.	99.97	0.9997
		Others	—	0.05 max.	0.03	0.0003
Glass Sleeve (33 mg)		PbO	1317-36-8	50 min.	60.5	19.965
		SiO ₂	7631-86-9	10-50	33	10.89
		K ₂ O	12136-45-7	1-10	4	1.32
		B ₂ O ₃	1303-86-2	1-10	2.5	0.825
Lead Wire-Dumet (11 mg)	Core material (8.36 mg)	Ni	7440-02-0	41-43	42.15	3.52374
		Fe	7439-89-6	balance	57.85	4.83626
	Cladding copper (2.64 mg)	Cu	7440-50-8	100	100	2.64
Lead Wire-CCS (79.72 mg)		Fe	7439-89-6	82	82	65.3704
		Cu	7440-50-8	18	18	14.3496
Dice (0.05 mg)		Si	7440-21-3	70.9	70.9	0.03545
		Al	7429-90-5	0.1	0.1	0.00005
		Ag	7440-22-4	28.6	28.6	0.0143
		Ni	7440-02-0	0.4	0.4	0.0002
Ink (0.23 mg)		C	7440-44-0	100	100	0.23

Note: Lead (Pb) in glass of electronic components is exempted from RoHS directive (EU Directive 2002/95/EC)

Chemical Composition of Diode (DO-41 Glass)



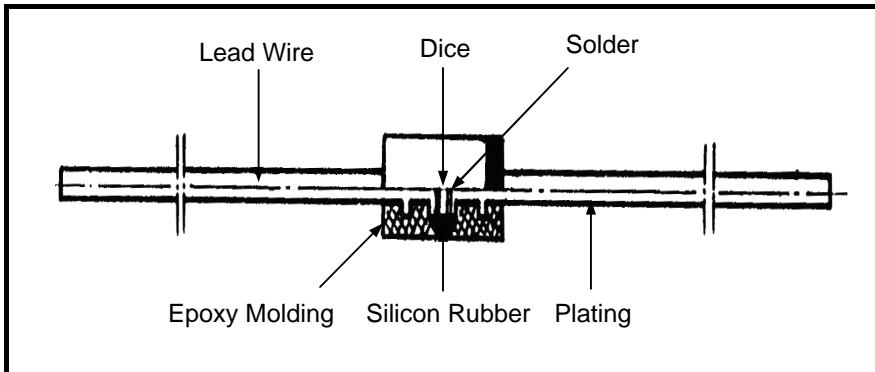
Weight: 253 mg / pc

15-Nov-07

Make up of material		Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Solder Dipping (5 mg)		Sn	7440-31-5	99.95 min.	99.97	4.9985
		Others	—	0.05 max.	0.03	0.0015
Glass Sleeve (49.835 mg)		PbO	1317-36-8	50 min.	60.5	30.150175
		SiO ₂	7631-86-9	10-50	33	16.44555
		K ₂ O	12136-45-7	1-10	4	1.9934
		B ₂ O ₃	1303-86-2	1-10	2.5	1.245875
Lead Wire-Dumet (47.234 mg)	Core material (35.89784 mg)	Ni	7440-02-0	41-43	42.15	15.13093956
		Fe	7439-89-6	balance	57.85	20.76690044
	Cladding copper (11.33616 mg)	Cu	7440-50-8	100	100	11.33616
Lead Wire-CCS (150.336 mg)		Fe	7439-89-6	82	82	123.27552
		Cu	7440-50-8	18	18	27.06048
Dice (0.165 mg)		Si	7440-21-3	70.9	70.9	0.116985
		Al	7429-90-5	0.1	0.1	0.000165
		Ag	7440-22-4	28.6	28.6	0.04719
		Ni	7440-02-0	0.4	0.4	0.00066
Ink (0.43 mg)		C	7440-44-0	100	100	0.43

Note: Lead (Pb) in glass of electronic components is exempted from RoHS directive (EU Directive 2002/95/EC)

Chemical Composition of Diode (DO-41 Plastic)



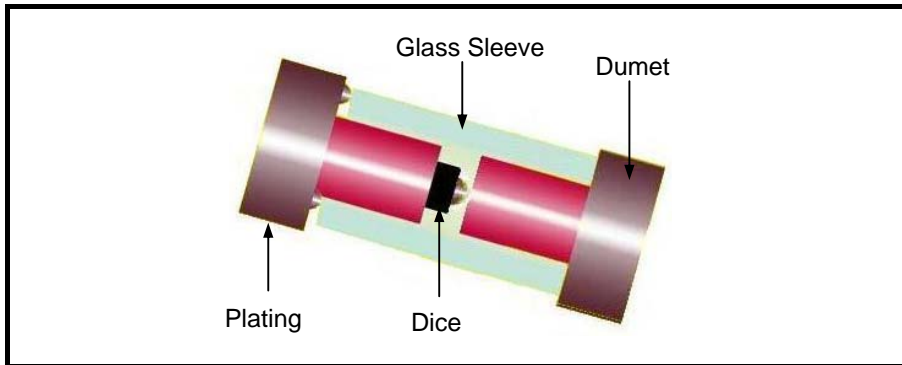
Weight: 328 mg / pc

15-Nov-07

Make up of material	Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (5.757 mg)	Sn	7440-31-5	99.95 min.	99.97	5.7552729
	Others	—	0.05 max.	0.03	0.0017271
Solder (0.5 mg)	Pb	7439-92-1	92.5	92.5	0.4625
	Ag	7440-22-4	5	5	0.025
	Cu	7440-50-8	2.5	2.5	0.0125
Epoxy Molding (98.4 mg)	Crystalline Silica (Quartz)	14808-60-7	70 - 90	78.2	76.9488
	Cristobalite	14464-46-1	0 - 1	0.5	0.492
	Bisphenol-A Epoxy Resin	1675-54-3	3 - 20	11	10.824
	Phenolic Resin Water-Soluble	9003-35-4	2 - 15	10	9.84
	Carbon Black	1333-86-4	0.1 - 0.5	0.3	0.2952
Lead Wire (221.59 mg)	Cu	7440-50-8	100	100	221.59
Dice (0.693 mg)	Si	7440-21-3	90.8	90.8	0.629244
	P	7723-14-0	2.5	2.5	0.017325
	Ni	7440-02-0	5	5	0.03465
	Be	7440-41-7	1.7	1.7	0.011781
Silicon Rubber (1 mg)	Si	7440-21-3	100	100	1
Ink (0.06 mg)	C	7440-44-0	100	100	0.06

Note: Lead (Pb) in high melting temperature type solders is exempted from RoHS directive (EU Directive 2002/95/EC).

Chemical Composition of Diode (LS-31)



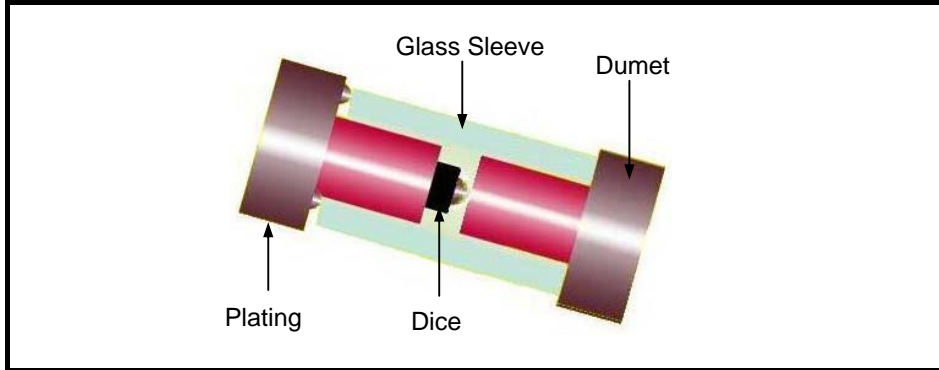
Weight: 12.3 mg / pc

15-Nov-07

Make up of material		Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.25 mg)		Sn	7440-31-5	99.95 min.	99.97	0.249925
		Others	—	0.05 max.	0.03	0.000075
Glass Sleeve (4.4 mg)		PbO	1317-36-8	50 min.	60.5	2.662
		SiO ₂	7631-86-9	10-50	33	1.452
		K ₂ O	12136-45-7	1-10	4	0.176
		B ₂ O ₃	1303-86-2	1-10	2.5	0.11
Lead Wire- Dumet (7.5 mg)	Core material (5.7 mg)	Ni	7440-02-0	41-43	42.15	2.40255
		Fe	7439-89-6	balance	57.85	3.29745
	Cladding copper (1.8 mg)	Cu	7440-50-8	100	100	1.8
Dice (0.05 mg)		Si	7440-21-3	70.9	70.9	0.03545
		Al	7429-90-5	0.1	0.1	0.00005
		Ag	7440-22-4	28.6	28.6	0.0143
		Ni	7440-02-0	0.4	0.4	0.0002
Ink (0.1 mg)		C	7440-44-0	100	100	0.1

Note: Lead (Pb) in glass of electronic components is exempted from RoHS directive(EU Directive 2002/95/EC)

Chemical Composition of Diode (LS-34)



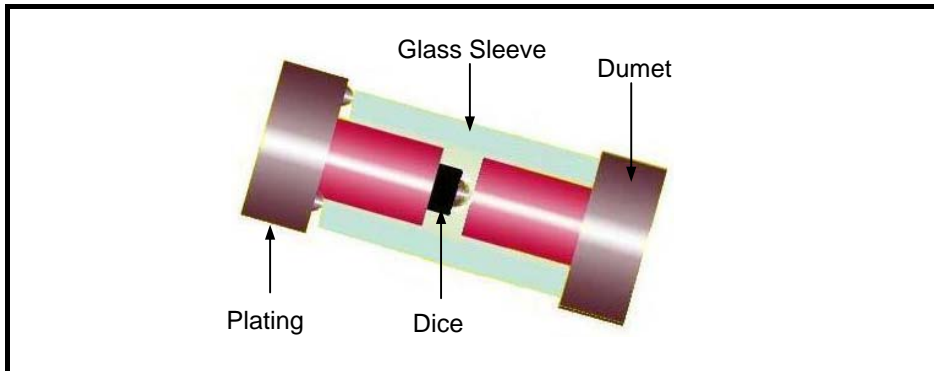
Weight: 30.8 mg / pc

15-Nov-07

Make up of material		Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.3 mg)		Sn	7440-31-5	99.95 min.	99.97	0.29991
		Others	—	0.05 max.	0.03	0.00009
Glass Sleeve (11.66 mg)		PbO	1317-36-8	50 min.	60.5	7.0543
		SiO ₂	7631-86-9	10-50	33	3.8478
		K ₂ O	12136-45-7	1-10	4	0.4664
		B ₂ O ₃	1303-86-2	1-10	2.5	0.2915
Lead Wire-Dumet (18.6 mg)	Core material (14.136 mg)	Ni	7440-02-0	41-43	42.15	5.958324
		Fe	7439-89-6	balance	57.85	8.177676
	Cladding copper (4.464 mg)	Cu	7440-50-8	100	100	4.464
Dice (0.05 mg)		Si	7440-21-3	70.9	70.9	0.03545
		Al	7429-90-5	0.1	0.1	0.00005
		Ag	7440-22-4	28.6	28.6	0.0143
		Ni	7440-02-0	0.4	0.4	0.0002
Ink (0.19 mg)		C	7440-44-0	100	100	0.19

Note: Lead (Pb) in glass of electronic components is exempted from RoHS directive (EU Directive 2002/95/EC)

Chemical Composition of Diode (LL-34)



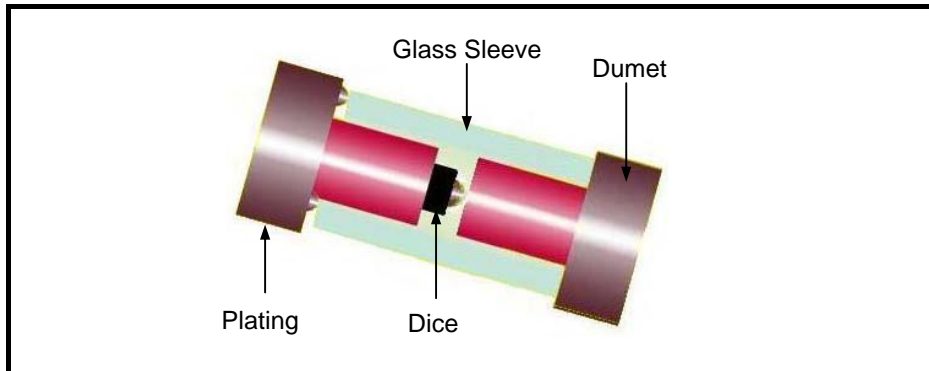
Weight: 30.6 mg / pc

15-Nov-07

Make up of material		Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.3 mg)		Sn	7440-31-5	99.95 min.	99.97	0.29991
		Others	—	0.05 max.	0.03	0.00009
Glass Sleeve (11.46 mg)		PbO	1317-36-8	50 min.	60.5	6.9333
		SiO ₂	7631-86-9	10-50	33	3.7818
		K ₂ O	12136-45-7	1-10	4	0.4584
		B ₂ O ₃	1303-86-2	1-10	2.5	0.2865
Lead Wire-Dumet (18.6 mg)	Core material (14.136 mg)	Ni	7440-02-0	41-43	42.15	5.958324
		Fe	7439-89-6	balance	57.85	8.177676
	Cladding copper (4.464 mg)	Cu	7440-50-8	100	100	4.464
Dice (0.05 mg)		Si	7440-21-3	70.9	70.9	0.03545
		Al	7429-90-5	0.1	0.1	0.00005
		Ag	7440-22-4	28.6	28.6	0.0143
		Ni	7440-02-0	0.4	0.4	0.0002
Ink (0.19 mg)		C	7440-44-0	100	100	0.19

Note: Lead (Pb) in glass of electronic components is exempted from RoHS directive (EU Directive 2002/95/EC)

Chemical Composition of Diode (LL-41 Glass)



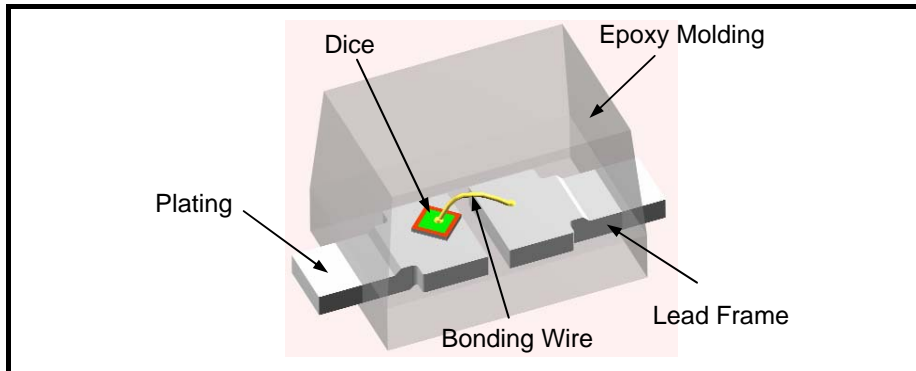
Weight: 129.9 mg / pc

15-Nov-07

Make up of material		Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.4 mg)		Sn	7440-31-5	99.95 min.	99.97	0.39988
		Others	—	0.05 max.	0.03	0.00012
Glass Sleeve (47.395 mg)		PbO	1317-36-8	50 min.	60.5	28.673975
		SiO ₂	7631-86-9	10-50	33	15.64035
		K ₂ O	12136-45-7	1-10	4	1.8958
		B ₂ O ₃	1303-86-2	1-10	2.5	1.184875
Lead Wire- Dumet (81.64 mg)	Core material (62.0464 mg)	Ni	7440-02-0	41-43	42.15	26.1525576
		Fe	7439-89-6	balance	57.85	35.8938424
	Cladding copper (19.5936 mg)	Cu	7440-50-8	100	100	19.5936
Dice (0.165 mg)		Si	7440-21-3	70.9	70.9	0.116985
		Al	7429-90-5	0.1	0.1	0.000165
		Ag	7440-22-4	28.6	28.6	0.04719
		Ni	7440-02-0	0.4	0.4	0.00066
Ink (0.3 mg)		C	7440-44-0	100	100	0.3

Note: Lead (Pb) in glass of electronic components is exempted from RoHS directive (EU Directive 2002/95/EC)

Chemical Composition of Diode (SOD-123)

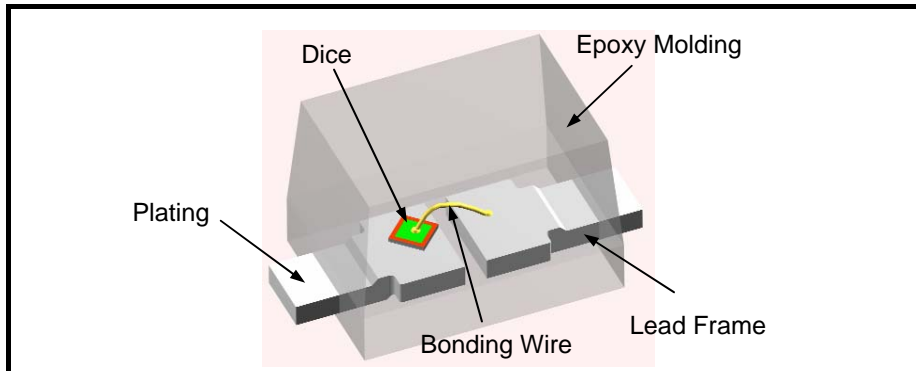


Weight: 9.15 mg / pc

15-Nov-07

Make up of material	Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.051 mg)	Sn	7440-31-5	99.95 min.	99.97	0.0509847
	Others	—	0.05 max.	0.03	0.0000153
Epoxy Molding (6.627 mg)	Crystalline Silica (Quartz)	14808-60-7	70 - 90	78.2	5.182314
	Cristobalite	14464-46-1	0 - 1	0.5	0.033135
	Bisphenol-A Epoxy Resin	1675-54-3	3 - 20	10	0.6627
	Phenolic Resin Water-Soluble	9003-35-4	2 - 15	9.5	0.629565
	Antimony Trioxide	1309-64-4	0.1 - 3	1.5	0.099405
	Carbon Black	1333-86-4	0.1 - 0.5	0.3	0.019881
Bonding Wire (0.005 mg)	Au	7440-57-5	99.99 min.	99.998	0.0049999
	Others	—	0.01 max.	0.002	0.0000001
Lead Frame (2.417 mg)	Ni	7440-02-0	40 - 42	40.34	0.9750178
	Fe	7439-89-6	balance	59.66	1.4419822
Dice (0.05 mg)	Basis	Si	7440-21-3	72.5	0.03625
	Obverse Metal	Al	7429-90-5	0.9	0.00045
	Back Metal	Au	7440-57-5	26.6	0.0133

Chemical Composition of Diode (SOD-323)

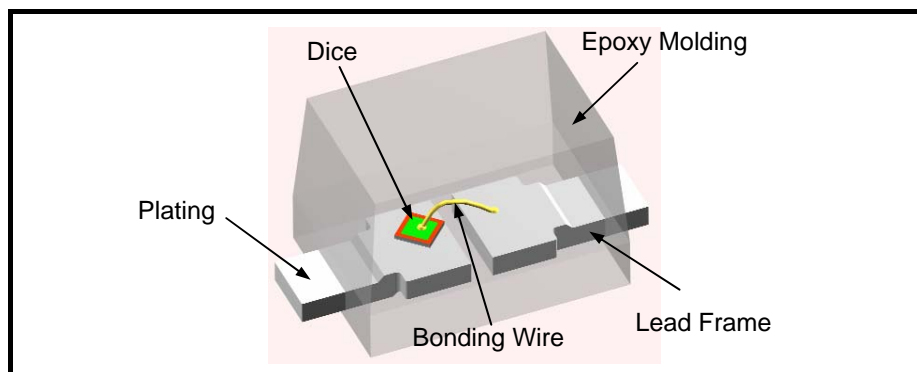


Weight: 4.6 mg / pc

15-Nov-07

Make up of material	Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.034 mg)	Sn	7440-31-5	99.95 min.	99.97	0.0339898
	Others	—	0.05 max.	0.03	0.0000102
Epoxy Molding (3.4065 mg)	Crystalline Silica (Quartz)	14808-60-7	70 - 90	78.2	2.663883
	Cristobalite	14464-46-1	0 - 1	0.5	0.0170325
	Bisphenol-A Epoxy Resin	1675-54-3	3 - 20	10	0.34065
	Phenolic Resin Water-Soluble	9003-35-4	2 - 15	9.5	0.3236175
	Antimony Trioxide	1309-64-4	0.1 - 3	1.5	0.0510975
	Carbon Black	1333-86-4	0.1 - 0.5	0.3	0.0102195
Bonding Wire (0.0045 mg)	Au	7440-57-5	99.99 min.	99.998	0.00449991
	Others	—	0.01 max.	0.002	0.00000009
Lead Frame (1.105 mg)	Ni	7440-02-0	40 - 42	40.34	0.445757
	Fe	7439-89-6	balance	59.66	0.659243
Dice (0.05 mg)	Basis	Si	7440-21-3	72.5	0.03625
	Obverse Metal	Al	7429-90-5	0.9	0.00045
	Back Metal	Au	7440-57-5	26.6	0.0133

Chemical Composition of Diode (SOD-523)

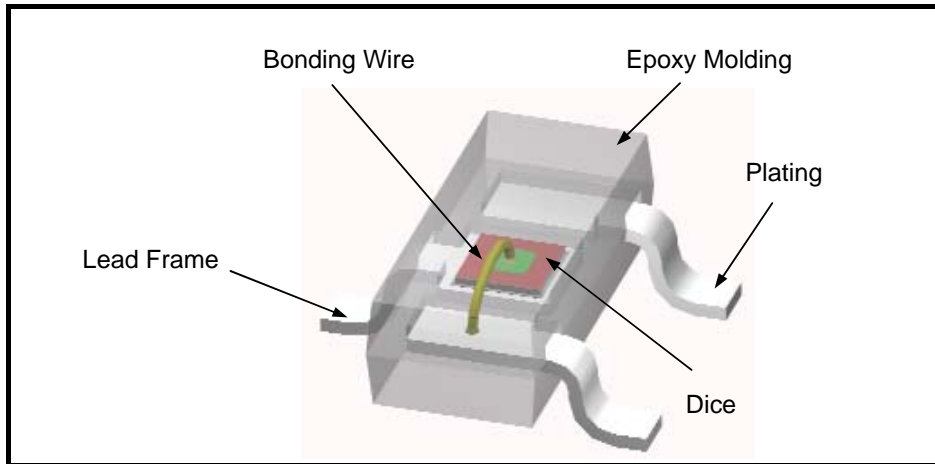


Weight: 1.47 mg / pc

15-Nov-07

Make up of material	Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.018 mg)	Sn	7440-31-5	99.95 min.	99.97	0.0179946
	Others	—	0.05 max.	0.03	0.0000054
Epoxy Molding (0.8475 mg)	Crystalline Silica (Quartz)	14808-60-7	70 - 90	78.2	0.662745
	Cristobalite	14464-46-1	0 - 1	0.5	0.0042375
	Bisphenol-A Epoxy Resin	1675-54-3	3- 20	10	0.08475
	Phenolic Resin Water-Soluble	9003-35-4	2- 15	9.5	0.0805125
	Antimony Trioxide	1309-64-4	0.1 - 3	1.5	0.0127125
	Carbon Black	1333-86-4	0.1 - 0.5	0.3	0.0025425
Bonding Wire (0.0035 mg)	Au	7440-57-5	99.99 min.	99.998	0.00349993
	Others	—	0.01 max.	0.002	0.00000007
Lead Frame (0.553 mg)	Ni	7440-02-0	40 - 42	40.34	0.2230802
	Fe	7439-89-6	balance	59.66	0.3299198
Dice (0.048 mg)	Basis	Si	7440-21-3	72.5	0.0348
	Obverse Metal	Al	7429-90-5	0.9	0.000432
	Back Metal	Au	7440-57-5	26.6	0.012768

Chemical Composition of Diode (SOT-23 Single Diode)

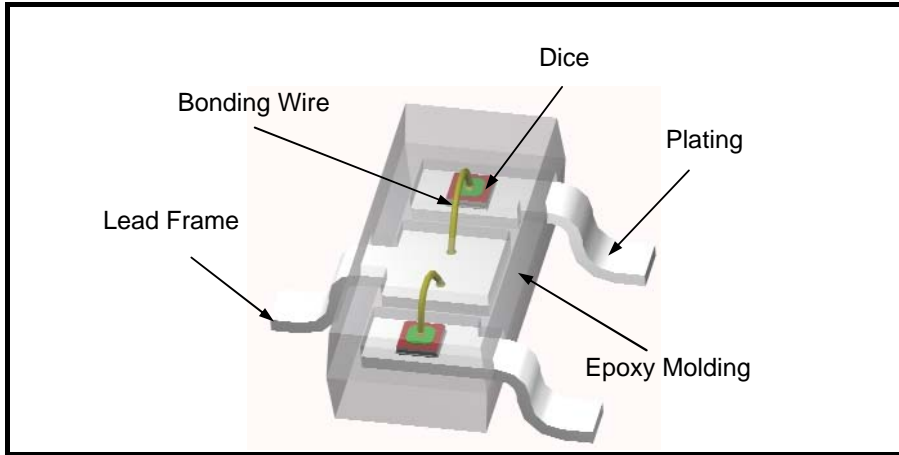


Weight: 8.72 mg / pc

15-Nov-07

Make up of material	Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.14 mg)	Sn	7440-31-5	99.95 min.	99.97	0.139958
	Others	—	0.05 max.	0.03	0.000042
Epoxy Molding (6.0033 mg)	Crystalline Silica (Quartz)	14808-60-7	70 - 90	78.2	4.6945806
	Cristobalite	14464-46-1	0 - 1	0.5	0.0300165
	Bisphenol-A Epoxy Resin	1675-54-3	3 - 20	10	0.60033
	Phenolic Resin Water-Soluble	9003-35-4	2 - 15	9.5	0.5703135
	Antimony Trioxide	1309-64-4	0.1 - 3	1.5	0.0900495
	Carbon Black	1333-86-4	0.1 - 0.5	0.3	0.0180099
Bonding Wire (0.038 mg)	Au	7440-57-5	99.99 min.	99.998	0.03799924
	Others	—	0.01 max.	0.002	0.00000076
Lead Frame (2.526 mg)	Ni	7440-02-0	40 - 42	40.34	1.0189884
	Fe	7439-89-6	balance	59.66	1.5070116
Dice (0.0127 mg)	Basis	Si	7440-21-3	72.5	0.0092075
	Obverse Metal	Al	7429-90-5	0.9	0.0001143
	Back Metal	Au	7440-57-5	26.6	0.0033782

Chemical Composition of Diode (SOT-23 Double Diode)

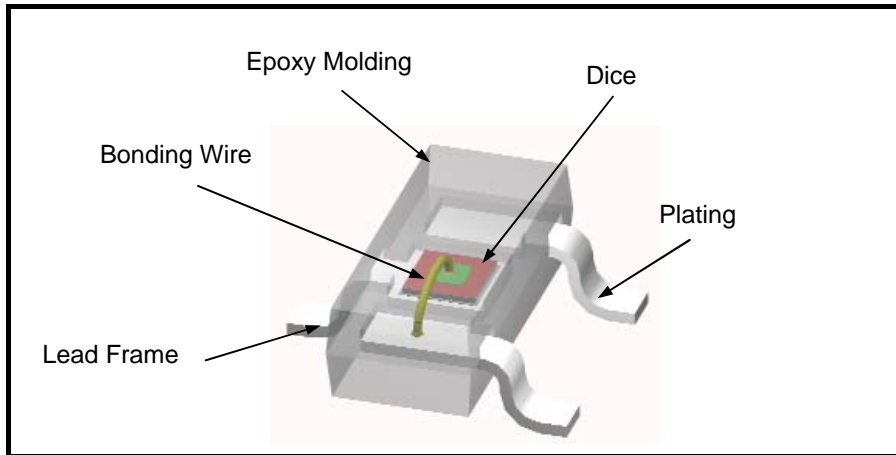


Weight: 8.72 mg / pc

15-Nov-07

Make up of material	Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.14 mg)	Sn	7440-31-5	99.95 min.	99.97	0.139958
	Others	—	0.05 max.	0.03	0.000042
Epoxy Molding (5.9526 mg)	Crystalline Silica (Quartz)	14808-60-7	70 - 90	78.2	4.6549332
	Cristobalite	14464-46-1	0 - 1	0.5	0.029763
	Bisphenol-A Epoxy Resin	1675-54-3	3 - 20	10	0.59526
	Phenolic Resin Water-Soluble	9003-35-4	2 - 15	9.5	0.565497
	Antimony Trioxide	1309-64-4	0.1 - 3	1.5	0.089289
	Carbon Black	1333-86-4	0.1 - 0.5	0.3	0.0178578
Bonding Wire (0.076 mg)	Au	7440-57-5	99.99 min.	99.998	0.07599848
	Others	—	0.01 max.	0.002	0.00000152
Lead Frame (2.526 mg)	Ni	7440-02-0	40 - 42	40.34	1.0189884
	Fe	7439-89-6	balance	59.66	1.5070116
Dice (0.0254 mg)	Basis	Si	7440-21-3	72.5	0.018415
	Obverse Metal	Al	7429-90-5	0.9	0.0002286
	Back Metal	Au	7440-57-5	26.6	0.0067564

Chemical Composition of Diode (SOT-323 Single Diode)

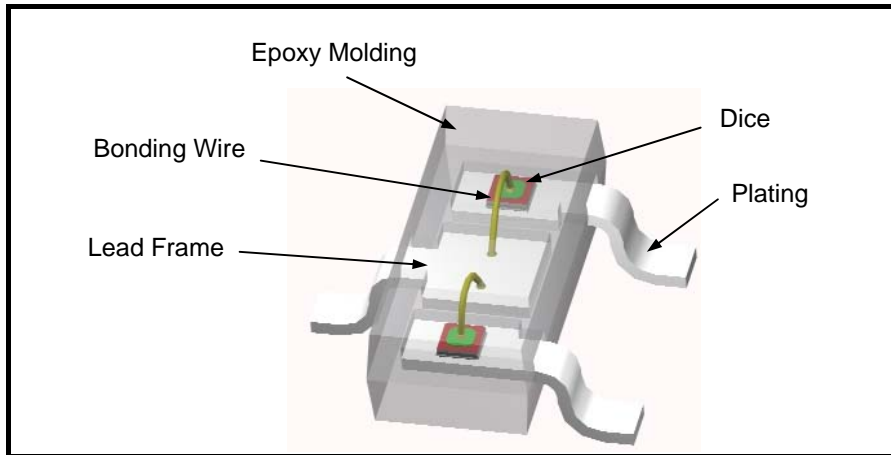


Weight: 5 mg / pc

15-Nov-07

Make up of material	Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.08 mg)	Sn	7440-31-5	99.95 min.	99.97	0.079976
	Others	—	0.05 max.	0.03	0.000024
Epoxy Molding (3.4373 mg)	Crystalline Silica (Quartz)	14808-60-7	70 - 90	78.2	2.6879686
	Cristobalite	14464-46-1	0 - 1	0.5	0.0171865
	Bisphenol-A Epoxy Resin	1675-54-3	3 - 20	10	0.34373
	Phenolic Resin Water-Soluble	9003-35-4	2 - 15	9.5	0.3265435
	Antimony Trioxide	1309-64-4	0.1 - 3	1.5	0.0515595
	Carbon Black	1333-86-4	0.1 - 0.5	0.3	0.0103119
Bonding Wire (0.022 mg)	Au	7440-57-5	99.99 min.	99.998	0.02199956
	Others	—	0.01 max.	0.002	0.00000044
Lead Frame (1.448 mg)	Ni	7440-02-0	40 - 42	40.34	0.5841232
	Fe	7439-89-6	balance	59.66	0.8638768
Dice (0.0127 mg)	Basis	Si	7440-21-3	72.5	0.0092075
	Obverse Metal	Al	7429-90-5	0.9	0.0001143
	Back Metal	Au	7440-57-5	26.6	0.0033782

Chemical Composition of Diode (SOT-323 Double Diode)



Weight: 5 mg / pc

15-Nov-07

Make up of material	Chemical Composition	CAS No.	Content Spec. (%)	Content (%)	Substance Weight (mg)
Plating (0.08 mg)	Sn	7440-31-5	99.95 min.	99.97	0.079976
	Others	—	0.05 max.	0.03	0.000024
Epoxy Molding (3.4026 mg)	Crystalline Silica (Quartz)	14808-60-7	70 - 90	78.2	2.6608332
	Cristobalite	14464-46-1	0 - 1	0.5	0.017013
	Bisphenol-A Epoxy Resin	1675-54-3	3 - 20	10	0.34026
	Phenolic Resin Water-Soluble	9003-35-4	2 - 15	9.5	0.323247
	Antimony Trioxide	1309-64-4	0.1 - 3	1.5	0.051039
	Carbon Black	1333-86-4	0.1 - 0.5	0.3	0.0102078
Bonding Wire (0.044 mg)	Au	7440-57-5	99.99 min.	99.998	0.04399912
	Others	—	0.01 max.	0.002	0.00000088
Lead Frame (1.448 mg)	Ni	7440-02-0	40 - 42	40.34	0.5841232
	Fe	7439-89-6	balance	59.66	0.8638768
Dice (0.0254 mg)	Basis	Si	7440-21-3	72.5	0.018415
	Obverse Metal	Al	7429-90-5	0.9	0.0002286
	Back Metal	Au	7440-57-5	26.6	0.0067564