

TLV1702AIDGKR

Quality, reliability & packaging data download

Status: ACTIVE

Report date: 05/04/2026



Assembly site: **TI MALAYSIA A/T**

RoHS	Yes
REACH	Yes
Device marking	1702
Lead finish/Ball material	NiPdAu
MSL rating/Peak reflow	Level-1-260C-UNLIM
Rating	Catalog

Material content

Component	Substance	CAS Number	Homogeneous Material Level			Component Level	
			Amount (mg)	Percentage %	ppm	Percentage %	ppm
Bond Wire							
Copper and Its Alloys	Copper	7440-50-8	0.041236	97.586142	975861	0.089589	896
Not Categorized	Proprietary Materials	—	0.000005	0.011833	118	0.000011	0
Precious Metals	Palladium	7440-05-3	0.001014	2.399659	23997	0.002203	22
Precious Metals	Silver	7440-22-4	0.000001	0.002367	24	0.000002	0
Sub-total	—	—	0.042256	100	1000000	0.091805	918
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.085296	80.000000	800000	0.185313	1853
Thermoplastics	Epoxy	85954-11-6	0.021324	20.000000	200000	0.046328	463
Sub-total	—	—	0.106620	100	1000000	0.231641	2316
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	27.923323	97.050000	970500	60.665908	606659
Copper and Its Alloys	Iron	7439-89-6	0.748075	2.600001	26000	1.625260	16253
Copper and Its Alloys	Phosphorus	7723-14-0	0.043158	0.149999	1500	0.093765	938
Zinc and Its Alloys	Zinc	7440-66-6	0.057544	0.199999	2000	0.125019	1250
Sub-total	—	—	28.772100	100	1000000	62.509952	625100
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.026634	95.121429	951214	0.057865	579
Precious Metals	Gold	7440-57-5	0.000218	0.778571	7786	0.000474	5
Precious Metals	Palladium	7440-05-3	0.001148	4.100000	41000	0.002494	25
Sub-total	—	—	0.028000	100	1000000	0.060832	608
Mold Compound							
Not Categorized	Phenolic Resin	9003-35-4	0.589053	3.500000	35000	1.279770	12798
Other Inorganic Materials	Fused Silica	60676-86-0	14.389722	85.500001	855000	31.262954	312630
Other Organic Materials	Carbon Black	1333-86-4	0.08415	0.499998	5000	0.182823	1828
Thermoplastics	Epoxy	85954-11-6	1.767159	10.500001	105000	3.839310	38393
Sub-total	—	—	16.830084	100	1000000	36.564858	365649
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.248971	100.000000	1000000	0.540912	5409
Sub-total	—	—	0.248971	100	1000000	0.540912	5409
Total	—	—	46.028031	—	—	100	1000000

Assembly site: Ext-Mfg

RoHS	Yes
REACH	Yes
Device marking	1702
Lead finish/Ball material	Sn
MSL rating/Peak reflow	Level-1-260C-UNLIM
Rating	Catalog

Material content

Component	Substance	CAS Number	Amount (mg)	Homogeneous Material Level		Component Level	
				Percentage %	ppm	Percentage %	ppm
Bond Wire							
Copper and Its Alloys	Copper	7440-50-8	0.039955	97.387087	973871	0.138895	1389
Precious Metals	Gold	7440-57-5	0.000088	0.214493	2145	0.000306	3
Precious Metals	Palladium	7440-05-3	0.000984	2.398421	23984	0.003421	34
Sub-total	—	—	0.041027	100	1000000	0.142622	1426
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.089785	80.000178	800002	0.312119	3121
Thermoplastics	Epoxy	85954-11-6	0.022446	19.999822	199998	0.078029	780
Sub-total	—	—	0.112231	100	1000000	0.390147	3901
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	11.1297	96.780000	967800	38.690048	386900
Copper and Its Alloys	Iron	7439-89-6	0.27025	2.350000	23500	0.939467	9395
Copper and Its Alloys	Phosphorus	7723-14-0	0.0092	0.080000	800	0.031982	320
Other Nonferrous Metals and Alloys	Lead	7439-92-1	0.00115	0.010000	100	0.003998	40
Precious Metals	Silver	7440-22-4	0.07475	0.650000	6500	0.259853	2599
Zinc and Its Alloys	Zinc	7440-66-6	0.01495	0.130000	1300	0.051971	520
Sub-total	—	—	11.50000	100	1000000	39.977318	399773
Lead Frame Plating							
Other Nonferrous Metals and Alloys	Tin	7440-31-5	0.07	100.000000	1000000	0.243340	2433
Sub-total	—	—	0.07	100	1000000	0.243340	2433
Mold Compound							

Other Inorganic Materials	Fused Silica	60676-86-0	14.274971	85.000003	850000	49.623918	496239
Other Organic Materials	Carbon Black	1333-86-4	0.092367	0.549997	5500	0.321094	3211
Thermoplastics	Epoxy	85954-11-6	2.426745	14.450000	144500	8.436066	84361
Sub-total	—	—	16.794083	100	1000000	58.381078	583811
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.248971	100.000000	1000000	0.865495	8655
Sub-total	—	—	0.248971	100	1000000	0.865495	8655
Total	—	—	28.766312	—	—	100	1000000

Assembly site: Ext-Mfg

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				Percentage %	ppm	Percentage %	ppm
Bond Wire							
Copper and Its Alloys	Copper	7440-50-8	0.039863	99.984951	999850	0.130031	1300
Not Categorized	Proprietary Materials	—	0.000005	0.012541	125	0.000016	0
Precious Metals	Silver	7440-22-4	0.000001	0.002508	25	0.000003	0
Sub-total	—	—	0.039869	100	1000000	0.130050	1301
Die Attach Adhesive							
Precious Metals	Silver	7440-22-4	0.078225	82.000294	820003	0.255165	2552
Thermoplastics	Epoxy	85954-11-6	0.017171	17.999706	179997	0.056011	560
Sub-total	—	—	0.095396	100	1000000	0.311176	3112
Lead Frame							
Copper and Its Alloys	Copper	7440-50-8	13.036772	99.700000	997000	42.525135	425251
Magnesium and Its Alloys	Magnesium	7439-95-4	0.006538	0.050000	500	0.021327	213

Other Inorganic Materials	Silicon	7440-21-3	0.03269	0.250000	2500	0.106633	1066
Sub-total	—	—	13.076000	100	1000000	42.653094	426531
Lead Frame Plating							
Nickel and Its Alloys	Nickel	7440-02-0	0.3892	97.300000	973000	1.269546	12695
Precious Metals	Gold	7440-57-5	0.0012	0.300000	3000	0.003914	39
Precious Metals	Palladium	7440-05-3	0.0084	2.100000	21000	0.027400	274
Precious Metals	Silver	7440-22-4	0.0012	0.300000	3000	0.003914	39
Sub-total	—	—	0.4000	100	1000000	1.304775	13048
Mold Compound							
Other Inorganic Materials	Fused Silica	60676-86-0	15.521551	92.500001	925000	50.630329	506303
Other Organic Materials	Carbon Black	1333-86-4	0.0839	0.499998	5000	0.273677	2737
Thermoplastics	Epoxy	85954-11-6	1.174604	7.000001	70000	3.831485	38315
Sub-total	—	—	16.780055	100	1000000	54.735490	547355
Semiconductor Device							
Ceramics / Glass	Doped Silicon	7440-21-3	0.265307	100.000000	1000000	0.865415	8654
Sub-total	—	—	0.265307	100	1000000	0.865415	8654
Total	—	—	30.656627	—	—	100	1000000

MTBF/FIT estimates

MTBF / FIT		MTBF / FIT supporting data								
MTBF	FIT	Usage temp (°C)	Conf level (%)	Activation energy (eV)	Test temp (°C)	Test duration (hours)	Sample size	Fails	Additional comments	
1.58×10 ⁹	0.6	55	60	0.7	125	1000	40590	1	—	

Qualification summary

Stress	Reference	Min lot qty	SS / lot	Condition	Duration	Result	Notes
HTOL	JESD22-A108	3	77	Life test, 125C	1000 hours	Pass	Or equivalent JEDEC condition
HTSL	JESD22-A103	3	25	High temp storage bake, 150C	1000 hours	Pass	Or equivalent JEDEC condition
AC/UHAST	JESD22-A102/JESD22-A118	3	25	Unbiased HAST 130C / 85% RH	96 hours	Pass	Or equivalent JEDEC condition
THB/HAST	JESD22-A101/JESD22-A110	3	25	HAST 130C/85%RH	96 hours	Pass	Or equivalent JEDEC condition
TC	JESD22-A104	3	25	Temperature cycle -65/150C	500 cycles	Pass	Or equivalent JEDEC condition
SD	J-STD-002	3	22	Per specification	>95% lead coverage	Pass	—
HBM	JS-001	1	3	ESD - HBM	Classification	See data sheet	—
CDM	JS-002	1	3	ESD - CDM	Classification	See data sheet	—
LU	JESD78	1	3	Latch-up	Per JESD78	Pass	As applicable per JESD78
MSL	J-STD-020	—	—	Per J-STD-020	Classification	See data sheet	—

Ongoing reliability monitoring

FAB process reliability data

Fab Process	Reliability Test	Rolling Year (2Q2025 - 1Q2026) Sample Size	Cumulative Sample Size	Disposition
High-Speed BICMOS	Life test 125C, 1000 Hours or Equivalent JEDEC Condition	77	35970	Pass

Assembly process reliability data

Package Family	Reliability Test	Rolling Year (2Q2025 - 1Q2026) Sample Size	Cumulative Sample Size	Disposition
VSSOP	Biased HAST 130C/85%RH, 96 Hours or Equivalent JEDEC Condition	2079	34082	Pass
VSSOP	High temp storage bake 150C, 1000 Hours or Equivalent JEDEC Condition	2350	21532	Pass
VSSOP	Temperature cycle -65/150C, 500 Hours or Equivalent JEDEC Condition	3696	59626	Pass
VSSOP	Unbiased HAST 130C/85% RH, 96 Hours or Equivalent JEDEC Condition	2233	47295	Pass

Additional resources

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[Certifications](#)

[Conflict minerals specialized disclosure report](#)

[Restricted chemical test report](#)

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