



BODHI CAPITAL

An Initiative of ABC | INVESTMENTS 



Astra Microwave Products Limited

CMP: Rs. 254

Market Cap: 2400Cr

Analyst Take: HOLD

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Company Overview

Astra Microwave Products Limited (AMPL) was incorporated in 1991 by a team of distinguished scientists with experience in RF/Microwave/Digital electronics and management of projects with high technology content. Three highly motivated promoters had back then sensed a need for a sound, technically powerful private company that can design, develop and produce highly end RF and Microwave subsystems and systems for strategic applications.

Starting operations from what is now called Unit I, the Company has grown substantially in its 30+ years of existence to achieve a turnover of approx. INR 746+ crores with continuous investment in infrastructure, captive test facilities and other resources.

Astra Microwave designs, develops and manufactures sub-systems for RF and microwave systems used in defense, space, meteorology and telecommunication.

AMPL is targeting to move up the value chain using partnerships and helped by the Make in India policy of the Government of India. It aims to be at the forefront of the wireless communication revolution through research and development, investing in technologies that can lead to leadership and employing the finest talent to reach the top through excellence.



Capabilities

Hyderabad, Telangana

Karnataka

Unit I



Land : 1.13 Acres
Building : 18,000 Sq. Ft
Status : Own
Year : 1999

Facility Offering

Automatic weather
Station AWS and other
Hydrology &
Meteorology

Unit II



Land : 2.0 Acres
Building : 20,000 Sq. Ft
Status : Own
Year : 1995

Facility Offering

Near Field Test Range
Out-Door Test Range
Multi-Layer Antenna
Fabrication

Unit III



Land : 9.9 Acres
Building : 77,000 Sq. Ft
Status : Own
Year : 2003

Facility Offering

Clean Room Laser
Welding
Vibration Table

Unit IV



Land : 19.0 Acres
Building : 1,80,000 Sq. Ft
Status : Own
Year : 2009

Facility Offering

EMI/EMC Halt/Hass
Chamber
ESS Chamber

Unit V



Land : 0.59 Acres
Building : 23,000 Sq. Ft
Status : Own
Year : 2019

Facility Offering

MIC Facility
CNC Drilling
Copper Plating
Gold Plating
Etching developing

Bengaluru Unit



Land : 5.0 Acres
Building : 1,00,000 Sq. Ft
Status : Own
Year : 2012

Facility Offering

Near Field Test Range



Business Model

AMPL's segments include sale of products (97% of total revenue) and sale of services (less than 1% of total revenue) under contracts made by customers and other operating revenue (a little more than 2% of total revenue).

Being a company with a strong R&D background, AMPL has undertaken production of equipment from R&D labs to reduce the production lead times. Astra today has an array of assembly and test facilities. Starting with a diverse range of microwave products like filters, transmitters, receivers, antennas etc., the achievement in producing actual space-borne hardware that has flown on Indian satellites was a dream come true for the promoters and for the company and an endeavor to be proud of for the entire AMPL team.

AMPL's geographical segments include India (53% of total revenue) and Overseas (47% of total revenue). Astra is expecting to increase its domestic sales and increase profitability.



Business Model

Astra Microwave has designed, developed and produced critical sub-systems for its customers for building various airborne, naval and ground based systems:

Defense

Radar electronics, electronic warfare, Strategic Electronics and Telemetry

Space

Ground based and flight model

Meteorology

Homeland Security

Perimeter Intrusion and Detection Radar

Systems

Multi-Function Radar Systems, Instrumentation Radar & Telemetry Systems, Perimeter Intrusion Radar, Meteorology Radar Systems and Air Traffic Management Radar Systems



Mode of Operation

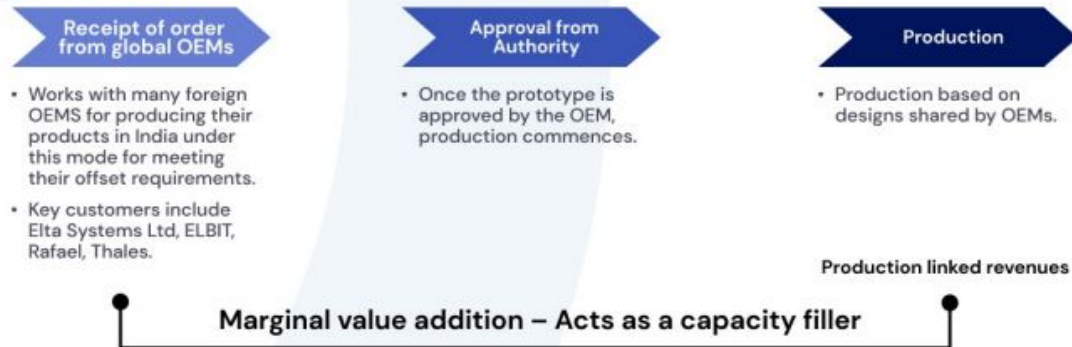
Build To Specifications (BTS) Orders

The company's strong relationship with large corporations builds its brand equity and helps it in establishing itself as a prime contractor for large and longer-term programs in the marketplace. AMPL works on high-value complex projects awarded by companies.



Build To Print (BTP) Orders

AMPL has produced more than USD 150 million worth of high-end modules under BTP route.



Clientele



Major stake in upcoming Defence Programs



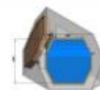
AATRU FOR ASPJ



Light Combat Aircraft



AAAU for Uttam AESA Radar



AAAU for Naval Radar



AAAU for AEW&C



Long Range Radar TRMs, BSNs, PS



Medium Power Radar DTRMs



Subsidiary Holdings

Bhavyabhanu Electronics Pvt. Limited (BEPL)



Bhavyabhanu Electronics Pvt. Ltd.

- BEPL is a fully owned subsidiary of AMPL.
- BEPL has been established with state-of-the-art manufacturing & test facilities to meet global standards. This combined with experienced man power & stabilized processes ensure that the needs of various industry segments can be met easily.
- BEPL is a dependable player with excellent technological capabilities and a long-term commitment to the defense, aerospace, medical and industrial electronics industry.
- Its products are known for ruggedness and reliability and conform to the latest quality standards.
- BEPL can handle low/medium volume as well as high volume production of products.



Subsidiary Holdings



Aelius Semiconductors Pte. Ltd.

- Aelius Semiconductors Pte Ltd is a fabless MMIC (Monolithic microwave integrated circuit) design house, based in Singapore.
- It develops Gas and GaN MMIC products based on a robust and reliable design philosophy. These designs are fabricated at leading foundries across the world.
- The products are tested and packaged as per customer's requirement utilizing state-of-the-art facilities.
- Aelius's unique and wide range of MMIC products are focused primarily on the Defense and Space industries,.



Joint Venture

Astra Rafael Comsys Private Ltd.



- Astra Microwave Products Ltd. (AMPL) and M/s RAFAEL ADVANCED DEFENSE SYSTEMS LTD., Israel (RAFAEL) have come together to form a Joint Venture Company called Astra Rafael Comsys Private Ltd. (ARC).
- ARC is the parties mutually exclusive vehicle in India and focuses on indigenous technology and “Make in India” programs. ARC engages in carrying out production, integration, customization, marketing, sale, life cycle support and additional activities as required in the fields of Tactical Radio Communication systems, Electronic Warfare Systems and Signal Intelligence Systems.



Story

1991 - Started off by building products for setting up telecom base stations

1993 - Received the first opportunity to build products for DRDO

1995 - Company went public

1997 - First R&D deliveries to Defense for a Surface to Air Missile program of the DRDO

2000 - Started working in the complex field of EW.

2003 - Took up challenging work for components and sub-systems for Satellite Application after invitation from ISRO for the Indian Private Industry to enter into the Space business

2005 - Decided to have a fabless design team in-house to design and develop MMICs for getting advantages of cost, design flexibility to help miniaturize modules and the ability to control production requirements

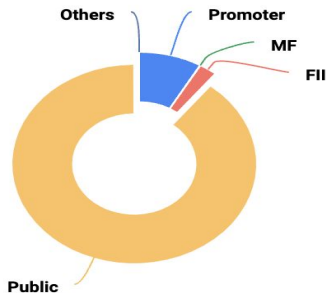
2007 - The process of audits and vendor capability mapping started owing to the offset rule introduced by DPP 2006; Many foreign OEM's showed interest to work with Astra for discharging their offset requirements

2018 - Developed its latest facility in Bengaluru



Shareholding Pattern and Analysis

SHAREHOLDING SUMMARY



HISTORICAL PROMOTOR HOLDING



HISTORICAL MF HOLDING



HISTORICAL FII HOLDING



Shareholding Pattern and Analysis

	Mar 2020	Jun 2020	Sep 2020	Dec 2020	Mar 2021	Jun 2021	Sep 2021	Dec 2021	Mar 2022	Jun 2022	Sep 2022	Dec 2022
Promoters +	10.05	10.05	10.03	9.80	8.98	8.87	8.71	8.71	8.71	8.46	8.28	8.27
FII +	1.30	0.48	0.59	0.98	1.04	1.01	1.45	1.43	1.82	2.17	3.13	2.32
DII +	11.19	10.85	8.94	8.02	4.95	3.30	1.68	0.58	0.29	0.16	0.07	0.07
Public +	77.45	78.62	80.45	81.20	85.03	86.82	88.16	89.28	89.18	89.20	88.52	89.34

- The FII holding has increased by 1.02% over the last 11 quarters
- Meanwhile, the DII holding has reduced by 9.12% over the same period
- Annual Dividend Yield is 0.54%.
- A few promoters have changed their shareholdings to '*public category*', hence reducing the promoter holdings in last few months.



Management

Dr. Avinash Chander (Chairman & Independent Director)

- Former Secretary, Defence R&D and Director General, DRDO
- A pioneer in Strapdown Inertial navigation & Guidance.
- Contributed in the development of several critical technologies in the field of radars, simulation, propulsion, control and System engineering.
- Tenure - 5 years, Compensation - 1.65 m rupees
- Ownership - Nil

Mr. S.Gurunatha Reddy (Managing Director)

- Chartered Accountant.
- Over 33 years of experience in accounting, finance, taxation, secretarial etc.
- Tenure- 9.75 years, Compensation - 11.77 m rupees



Management

Mr. M.Venkateshwar Reddy (Joint Managing Director)

- B.E. (Electronics), MBA
- Executive Director since April 29, 2013.
- Former Deputy Manager at ICOMM Tele Ltd.
- Tenure - 9.75 years, Compensation - 11.66 m rupees
- Ownership - 0.062 %

Mr. Atim Kabra (Non-executive Director)

- Economics (Honors) from Delhi University and a Masters in Management Studies from NMIMS
- Director at Frontline Strategy Limited and Prestellar Ventures
- Strong network of relationships across FII's, VC or PE funds
- Ownership - 3.87 % , Tenure - 3.58yrs
- Compensation - 1.65m rupees



Management

Mrs. Kiran Dhingra (Independent Director)

- Stood first in the combined merit list for IFS/IAS
- 38 years of experience in governance
- Director or Chairman on the Board of several PSUs
- Tenure- 3.58yrs, Compensation - ₹1.65m
- Ownership - Nil

Mr. PA Chitrakar (Non executive Director)

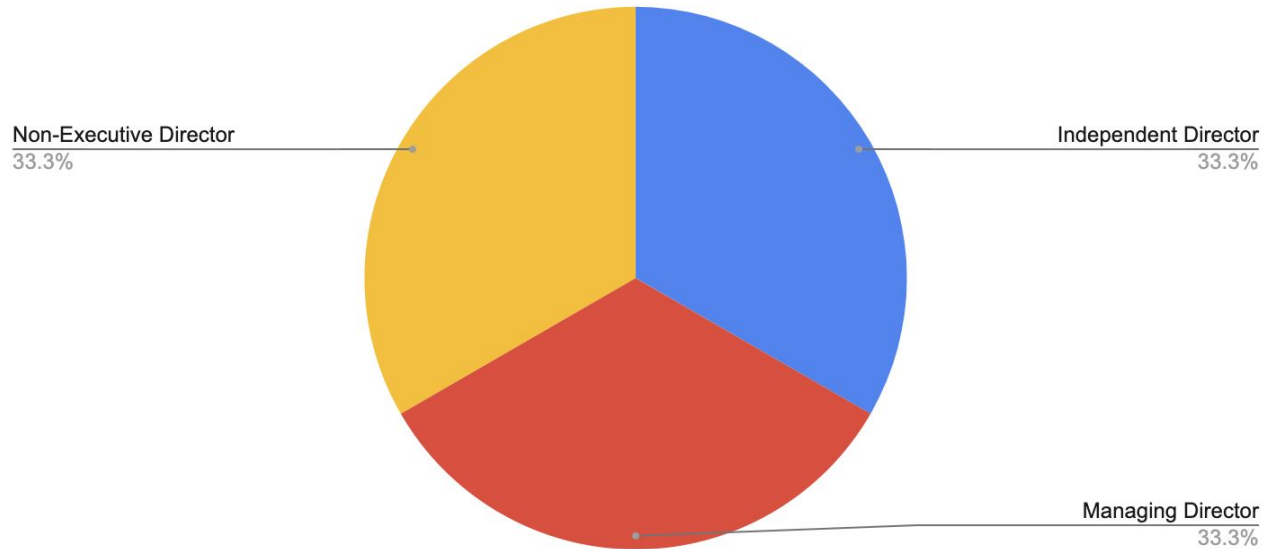
- Earlier served as the Chief Operating officer and an Executive Director
- Ownership- 3.74 %, Tenure- 1.17yrs,
- M.Sc. in Physics from Mysore University and an MTech (Advanced Electronics) from JNTU, Hyderabad.



Management

Average Tenure- 4.3yrs | Average Age- 66 years

Board Composition



Management

The ratio of the remuneration of each director to the median remuneration of the employees of the company for the financial year:

S. No.	Name of the Director	Ratio of the remuneration to the median remuneration of the employees
1	Dr. Avinash Chander (Chairman & Independent Director)	4.08:1
2	Mr. S.Gurunatha Reddy (Managing Director)	29.07:1
3	Mr. M.V. Reddy (Joint Managing Director)	28.81:1
4	Mr. Sunil Kumar Sharma (Independent Director)	4.08:1
5	Mrs. Kiran Dhingra (Independent Director)	4.08:1
6	Mr. Atim Kabra (Non-Executive Director)	4.08:1
7	Mr. P.A. Chitrakar (Non-Executive Director) #	-----

Notes:

Mr. P. A. Chitrakar was appointed as an Additional Director (Non-Executive Director) of the Company w.e.f. November 10, 2021.

The percentage increase in remuneration of each Director, Chief Financial Officer, Chief Executive Officer, Company Secretary or Manager in the financial year

S. No.	Name of the Director / KMP	Percentage Increase in Remuneration
1	Dr. Avinash Chander (Chairman & Independent Director)	143.27
2	Mr. S.Gurunatha Reddy (Managing Director)	27.72
3	Mr. M.V. Reddy (Joint Managing Director)	22.52
4	Mr. Sunil Kumar Sharma (Independent Director)	143.27
5	Mrs. Kiran Dhingra (Independent Director)	143.27
6	Mr. Atim Kabra (Non-Executive Director)	143.27
7	Mr. P.A. Chitrakar (Non-Executive Director) #	NA
8	Mr. T. Anjaneyulu (Company Secretary)	1.26
9	Mr. B.V.S. Narasinga Rao (Chief Financial Officer)	4.79



Management

S. No	Name of the Director	Number of Board Meetings		Attendance at AGM Held on August 26, 2021
		Held	Attended	
1	Dr. Avinash Chander	5	5	Present
2	Mr. S.Gurunatha Reddy	5	5	Present
3	Mr. M.V. Reddy	5	5	Present
4	Mr. Sunil Kumar Sharma	5	5	Present
5	Mrs. Kiran Dhingra, (Retd. IAS)	5	5	Present
6	Mr. Atim Kabra	5	5	Present
7	Mr. P. A. Chitrakar	1	1	NA

All directors were regular present in the board meetings.



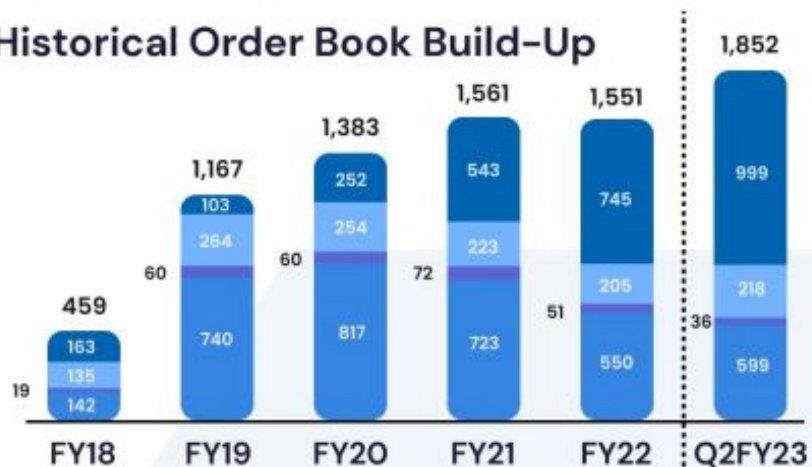
The Way Forward

- The company aims to achieve 70% - Domestic and 30% - Export Revenue distribution over next 2-3 years. Domestic business on an average carries 40 to 45% of gross margin as against 8 to 10% gross margin in exports.
- They are currently bidding for the whole system -the complete radar system procurement- for both DRDO and future MoD requirements.
- Exploring the areas in the anti- drone, EW, satellites, SDRs and electro-optics through JVs
- The company will continue to look at organic and in organic options to stabilize top line performance as present business is project driven and hence lumpy in nature

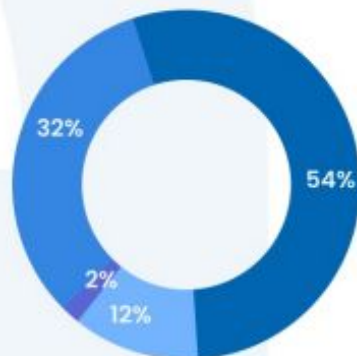


Robust Order Book

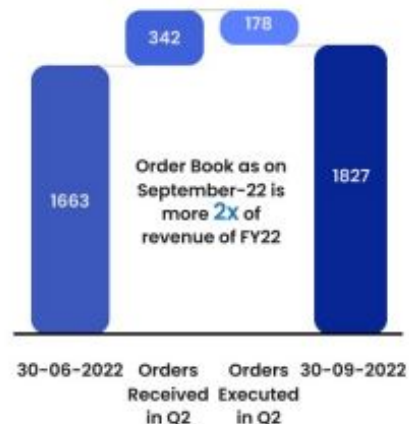
Historical Order Book Build-Up



Diversified Order Book



Order Book Build-Up



Order Book of Q2 FY23

328.88
Defence

0.42
Exports

1.34
Space

11.86
Meteorological

342.49
TOTAL

(Rs in Crs.)

Qualitative Analysis



Industry Analysis

Although the COVID-19 pandemic affected the Indian economy, its impact was not felt on the country's defense spending.

The geopolitical conflicts between India and its neighboring nations and the threat of terrorism have forced the country further to reinforce its perimeter security and naval and airborne capabilities. The country has constantly been increasing its defense expenditure over the years.

The allocation to defence Budget to Rs 5.94 lakh crore for 2023-24 from last year's (2022-23) allocation of Rs 5.25 lakh crore. It was also announced in the fiscal budget 2023 that 68% of capital procurement budget in defence to be earmarked for domestic companies, and private companies to be encouraged to take up the design and development of military platforms/equipment in collaboration with DRDO and other organisations.

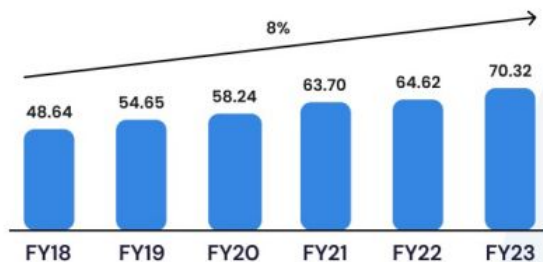
Some of the main players in the defence industry are HAL and BEL.



Growing defence products opportunity

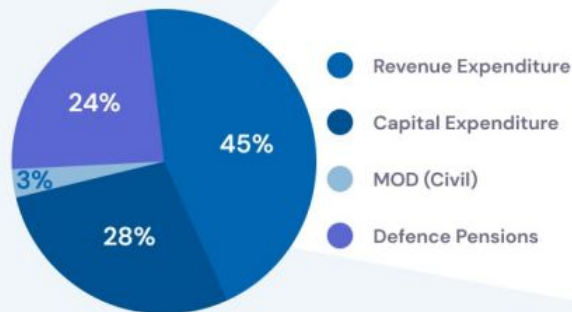
India's extensive modernisation plans, an increased focus on homeland security to increase government allocation for defence expenditure along with Make in India focus are expected to drive healthy growth in the sector.

Growing Defence Budget (in Bn \$)



India is the 3rd largest military spender

Defence Budget Components – FY22



Source: Ministry of Defence, various news articles

The Indian government has taken various initiatives to promote on indigenization in this space:

Atma Nirbhar Bharat

Imports Embargo

The Indian government has set the defence production target at USD 25 bn by 2025 (including US\$5 bn from exports by 2025).

ISRO has planned multiple deep space and experimental missions to strengthen India's position in global space industry through new technology development.

Indigenous shipbuilding with a remarkable increase in capability and programme fulfillment.

Defence Acquisition Procedure, 2020.

Category	Indigenous Content (IC)
Buy (Indian-IDDM)	Indigenous design and ≥ 50%
Buy (Indian)	In case of indigenous design ≥ 50%, otherwise ≥ 60%
Buy and Make (Indian)	≥ 50% of the 'Make' portion
Buy and Make	Category not present
Buy (Global – Manufacture in India)	50% or more
Foreign Vendor	Foreign Vendor – Nil/ Indian Vendor ≥ 30%

Business Potential till 2028

Rs. 4,000 Cr.
Defence & Aerospace

Rs. 500 Cr.
Space

Rs. 1,500 Cr.
Turnkey Projects, Metrology & Systems

Rs. 1,000 Cr.
Export

Rs. 7,000 Cr.
TOTAL



Porter's Five Forces

01	Bargaining Power of Suppliers	Medium	<ul style="list-style-type: none">Suppliers who provide the latest technology or unique inputs required for RF products can exercise a higher bargaining powerThey have in house technology to manufacture their products which eliminates the need for suppliers to an extent.Backward integration
02	Bargaining Power of Buyers	High	<ul style="list-style-type: none">Almost all the orders which they receive are from govt or custom ordersCompetition in production of RF products high so many alternativesTrying to reduce to exports so becoming more dependent on Govt. Exports are tariff based, which is again controlled by the govt.
03	Competitive Rivalry	Low to Medium	<ul style="list-style-type: none">There are existing companies in place that compete in defence productionSome PSUs can become a direct competition if they begin production which they don't do as of now because of efficiency reasons..Industry moving more towards privatisation
04	Threat of New Entrants	Low	<ul style="list-style-type: none">Investment heavy & capital intensive businessTrust based industry comes to govt placing orders so new entrants will face a lot of competitionOffset rule - new players might come up (especially existing large companies)
05	Threat from Substitutes	Low to Medium	<ul style="list-style-type: none">There are no substitutes to defense products they sellIf a new technology does come up it'll take time to displace the existing one.Astra has the capability to adapt to new technology.

SWOT ANALYSIS

STRENGTHS

Established market position, supported by strong in-house capability in the microwave RF applications domain

Healthy customer relationships and growth prospects for the sector

Expanding business portfolio by providing microwave applications in the space and civil teleco segments.

Has been taking steps to move up the value chain from the sub-systems vendor to a system vendor.

Healthy order pipeline offering sound revenue visibility.

WEAKNESSES

Large working capital requirement

Has to maintain sizeable inventory to cater to all segments.

There has been uncertainty about the promoters of the company. Some re-classifications and selling have also reduced promoter holdings.

The profitability is negative because of higher export mix. The export orders are built-to-print with very small margins. Margins are better in domestic business.

OPPORTUNITIES

The extensive and continued government focus on 'Make in India', especially in the defence sector, augurs well

The group also benefit from announcements in the Union Budget for fiscal 2023 such as 68% of capital procurement budget in defence to be earmarked for domestic companies

Focus on private companies to take up the design and development of military platforms/equipment in collaboration with Defence Research and Development Organisation (DRDO) and other organisations.

THREATS

The business depends on success in bidding for tenders invited by defence PSUs and research establishments.

Establishments such as the DRDO invite tenders from qualified vendors for their R&D requirement and commence bulk production on successful completion of product development.

Long gestation period for projects: Long-term revenue visibility is primarily driven by the success of R&D projects at DRDO and the subsequent mass production of products.



Risks and Concerns

The Company's main source of revenues lies in Defence market. Most of these projects are initiated, designed and developed by DRDO labs and driven by Govt., policies and priorities. Although technically they can project and complete the product development on the timelines indicated, conversion of that to a recognizable quantum of orders lies mainly on the Government decisions.

This results in an uneven and skewed pattern of sales for the Company, which is beyond their control. Defence export business is driven by offset provisions of Govt. of India which is project based and hence generally lumpy in nature and is controlled by export regulations where time delays could happen in granting necessary permissions. This export business is also high precision and skilled job involving specialized inputs from across the globe which has a bearing on timely execution and uniform billing.



Quantitative Analysis



Profit and Loss Statement Analysis

Income Statement (INR)		Hist 31-Mar-13	Hist 31-Mar-14	Hist 31-Mar-15	Hist 31-Mar-16	Hist 31-Mar-17	Hist 31-Mar-18	Hist 31-Mar-19	Hist 31-Mar-20	Hist 31-Mar-21	Hist 31-Mar-22
I.	Revenue From Operations	23829.03392	54424.48542	64417.867	43745.09468	45213.15484	36586.9023	29349.32	46722.43	64091.22	75046.31
	(less excise duty)	-1081.91358	-1308.1797	-984.14421	-1787.03991	-2705.23132	-366.72156	0	0	0	0
		22747.12034	53116.30572	63433.72279	41958.05477	42507.92352	36220.18074	29349.32	46722.43	64091.22	75046.31
	From Sale of Products	23171.62251	54134.3532	63621.17541	42381.50534	41865.1139	34714.94949	26322.14	43993.46	62278.42	72643.7
	From Sale of Services	657.41141	290.13222	717.77787	1077.29148	1474.60362	1676.00779	2807.89	2507.65	1646.41	2211.19
	From Sale of Power	0	0	1.64596	208.27424	201.10953	0	213.89	217.12	166.39	191.42
	Other Operating Revenue	0	0	77.26776	78.02362	76.21338	195.94502	219.29	221.32	166.39	191.42
II.	Other Income										
	Interest Income	384.45423	592.3709	328.11719	354.69271	338.80637	170.69809	156.69	327.3	281.47	225.15
	Miscellaneous Receipts	0.0525	2.29519	21.66311	0.08673	6.17605	23.73678	161.41	14.63	39.31	23.74
	Customs Duty Refund	122.96881	25.2187	38.78067	293.84657	0.6	0	0	0	0	0
	Export Incentives	40.67338	131.91103	225.37378	189.38645	0.41011	59.21868	1079.07	28.56	543.92	176.73
	Profit on disposal of Current Investments in units of Mutual Fu	0	0	0	0	3.87211	0	0	250.33	0	48.24
	Dividend Received on Current Investments (mutual fund)	30.19565	28.34918	0	0	24.18252	16.12168	0	0	0	0
	Total	578.34457	780.145	613.93475	838.01246	374.04716	269.77523	1397.17	620.82	864.7	473.86
III.	Total Revenue (I+II)	23325.46491	53896.45072	64047.65754	42796.06723	42881.97068	36489.95597	30746.49	47343.25	64955.92	75520.17

- The *sale of products* had gone down during 2015-2018. However, with further innovations of the company, it recorded a positive trend in 2019-22.
- The sale of services has recorded a healthy upward trend with occasional dips.
- The main operational revenue comes from sale of tangible products, which implies proportional cost of materials. The sale of services is negligible in comparison to sale of tangible products.
- The company utilizes the export incentives of the government, which varies year-on-year basis.



Profit and Loss Statement Analysis

IV.	Expenses										
	Cost of Materials Consumed	9533.53358	39180.65833	43838.71651	19345.33244	19282.58113	14199.01445	18008.42	33354.04	48621.47	54209.73
	Changes in Inventories of Finished Goods, Work-in-Progress and Stock-in-Trade	509.83609	-4343.8324	-504.52974	2587.46951	-538.48827	512.54059	-1786.14	-6826.71	-4034.05	-1489.07
	Employee Benefit Expense	2798.17984	3749.44383	3948.83268	5082.03802	5670.8062	6949.5501	6502.55	7149.88	7137.6	8062.83
	Financial Costs	412.50183	673.08431	948.29127	878.83632	1050.16105	1219.56653	926.31	846.2	2312.4	2108.9
	Depreciation and Amortization Expense	1335.48063	1479.53095	2153.85153	2358.44594	2407.42683	2740.85451	2890.13	2575.91	2354.11	2204.15
	Other Expenses	3791.78455	6158.49784	5512.30324	5410.85523	8147.97375	3469.94007	3746.94	4796.15	4647.4	5341.26
	Total Expenses	18381.31652	46897.38286	55897.46549	35662.97746	36020.46069	29091.46625	30288.21	41895.47	61038.93	70437.8
VII.	Profit Before Tax	4944.14839	6999.06786	8150.19205	7133.08977	6861.50999	7398.48972	458.28	5447.78	3916.99	5082.37

- The Cost of Materials consumed has been directly proportional to the sales of products in the year. Only exception was 2020-21, where the cost of supply went up significantly due to Covid-19.
- The Employee Benefit Expense is rising due to the workforce expansion of the company.
- Since the industry is asset heavy and the company has opened new facilities, depreciation and amortization went up and remained within 2000-3000 range.
- Financial Costs come from the working capital credit it avails from bank and some long-term debt. However, the company has regularly paid the interest expense on such loans.
- The company has recorded healthy profits in the last 10 years apart from 2018-19 where it attributes it to market conditions and 2020-21 when the cost of materials consumed went up.



Profit and Loss Statement Analysis

VIII.	Tax Expense										
	(1) Current Tax	-1247.69723	-1605.02952	-1826.7278	-1591.58198	-1463.76305	-1718.62359	-452.82	-1999.52	-1118.78	-1624.22
	(2) Deferred Tax	-77.54704	-277.36407	-244.58018	-3.49973	-120.67706	-400.18345	-93.22	-489.76	-149.32	-390.14
	(3) MAT Credit	0	0	0	95.78877	383.28304	-264.04494	0	0	0	0
	Total Tax	-1,325	-1,882	-2,071	-1,499	-1,201	-2,383	-546	-2,489	-1,268	-2,014
IX.	Profit/(Loss) for the period from Continuing Operations (l.	3618.90412	5116.67427	6078.88407	5633.79683	5660.35292	5015.63774	-87.76	2958.5	2648.89	3068.01
X.	EPS: (In Rupees) (Face Value Rs.2/-)										
	Basic and Diluted before extraordinary items	4.54	6.22	7.42	6.77	6.53	7.05	-1.13	5.08	3.33	4.37
	Basic & Diluted Earnings Per Share after extraordinary items	4.54	6.22	7.42	6.77	6.53	7.05	-1.13	5.08	3.33	4.37
	No. of Equity Shares outstanding at the beginning of the year	81,825,225.00	81,825,225.00	81,825,225.00	81,825,225.00	86,611,675.00	86,611,675.00	86,611,675.00	86,611,675.00	86,611,675.00	86,611,675.00
	Weighted Average No. of Equity Shares issued during the yea	0.00	0.00	0.00	1,399,317.00	0.00	0.00	0.00	0.00	0.00	0.00
	Number of Bonus Shares issued	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total number of Shares outstanding at the end of the year	818.25225	818.25225	818.25225	832.24542	866.11675	866.11675	866.11675	866.11675	866.11675	866.11675

- The Net Profit has gone down in the last five years. Although the revenues have shown good recovery, the expenses have gone up significantly.
- The EPS has gone down in the last 5 years, partly due to an increase in the expenses and equity shares issued in 2015-16.



Balance Sheet Analysis

Astra Microwave Products Ltd. Balance Sheet		Hist 31-Mar-18	Hist 31-Mar-19	Hist 31-Mar-20	Hist 31-Mar-21	Hist 31-Mar-22
Assets						
Net PPE		19,447.84	17,817.42	16,071.44	15,271.91	15,863.39
Capital WIP		72.5	243.39	1,205.65	0.00	8.23
Investments		0.20	1,447.49	1,318.60	1,609.90	1,384.76
Intangible Assets		0	0	0.00	0.00	100.75
Other Financial Assets		1,707.91	1,289.01	1,140.28	1,135.39	923.74
Other NCA (Including Tax Assets)		92.13	212.31	942.85	565.48	1,277.25
Total Non-Current Assets		21,320.58	21,009.62	20,678.82	18,582.68	19,558.12
Inventories		10,717.55	13,977.06	28,354.81	32,961.07	41,933.79
Investments		12,573.31	2,023.46	1,304.70	1,409.60	-
Trade Receivables		19,040.59	19,214.06	24,935.84	26,681.79	20,508.07
Cash and cash equivalents + Bank		2,967.58	2,790.50	5,323.24	4,252.61	7,747.00
Other Current Assets including tax		1,010.52	2,595.57	8,939.69	10,641.90	7105.56
Total current assets		46,309.55	40,600.65	68,858.28	75,946.97	77,294.42
Total Assets		67,630.13	61,610.27	89,537.10	94,529.65	96,852.54

- Can notice a gradual decrease in Net PPE: company sold fixed assets (buildings, power generating systems, plant & machinery)
- CWIP increased dramatically in 2020, due to increase in prices of raw materials due to COVID, can also notice a complete reduction in 2021 due to market stagnation, prices reduced
- Increase in Intangible Assets in 2022: company bought computer softwares and capitalised development costs
- Trade receivable is a high proportion of sales as the company deals with the government, clear by their generally higher receivable days ratio



Balance Sheet Analysis

Astra Microwave Products Ltd. Balance Sheet		Hist 31-Mar-18	Hist 31-Mar-19	Hist 31-Mar-20	Hist 31-Mar-21	Hist 31-Mar-22
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Total current assets		46,309.55	40,600.65	68,858.28	75,946.97	77,294.42
Total Assets		67,630.13	61,610.27	89,537.10	94,529.65	96,852.54

- Increase in NCA in 2020 due to capital advances and deposits with government departments but mainly due to increase in CWIP
- Gradual increase in inventories over the years due to stocking up of raw materials, increase in CWIP and sales reversals
- Parallel increase in cash & cash equivalents with increase in sales revenue
- Increase in other current assets over the years due to an increase in balance with government authorities and advances to suppliers



Balance Sheet Analysis

Astra Microwave Products Ltd. Balance Sheet		<i>Hist</i> 31-Mar-18	<i>Hist</i> 31-Mar-19	<i>Hist</i> 31-Mar-20	<i>Hist</i> 31-Mar-21	<i>Hist</i> 31-Mar-22
Long-term debt and financial liabilities		1,426.10	475.44	0	0	335.41
Provisions		133.29	23.81	351.33	398.41	429.08
Deferred tax liabilities		435.67	471.72	0	0	3,963.46
Total non-current liabilities		1,995.06	970.97	351.33	398.41	4727.95
Short term Borrowings		2,172.67	253.76	5,486.23	12,155.45	6,704.90
Trade Payables		1,468.53	2,459.11	6,112.96	3,772.59	5,538.46
Other Financial Liabilities		6,580.08	1,144.04	1,645.48	1,204.22	1,552.24
Provisions		499.41	324.21	181.8	200.72	354.99
Current tax Liabilities		145.66	0	249.75	155.28	5.29
Other operating current liabilities		2,304.30	1,316.46	529.67	482.44	223.36
Contract Liabilities		2,360.68	5,185.23	20,964.64	20,289.88	19,186.39
Total current liabilities		15,531.33	10,682.81	35,170.53	38,260.58	33,565.63
Total liabilities		17,526.39	11,653.78	35,521.86	38,658.99	38,293.58
Total liabilities & equity		67,630.13	61,610.27	89,537.10	94,529.65	96,852.54

- Repayment of HDFC loan repayable in 12 quarterly instalments (dated 2017) in 2020 brought down long-term debt to 0
- Have taken a term loan from Axis bank in 2022 which is repayable in 8 quarterly instalments to fund equipment/machinery



Balance Sheet Analysis

Astra Microwave Products Ltd. Balance Sheet		<i>Hist</i> 31-Mar-18	<i>Hist</i> 31-Mar-19	<i>Hist</i> 31-Mar-20	<i>Hist</i> 31-Mar-21	<i>Hist</i> 31-Mar-22
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Total liabilities		17,526.39	11,653.78	35,521.86	38,658.99	38,293.58
Total liabilities & equity		67,630.13	61,610.27	89,537.10	94,529.65	96,852.54

- Working capital loans taken in 2021 from HDFC and Axis Bank
- Repayment of parts of HDFC loan from 2021 and repayment of Axis Bank loan (2020) entirely
- Took advances from customers in 2020 which increased the contract liabilities
- Can notice an increase in Liabilities ever since Covid, as loans and advances were critical for the company in the tough times



Cash Flow Statement Analysis

Cash Flows	Hist 31-Mar-13	Hist 31-Mar-14	Hist 31-Mar-15	Hist 31-Mar-16	Hist 31-Mar-17	Hist 31-Mar-18	Hist 31-Mar-19	Hist 31-Mar-20	Hist 31-Mar-21	Hist 31-Mar-22
Cash Flows From Operations										
Net Income	3,913.58	5,423.53	6,296.78	5,652.04	5,297.34	6,499.09	1,335.80	5,913.91	3,854.63	5,021.15
Add Depreciation	1,335.48	1,481.15	2,204.67	2,404.20	2,449.37	2,740.85	2,890.13	2,575.91	2,354.11	2,204.15
Finance Cost	412.50	673.08	996.79	912.87	1,123.32	1,219.57	926.31	846.20	2,491.00	2,108.90
Dividend Income	-30.20	-28.35	0.00	0.00	-24.18	-16.12	-156.69	-327.30	0.00	0.00
(Gain)/loss on sale of investments	0.00	0.00	0.00	0.00	-3.87	-202.80	0.00	0.00	0.00	-48.24
(Gain)/loss on fair valuation of financial assets	0.00	0.00	0.00	0.00	-230.91	-337.98	-78.05	-82.04	-104.90	0.00
(Gain)/loss on disposal of property, plant and equipment	0.00	0.00	0.00	0.00	-1.55	0.28	-259.63	-4.87	2.18	-1.98
Unrealised exchange (gain)/loss	0.00	0.00	0.00	0.00	59.50	2.27	-45.39	-312.93	-89.12	15.42
Changes in expected credit loss	0.00	0.00	0.00	0.00	0.00	0.00	-5.58	377.55	-116.54	424.57
Share or profit/(loss) from Joint venture and associate	0.00	0.00	0.00	0.00	0.00	0.00	177.51	128.89	283.80	225.15
Interest Received	-384.45	-593.27	-339.45	-366.94	0.00	0.00	0.00	0.00	-241.32	-225.15
Income Tax Paid	-1,143.40	-1,562.42	-2,181.76	1,464.64	-1,675.05	-1,475.29	-1,136.68	-1,789.01	-776.79	-2,082.18
(Inc)/Dec in OWC	6,133.96	-9,521.48	-9,666.86	-2,747.00	-6,912.21	818.36	-2,788.88	-7,503.43	-10,116.62	3,825.50
Increase in Cash From Operating Activities	10,237.50	-4,128.34	-2,689.82	7,319.83	116.75	9,212.84	858.85	-177.12	-2,459.57	11,467.29

- Net income has risen at a CAGR 8.9% of except the COVID years which saw a dip across the industry.
- Astra Microwave has multiple JVs and subsidiaries which are profitable in the recent years.
- Operating working capital has increased in most years due to increase in trade receivables.
- The cash flow from operating activities have been negative for a couple of years, due to increased investment in Operation Working Capital (OWC).



Cash Flow Statement Analysis

Cash Flow from Investing Activities										
Capex on PPE	-2,709.32	-3,940.43	-3,379.23	-2,145.11	-7,236.55	-3,389.82	-1,621.74	-1,942.27	-368.80	-2,793.68
Proceeds from Disposal of Assets	17.81	4.41	5.43	13.71	4.27	10.20	301.82	138.12	1.25	5.55
Purchase of Long Term Financial assets	-26.00	-10.00	0.00	-0.20	0.00	0.00	0.00	0.00	0.00	0.00
Purchase of current investments	0.00	0.00	0.00	0.00	-5,595.00	-16,104.47	-22,474.37	-21,500.00	0.00	-1,473.89
Proceeds from sale of current investments	0.00	0.00	0.00	0.00	96.13	9,807.73	33,814.14	22,551.14	509.52	1,457.84
Investment in Equity Shares of Associate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-200.10	0.00
Investment in Equity Shares of Joint ventures	0.00	0.00	0.00	0.00	0.00	0.00	-1,624.90	0.00	-375.00	0.00
Proceeds from Financial Assets	-1,987.78	2,767.48	589.70	330.67	0.00	20.00	0.00	0.00	0.00	0.00
Dividends received	0.00	0.00	0.00	0.00	24.18	16.12	0.00	0.00	0.00	0.00
Interest received	0.00	0.00	0.00	0.00	365.64	205.64	147.25	153.64	356.64	206.82
Increase in Cash From Investing Activities	-4,705.29	-1,178.54	-2,784.10	-1,800.93	-12,341.32	-9,434.61	8,542.20	-599.37	-76.49	-2,597.36

- CF from Investing activities has fairly remained negative due to large CAPEX on PPE
- There has been healthy capital expenditure over the years in terms of new research and manufacturing facilities in 2012 and 2019
- Astra has been quite aggressive with regards to purchase and sale of current investments (mutual funds) in the last five years.



Cash Flow Statement Analysis

Cash Flow From Financing Activities										
Proceeds from long term borrowings	1,557.10	2,242.11	1,761.74	395.36	1,835.22	1,016.87	0.00	0.00	0.00	1,460.41
Proceeds from short term borrowings	0.00	0.00	2,321.43	0.00	12,790.40	7,000.00	2,005.31	102,409.54	98,871.58	94,436.24
Payment of LTD	-2,106.16	-512.41	-934.94	-2,882.25	-1,158.82	-974.96	-5,950.67	-961.11	-475.44	0.00
Repayment of Short Term Debt	-764.24	-252.91	0.00	-4,787.36	-6,500.00	-11,219.37	-3,924.22	-97,177.07	-92,202.37	-101,011.78
Interest Paid	-418.93	-630.50	-979.56	-739.04	-1,125.33	-1,255.13	-719.84	-333.19	-1,775.12	-1,715.38
QIP NCD proceeds	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
QIP Share issue proceeds	0.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Share issue expenses	0.00	0.00	0.00	-194.67	0.00	0.00	0.00	0.00	0.00	0.00
Dividend Paid	-665.69	-765.85	-1,053.05	-1,181.80	-1,250.93	-1,042.44	-1,252.98	-261.04	-1,039.34	-1,043.09
Increase in Cash From Financing Activities	-2,390.04	45.61	1,115.63	2,110.24	4,590.56	-6,475.03	-9,842.40	3,677.13	3,379.31	-7,873.60

- In recent years, Astra has relied more on short-term borrowings instead of long-term borrowings. It also issued non-convertible debentures in 2015-16.
- Payment of interest and retirement of debt (both long-term and short-term) have been done regularly and as per the due dates.
- Since Astra has relied more short-term borrowings, the repayments have also gone up significantly in the last 3 years.



Ratio Analysis

PARTICULARS	FY2018	FY2019	FY2020	FY2021	FY2022
Profitability Ratios					
GPM	61.09	41.43	29.55	25.15	28.22
OPM	23.62	4.50	13.29	9.59	9.52
ROCE	16.54	2.72	11.58	11.07	11.36
ROE	10.01	0.18	5.48	4.74	5.24

- Decrease in GPM over the years due to increase in COGS with the increase in business
- OPM has decreased in 2019 due to increase in Employee Benefit Expense and Financial Costs
- ROCE in 2019 fell due to low EBIT
- The ROCE is lower than its competitors (~20-25%)
- ROE in 2019 fell to negative due to relatively poor revenue earnings (net profit was negative)



Ratio Analysis

PARTICULARS	FY2018	FY2019	FY2020	FY2021	FY2022
Valuation Ratios					
P/B	1.33	1.71	0.83	2.01	3.33
P/E (Historical)	10.88	87.52	11.05	40.09	50.08
PEG Ratio	1.37	-1.04	0.03	-1.16	1.60
P/S	0.018	0.029	0.010	0.018	0.025
EV/EBITDA	1.25	2.09	3.41	4.10	2.99
EV/Sales	0.39	0.30	0.65	0.55	0.37

- P/B has been increasing post-Covid which portrays investor interest because the market value is higher than the book value of the company
- Fairly higher P/E than the industry average of 14.9 over last 3 years and current sector P/E of 18.8
- FY2019 and FY2021 showed degrowth, which further pulled the PEG Ratio down to negative (earnings growth estimate that point to a company losing money)
- Fairly constant P/S ratio, depicting a uniform willingness to pay per unit of sales of the buyer
- EV/EBITDA has increased over the years due to a fall in earnings, still a fairly lower ratio than its primary competitors



Ratio Analysis

PARTICULARS	FY2018	FY2019	FY2020	FY2021	FY2022
Liquidity and Solvency Ratios					
Current Ratio	2.98	3.80	1.96	1.98	2.30
Quick Ratio	2.29	2.49	1.15	1.12	1.05
Interest Coverage Ratio	7.07	1.49	7.44	2.69	3.41
D/E	0.34	0.23	0.65	0.69	0.65

- Shown a current ratio that was greater than 1; healthy sign
- Quick ratio was also greater than 1; another healthy sign showing liquid assets greater than current liabilities, however still decreasing in last few years due to increase in short-term loans
- Interest Coverage Ratio greater than 1; sign of company not being over-leveraged and can cover their interest expense without having taken any new debt
- D/E constantly less than 1; showing strong signs of company covering its liabilities



Ratio Analysis

PARTICULARS	FY2018	FY2019	FY2020	FY2021	FY2022
Financial Efficiency Ratios					
Payable Days	37.75	49.84	66.90	28.32	37.29
Receivable Days	190.46	228.10	192.25	149.93	99.12
Inventory Turnover Ratio	0.66	0.69	0.63	0.63	0.69

- Volatile payable days and Receivable days; mainly because they are a B2G company
- Inventory Turnover Ratio of less than 1; showing signs of inefficient sales and inventory stocking up. Could be constant due to contractual selling, amounts sold are mostly inflexible and pre-decided



Valuation-DCF



WACC Calculation

WACC Calculation Sheet for Astra Microwave Products Ltd (06/02/23)

Cost of Equity= Riskfree Rate + Beta * ERP			
Riskfree rate=			
10 Year Government Bond Rate - CDS			
10 year government bond rate			7.28%
CDS			2.69%
Risk free rate=			4.59%
Beta=			
Country/Region	% of total reven	Country-wise betas	Adjusted Betas
India	53%	1.28	0.6784
Israel	23.50%	1.24	0.2914
France	8.00%	0.48	0.0384
USA	7.75%	1.06	0.08215
Italy	7.75%	0.48	0.0372
		Final Beta	1.12755
Equity Risk Premium=			
	Moody's	ERP	Revenue Exposure
			Adjusted ERP
	India	Baa3	9.73%
			53%
			5.16%
	Israel	A1	7.16%
			23.50%
			1.68%
	France	Aa2	6.79%
			8.00%
			0.54%
	USA	Aaa	5.94%
			7.75%
			0.46%
	Italy	Baa3	9.73%
			7.75%
			0.75%
			8.60%
ERP=			8.60%

Cost Of Equity			
Risk-free rate+ beta*ERP =			14.28%
Cost Of Debt= (Risk-free rate+ company default spread+ country risk premium)(1- Marginal Tax rate)			
Company Default spread			
Interest Coverage Ratio=			4.46
	If ICR > 12.5	A2/A	
	Therefore CDS=		1.42%
Marginal Tax Rate=			34.94%
Cost of Debt=			5.33%
Cost Of Capital=			
	Cost of equity (Value of Equity/(Value of Equity + Value of Debt)) + Cost of Debt(Value of Debt/(Value of Equity + Value of Debt))		
Share Price			254
Number of Shares (Cr.)			8.6596203
Value of Equity			2199.543556 Cr
Value of Debt			859.26 Cr
Cost of Capital/WACC			11.77%



Table of Assumptions

Assumptions	Hist	Hist	Hist	Hist	Hist	Proj	Proj	Proj	Proj	Proj	
	31-Mar-18	31-Mar-19	31-Mar-20	31-Mar-21	31-Mar-22	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	
Income statement											
Sales growth	-19.08%	-19.78%	59.19%	37.17%	17.09%	13.00%	13.00%	13.00%	13.00%	13.00%	Taken as CAGR
COGS as a % of sales	41.21%	55.27%	56.78%	69.57%	70.25%	65%	65%	65%	65%	65%	Taken as average of past 5 years with a slight increase as the trend indicates (due to conservatism)
Employee Expense as a % of sales	18.99%	22.16%	15.30%	11.14%	10.74%	15.66%	15.66%	15.66%	15.66%	15.66%	Taken as average of past 5 years
Depreciation as a % of last years PPE		14.86%	14.46%	14.65%	14.43%	14.60%	14.60%	14.60%	14.60%	14.60%	Taken as average of past 5 years
Other Non-Operating/Non-Recurring Income	269.77523	1397.17	620.82	864.7	473.86	0	0	0	0	0	
Other Non-Operating/Non-Recurring Expenses	3469.94007	3746.94	4796.15	4647.4	5341.26	0	0	0	0	0	
Effective Tax rate	17.82%	78.47%	27.71%	24.75%	24.28%	24.28%	24.28%	24.28%	24.28%	24.28%	Taken at previous year level
Marginal Tax Rate	34.60%	34.90%	34.90%	34.90%	34.90%	34.90%	34.90%	34.90%	34.90%	34.90%	
Dividend pay out ratio	20.78%	0.00%	8.82%	39.24%	34.00%	20.00%	20.00%	20.00%	20.00%	20.00%	Taken at average of past 5 years
Basic weighted average shares outstanding	8.6611675	8.6611675	8.6611675	8.6611675	8.6611675	8.6611675	8.6611675	8.6611675	8.6611675	8.6611675	Taken as constant at previous year levels
Assets											
Capex on PPE as a % of sales	9.27%	5.53%	4.16%	0.58%	3.72%	5.00%	5.00%	5.00%	5.00%	5.00%	Average of past 5 years
Capital WIP as a percentage of Net PPE	0.05%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	Taken at average of past 5 years
Investments	0.20	1,447.49	1,318.60	1,609.90	1,384.76	1,384.76	1,384.76	1,384.76	1,384.76	1,384.76	Taken as constant at previous year levels
Other Financial Assets	1,707.91	1,289.01	1,140.28	1,135.39	923.74	1230	1230	1230	1230	1230	Taken at past 5 years average
Other Non Current Operating Assets as a % of sales	0.25%	0.72%	2.02%	0.88%	1.70%	1.00%	1.00%	1.00%	1.00%	1.00%	Taken at past 5 years average
Inventories as a % of COGS	75.48%	77.61%	85.01%	67.79%	77.35%	70.00%	70.00%	70.00%	70.00%	70.00%	Taken at past 5 years average
Current Investments	12,573.31	2,023.46	1,304.70	1,409.60	0.00	1150	1150	1150	1150	1150	Taken at past 4 years average
Trade Receivables as a % of Sales	52.04%	65.47%	53.37%	41.63%	27.33%	30.00%	30.00%	30.00%	30.00%	30.00%	Taken at past 5 years' average with a slight decrease as the trend indicates
Other Financial Assets	1,707.91	1,289.01	1,140.28	1,135.39	923.74	923.7	923.7	923.7	923.7	923.7	Taken constant at previous year levels
Other Current Assets as a % of Sales	2.76%	8.84%	19.13%	16.60%	9.47%	9.47%	9.47%	9.47%	9.47%	9.47%	Taken constant at previous year levels
Liabilities											
Other long term liabilities (amount)	1,426.10	475.44	0	0	335.41	335	335	335	335	335	Taken constant at previous year levels
Trade Payables as a % of COGS	10.34%	13.66%	18.33%	7.76%	10.22%	14.00%	14.00%	14.00%	14.00%	14.00%	Taken at past 5 years' average with a slight increase as the trend indicates
Other Financial Liabilities	6,580.08	1,144.04	1,645.48	1,204.22	1,552.24	1552.24	1552.24	1552.24	1552.24	1552.24	Taken as constant at previous year levels
Other operating current liabilities as a % of sales	6.30%	4.49%	1.13%	0.75%	0.30%	1.00%	1.00%	1.00%	1.00%	1.00%	Taken at past 5 years' average



FCF Calculations

Parameters								
Tax rate						34.94%		
Terminal growth rate						7.0%		
WACC						11.77%		
Free Cash Flows								
			2022	2023	2024	2025	2026	2027
	EBIT		7,191.27	14,599.81	16,363.13	18,349.77	20,587.91	23,109.26
	Effective Tax Rate		24.28%	24.28%	24.28%	24.28%	24.28%	24.28%
	NOPAT		5,445.12	11,054.75	12,389.90	13,894.15	15,588.84	17,497.96
	Depreciation & Amortization			2525.9559	2894.745461	3317.378299	3801.71553	4356.765998
	(Inc)/Dec in Operating Working Capital			(2,612)	(4,044)	(8,098)	(9,173)	(10,453)
	(Inc)/Dec in Other operating non-current assets			-514.03	99.21872645	112.1171609	126.6923918	143.1624027
	Inc/(Dec) in Other operating non-current liabilities			0	0	0	0	0
	Capital Expenditure			-4,002.26	-4,764.78	-5,384.85	-6,085.62	-6,877.61
	Free Cash Flows			6,452.64	6,575.51	3,840.77	4,258.23	4,667.63
Table of Free Cash Flows								



FCF Calculations

		Amount in lacs						
		2022	2023	2024	2025	2026	2027	
Change in Non-cash WC calculation								
	Operating current Assets							
	Accounts Receivable	20508	25441	28748	32485	36708	41480	
	+ Inventories	41,934	41,934	43,601	49,269	55,674	62,912	
	= Operating Current Assets	62,442	67,375	72,349	81,754	92,383	104,392	
	Operating current liabilities							
	Accounts Payable	5,538	7,717	8,720	9,854	11,135	12,582	
	+ Other operating current Liabilities	20,962	21,104	21,032	21,206	21,380	21,489	
	= Operating current liabilities	26,500	28,822	29,752	31,060	32,514	34,071	
	NOWC (current ass - current liab)	35,941	38,553	42,597	50,695	59,868	70,321	
	Change in NOWC		2,612	4,044	8,098	9,173	10,453	
	Discounted FCF		FY 23	FY 24	FY 25	FY 26	FY 27	Residual Value of firm
			5,773.24	5,263.74	2,750.84	2,728.72	2,676.14	60,055.47
	PV of residual value	34,432.17						
	Sum of PVs of Future Cash Flows	53,624.85						
	Add Cash and Current Investments (2022)	7,747.00						
	FCFF =	61,371.85						
	FCFE = FCFF - Int(1 - Tax rate) + Net borrowing							
	FCFE	66,699.80						
	Weighted Avg Number of Shares	866.12						
	Value per share	77.01016924						
	CMP	254						



Investment Thesis

We give this stock a HOLD rating owing to the following reasons

- The company has a large and diversified order book
- India's extensive modernisation plans and increased focus on defense along with Make in India are expected to drive healthy growth in the sector
- Industry moving towards private players and Astra seems to be able to capture the growth.
- Strong and experienced management from the industry itself
- Established market position in the microwave RF applications domain and further expansion into the upcoming electronic warfare category

- The stock price is overvalued at Rs. 254 as compared to the fair valuation of Rs. 77
- The stock price has recently risen a lot (used to trade ~Rs.80 in 2018-19)
- The Defense industry is highly regulated and the company is largely dependent on government orders
- The trade receivables and inventories are high as a percentage of sales (~35%) and COGS (70%) respectively due to the contractual nature of the business

