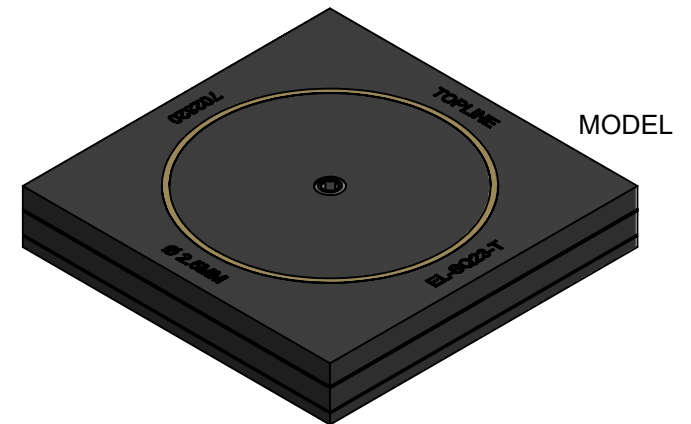


SCREW OPTIONAL

DIMENSION AND WEIGHT (MASS) TABLE

H HEIGHT ±0.5 mm	PCB MASS	TUNGSTEN BALLS IN CAVITY				Total PID MASS	SCREW ADJUST	SCREW HEX HEAD
		Ø DIA	Per Ball	QTY	Mass			
4.0mm	28g	1.5mm	0.031g	~93	2.8g	7.0g	2-56	0.035
4.5mm	36g	2.0mm	0.073g	~50	3.6g	7.5g	4-40	0.050
5.0mm	40g	2.3mm	0.102g	~39	4.0g	8.0g	6-32	1/16
7.5mm	45g	2.5mm	0.143g	~32	4.5g	11.0g	6-32	1/16



NOTES: (Unless Otherwise Specified).

1) DIMENSIONS mm

APPLICATION NOTES:

Contact TopLine for help to select the best PID for your application.

NOTES 2 MOUNTING STYLE

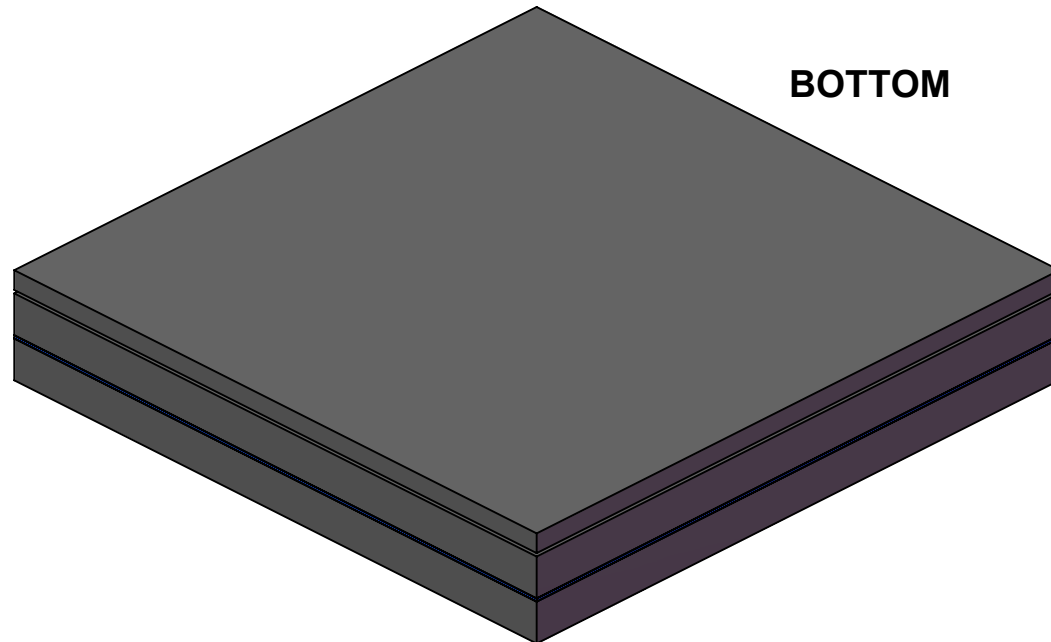
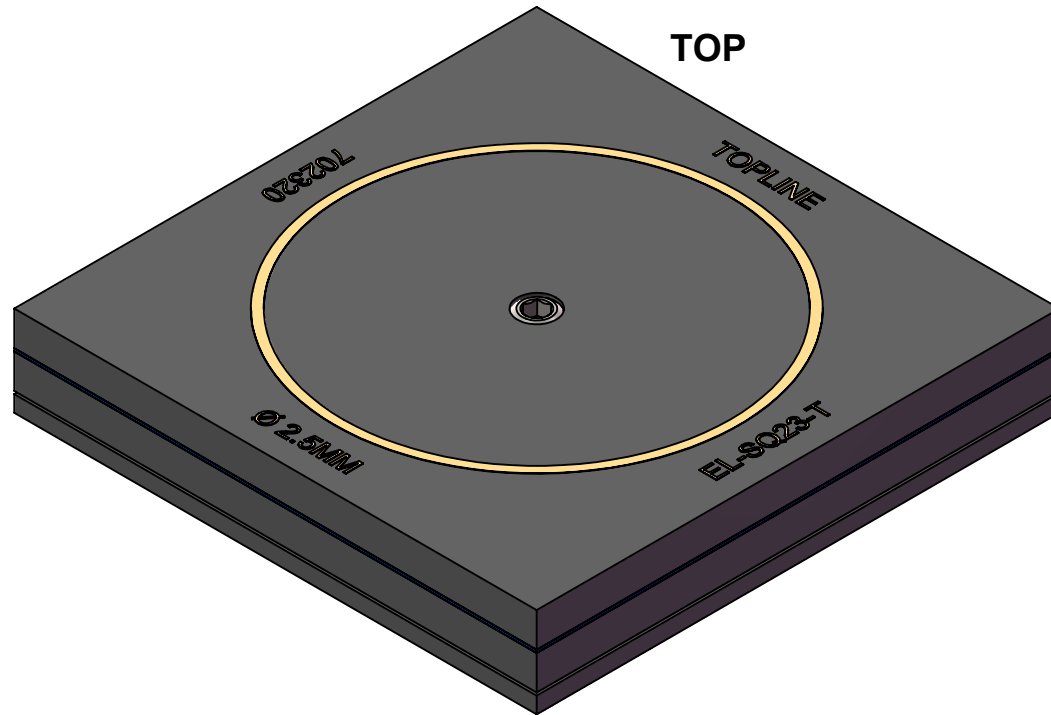
2= SCREW (FS)

3= ADHESIVE (FA)

PATENTS THAT MAY APPLY ON PAGE 4

APPROVALS	DATE	TopLine®			
DRAWN T. Au	7/7/2021				
ENG M. Hart	7/7/2021	TITLE EL-SQ23-T PID VIBRATION DAMPER			
MFG		SCALE	SIZE	DRAWING NO.	REV
QA		2.5:1	A	702320	A
CUST		DO NOT SCALE DRAWING			SHEET 1 OF 4
REVISED					

MODELS



BOTTOM

**STYLE FA
ADHESIVE
(GLUE)**

TopLine®			
TITLE		EL-SQ23-T PID VIBRATION DAMPER	
SCALE	SIZE	DRAWING NO.	REV
2.5:1	A	702320	A
DO NOT SCALE DRAWING			SHEET 2 OF 4

PART NUMBER SYSTEM

<u>F</u>	<u>A</u>	<u>2.8</u>	<u>SQ</u>	<u>23X</u>	<u>5.0</u>	<u>A</u>
Series	Mounting on PCB	Tungsten Payload Grams (Mins.)	Shape	X/Y Size	Height	Version/Option
<p>Filled F = FR4 Case A = Al Case</p> <p>Empty E = FR4 Case L = Al Case</p>	<p>Mounting Style A = Adhesive S = Screw Fastener</p>	<p>Code • Grams 2.8 = 2.8gm 3.6 = 3.6gm 4.0 = 4.0gm 4.5 = 4.5gm</p> <p>Other Mass Available</p>	<p>Code • Shape SQ = Square R = Rectangle C = Cylindrical T = Toroid Z = Custom</p>	<p>Code Size 23X = 23mm SQ</p> <p>Other Sizes Available</p>	<p>Code Height 4.0 = 4.0mm 4.5 = 4.5mm 5.0 = 5.0mm 7.5 = 7.5mm</p> <p>Other Sizes Available</p>	<p>Code Version A Standard</p> <p>Other Version Available</p>

ORDER NUMBER

<u>1</u>	<u>3</u>	<u>298</u>	<u>2</u>
DESCRIPTION	Mount syle	Mass (gram) 9 = Decimal	Option Code
<p>Code • Description 1 = Filled PID 5 = Eng Dev Kit 7 = Empty Pkg</p>	<p>Code • Description 2 = Screw (S) 3 = Glue (A) 9 = Custom 0 = Master DWG</p>	<p>Code • Grams 298 = 2.8gm 396 = 3.6gm 490 = 4.0gm 495 = 4.5gm</p>	<p>1 Version A 2 Version B 3 Version C ... 9 Version J</p>

TopLine®			
TITLE EL-SQ23-T PID VIBRATION DAMPER			
SCALE NONE	SIZE A	DRAWING NO. 702320	REV A
DO NOT SCALE DRAWING			SHEET 3 OF 4

U.S. PATENTS PARTICLE IMPACT DAMPERS

	U.S. PATENT NBR	GRANTED	TITLE
1	9,521,753	2016	Vibration damping circuit board assembly
2	10,041,558	2018	Tunable apparatus for adjusting effective performance of particle impact damper
3	10,021,779	2018	Quick response particle damper for printed circuit boards and planar surfaces
4	D842351	2019	Toroidal shaped particle impact damper
5	10,704,639	2020	Unidirectional particle damper for printed circuit boards and planar surfaces

U.S. PATENTS REGISTERED TRADEMARKS

REGISTRATION	GRANTED	MARK	GOODS & SERVICES
5,469,015	2018	Inspired by Gravity®	Class 9. Electronic components namely particle impact dampers for attenuating vibration in printed circuit boards and mechanical assemblies

TopLine®

TITLE EL-SQ23-T
PID VIBRATION DAMPER

SCALE NONE	SIZE A	DRAWING NO. 702320	REV A
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DO NOT SCALE DRAWING

SHEET 4 OF 4