Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, CA 90638
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SDA441-01

5 kV DC-DC
DUAL HIGH VOLTAGE CONVERTER

Designer's Data Sheet

Part Number/Ordering Information [1/]

SDA441- 01 S

Screening [2/]
__ = Not Screened
TX = TX Level
TXV = TXV Level
S = S Level

Voltage
01 = 5,000 Volts

FEATURES:

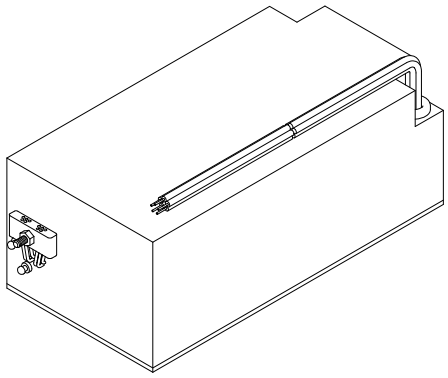
- Application: Airborne dual TWT high voltage converter
- 1 kW output power
- High power density (more than 50W/in^3)
- Minimum 95% output efficiency
- Minimum operational altitude 50,000 ft
- Designed for low EMI and noise
- TX, TXV, and S-level screening available[2/]
- Consult factory for:
  - Alternate output voltages
  - Application specific terminations

MAXIMUM RATINGS [3/]		SYMBOL	VALUE	UNIT
Input	Voltage	V_{IN}	300	$Volts_{PP}$
	Frequency	f_{OP}	50	kHz
Output	Cathode	V_{CATH}	6,000	Volts
	Collector	V_{COLL}	3,000	
	Ripple	V_{RIPPLE}	10	
Operating and Storage Temperature		T_{OP}	-40 to +87	°C
		T_{STG}	-40 to +125	

NOTES:

1/ For ordering information, price, operating curves, and availability- contact factory.
2/ Screening based on MIL-PRF-19500. Screening flows available on request.
3/ Unless otherwise specified, all electrical characteristics @ 25°C.
4/ All output loads are applied at the same time.

ASPM



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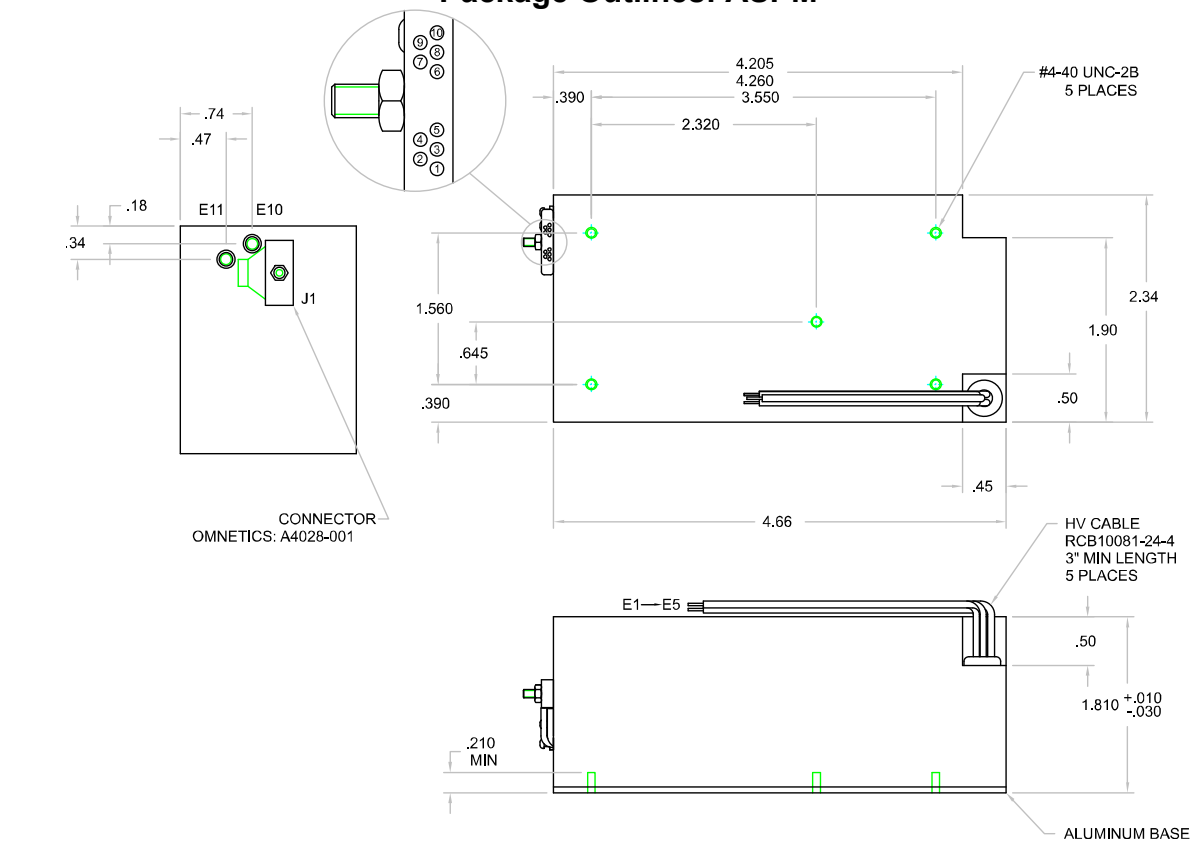
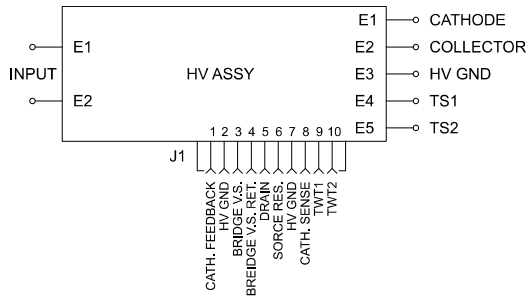
ELECTRICAL CHARACTERISTICS, @ T_B = -40 to +87°C

OUTPUT VOLTAGES[4/]	SYMBOL	MIN	MAX	UNIT
Cathode – GND (E_1 – E_3) V_{IN} = 260V_{PP} nom, I_{IN} = 8.6A max, f = 50kHz, R_L = 320kΩ	$V_{CATH-GND}$	-4.75	-4.95	kVolts
Cathode – Collector (E_1 – E_2) V_{IN} = 260V_{PP} nom, I_{IN} = 8.6A max, f = 50kHz, R_L = 6.95kΩ	$V_{CATH-COL}$	-2.45	-2.55	kVolts
Drain – GND ($J_{1.5}$ – $J_{1.2}$) V_{IN} = 260V_{PP} nom, I_{IN} = 8.6A max, f = 50kHz, R_L = 13kΩ	V_{DRAIN}	190	210	Volts
Cathode Feedback – GND ($J_{1.1}$ – $J_{1.2}$) V_{IN} = 260V_{PP} nom, I_{IN} = 8.6A max, f = 50kHz, R_L = 10kΩ	V_{CATFB}	-4.75	-4.95	Volts
Cathode Sense – GND ($J_{1.8}$ – $J_{1.2}$) V_{IN} = 260V_{PP} nom, I_{IN} = 8.6A max, f = 50kHz, R_L = 39kΩ	V_{CATSEN}	-4.50	-5.00	Volts

Package Outlines: ASPM





Tolerances (unless specified): .XX ± .03
.XXX ± .010