

SDA346 ULTRA FAST HIGH VOLTAGE ASSEMBLY UP TO 30 KV @ 250 mA 125KHz OPERATING FREQUENCY	SSDI X00139
	14849 FIRESTONE BLVD. LA MIRADA, CA 90638 TEL: (213) 921-9660 FAX: (213) 921-2396

FEATURES

- ⇒ Designed for use with TWT and Klystron switching power supplies.
- ⇒ Discretes and assemblies can be screened to TXV levels.
- ⇒ High Reverse Transient Energy capabilities.
- ⇒ Void-free, hermetically sealed, metallurgically bonded discretes.
- ⇒ Single junction discretes provide superior thermal properties than designs using multi junction discretes.
- ⇒ Isolated Aluminum heat sink with Boron Nitride encapsulation provides superior power dissipation.
- ⇒ All internal devices are matched 100% for avalanche BVR, IR, and trr.
- ⇒ Unique construction techniques guarantee 100% corona free operation.
- ⇒ Consult factory for higher voltages and currents and alternate bridge configurations.

MAXIMUM RATINGS PER LEG

RATING	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage and DC Blocking Voltage	VRM(rep) VR	10,000	Volts
RMS Reverse Voltage	Vr	7,000	Volts
Half Wave Rectified Forward Current Averaged over Full Cycle (Resistive Load, 60Hz, Sine Wave, TC=25 °C)	IO	1	Amp
Peak Repetitive Forward Current (TC=55 °C, 8.3ms Pulse, Allow Junction to reach Equilibrium between Pulses)	IFM(rep)	6	Amps
Peak Surge Current (TC=55 °C, 8.3ms Pulse, Superimposed on Rated Current at Rated Voltage)	IFM(surge)	25	Amps
Operating and Storage Temperature	TJ, Tstg	-55 to +125	°C

REVERSE RECOVERY CHARACTERISTICS

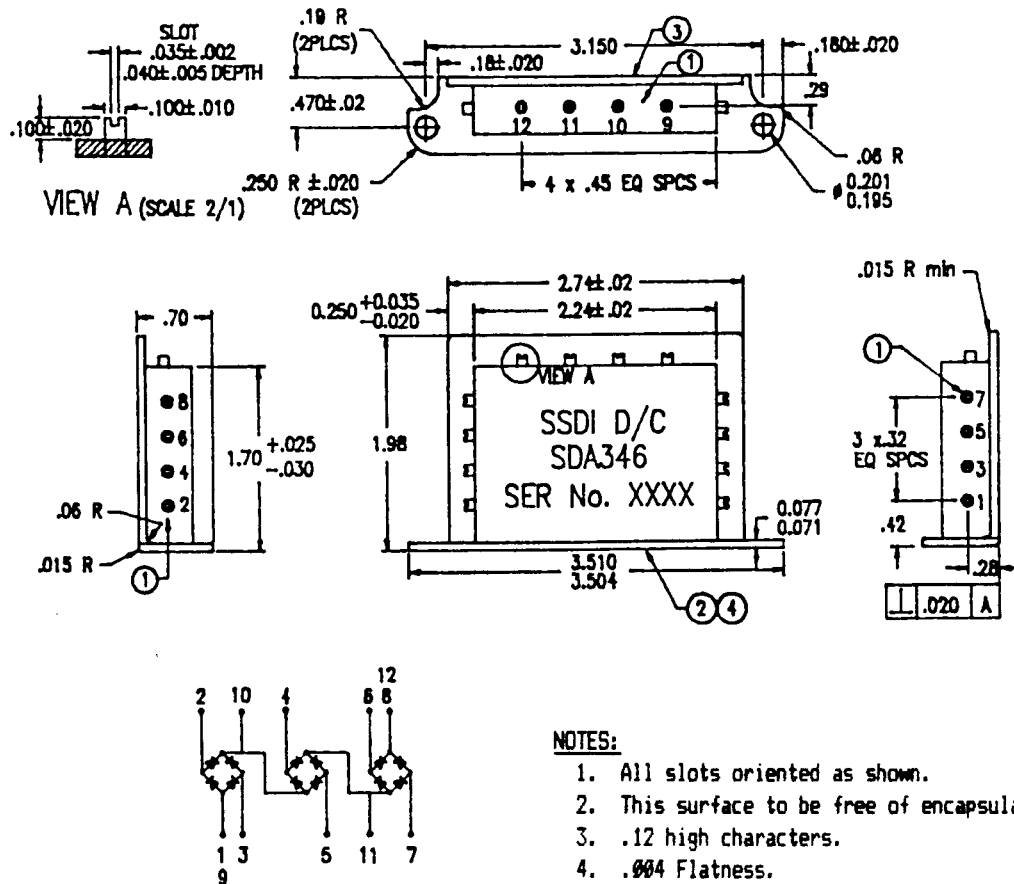
CHARACTERISTIC	SYMBOL	MIN	TYP	MAX	UNIT
Reverse Recovery Time * (IF=500mA, IR=1A, IRR=250mA)	trr	50	55	60	ns

* Tested on each individual diode before assembly.

ELECTRICAL CHARACTERISTICS PER LEG

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Max. Full Cycle Forward Voltage Drop, Averaged over Full Cycle ($I_O(\text{MAX})$, 60 Hz, Square Wave, $T_C = 55^\circ\text{C}$)	$V_F(\text{AV})$	7.0	Vdc
Max. Instantaneous Forward Voltage Drop ($I_F=1\text{A dc}$, $T_C=25^\circ\text{C}$, 300 μs Pulse)	V_F	14.5	Vdc
Max. Full Cycle Leakage Current Averaged over Full Cycle (Rated V_R , 60Hz, Square Wave, $T_C=100^\circ\text{C}$)	$I_R(\text{AV})$	100	$\mu\text{A dc}$
Max. Reverse Leakage Current (Rated V_R , $T_C=25^\circ\text{C}$)	I_R	5	$\mu\text{A dc}$
Max. Junction Capacitance ($V_R=100\text{V}$, $T_C=25^\circ\text{C}$)	C_J	1.5	pf

PHYSICAL DIMENSIONS AND SCHEMATIC DRAWING



SSDI

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