



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

**SAM20HF – SAM30HF
 and
 SAM20HFSMS – SAM30HFSMS**

**1 Amp
 2000 – 3000 VOLTS
 30 nsec
 HIGH VOLTAGE
 HYPER FAST RECTIFIER**

Designer's Data Sheet

Part Number / Ordering Information^{1/}

SAM HF

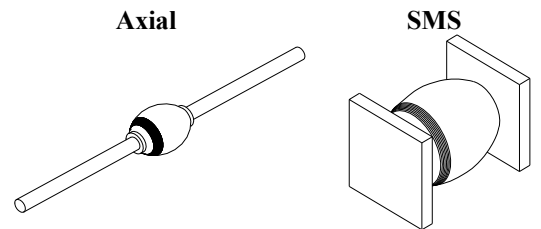
- Screening^{2/} = None
 TX = TX Level
 TXV = TXV Level
 S = S Level
- Package
 = Axial Leaded
 SMS = Surface Mount Square Tab
- Recovery Time
 HF = Hyper Fast
- Voltage
 20 = 2000
 25 = 2500
 30 = 3000

- FEATURES:**
- Hyper Fast Recovery: 30 nsec Maximum
 - PIV to 3000 Volts
 - Hermetically Sealed
 - Void-Free Construction
 - Metallurgically Bonded
 - 175°C Maximum Operating Temperature
 - TX, TXV, and Space Level Screening Available^{2/}

ELECTRICAL CHARACTERISTICS (at 25°C unless otherwise specified)

Part Number	Peak Inverse Voltage	Average Rectifier Current		Maximum Reverse Current		Maximum Forward Voltage	Maximum Surge Current (1 Cycle)	Maximum Reverse Recovery Time	Maximum Junction Capacitance	Typical Thermal Resistance
		I _O	I _O	I _R	I _R					
Symbol	PIV	I _O		I _R		V _F	I _{FSM}	t _{RR}	C _J	R _{θJL} / R _{θJE}
Units	V	A	mA	μA		V	A	ns	pF	°C/W
Conditions		25°C	100°C	@ PIV 25°C	@ PIV 100°C	@ 1 A	t _p = 8.3 ms sine	I _F = .5 A I _R = 1 A I _{RR} = .25 A	V _R = 100 V f _T = 1 MHz	R _{θJL} : L=3/8" R _{θJE} : L=0"
SAM20HF	2000	1	750	1.0	150	8.5	25	30	15	12
SAM25HF	2500	1	750	1.0	150	8.5	25	30	15	12
SAM30HF	3000	1	750	1.0	150	8.5	25	30	15	12
SAM20HFSMS	2000	1	800	1.0	150	8.5	25	30	15	6
SAM25HFSMS	2500	1	800	1.0	150	8.5	25	30	15	6
SAM30HFSMS	3000	1	800	1.0	150	8.5	25	30	15	6

1/ For Ordering Information, Price, Operating Curves, and Availability – Contact Factory.
 2/ Screening based on MIL-PRF-19500. Screening flow available on request.
 3/ Operating and testing over 10,000 V/inch may require encapsulation or immersion in a suitable dielectric material.
 4/ Max. forward voltage measured with instantaneous forward pulse of 300μsec minimum.
 5/ Max. end tab temp. for soldering is 250°C for 5 sec maximum.
 6/ Operating and storage temperature: -65°C to +175°C.



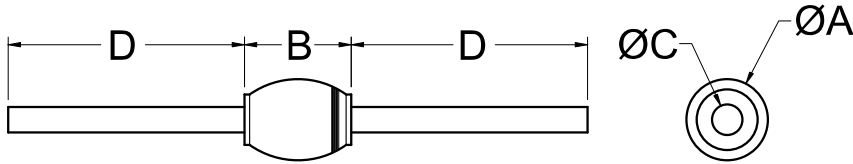


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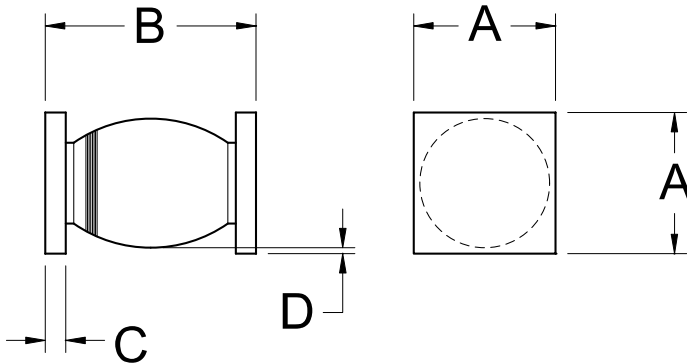
**SAM20HF – SAM30HF
 and
 SAM20HFSMS – SAM30HFSMS**

PACKAGE OUTLINE: Axial



DIMENSIONS		
DIM	MIN	MAX
A	---	.300"
B	---	.320"
C	.055"	.063"
D	.400"	---

PACKAGE OUTLINE: Surface Mount Square Tab



DIMENSIONS		
DIM	MIN	MAX
A	.195"	.205"
B	.330"	.410"
C	.020"	.035"
D	.002"	---

NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: RC0171A

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