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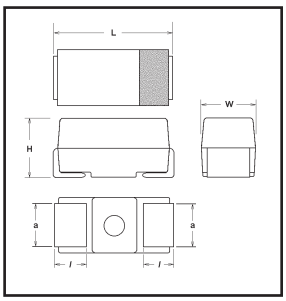
SAH SERIES



INTRODUCTION

SAH Series molded tantalum chip capacitors are specially developed for High Heat Resistance and High Reliability. Ideal for automotive electronics applications.

FEATURES:

- HIGH HEAT RESISTANCE MAKES IT SUITABLE FOR ALL TYPES OF SOLDERING
- HIGH RESISTANCE TO HEAT - 125°C WITH DERATED VOLTAGE FOR 2000 HRS. 150°C STEADY STATE FOR 1000 HRS.
- HIGH RESISTANCE TO MOISTURE. 85°C & 85% RH FOR 500 HRS. 65°C 95% RH WITH RATED VOLTAGE FOR 500 HRS.
- HIGHEST RELIABILITY DUE TO EXCEPTIONALLY LOW FAILURE RATE OF 0.5% PER 1000 HRS.
- COMPONENTS MEET EIAJ RC-3813 & JIS C 5102. REEL PACKING STDS - EIAJ RC-1009B /EIA 481/IEC 286-3.
- EPOXY MOLDED COMPONENTS WITH CONSISTENT DIMENSIONS AND SURFACE FINISH. ENGINEERED FOR AUTOMATIC ONSERTION.
- COMPATIBLE WITH ALL POPULAR HIGH SPEED ASSEMBLY MACHINES.

GENERAL SPECIFICATIONS

CAPACITANCE RANGE: 1.0 µF to 68 µF. **VOLTAGE RANGE:** 4VDC to 50VDC. **CAPACITANCE TOLERANCE:** ±20%(M), ±10%(K), (±5%(J) - UPON REQUEST). **TEMPERATURE RANGE** -55 TO +125°C WITH DERATING ABOVE 85°C. **ENVIRONMENTAL CLASSIFICATION:** 55/125/56(IEC68-2). **DISSIPATION FACTOR:** 0.1µF TO 1µF 4 % MAX,1.5µF TO 68 µF 6% MAX. **LEAKAGE CURRENT**: NOT MORE THAN 0.005CV µA or 0.25 µA WHICHEVER IS GREATER. **FAILURE RATE:** 0.5%PER 1000 HRS.

LIFE TEST DETAILS

CAPACITORS SHALL WITHSTAND RATED DC VOLTAGE APPLIED AT 85°C for 2000 Hrs. or DERATED DC VOLTAGE APPLIED at 125°C for 1000 Hrs. AFTER THE TEST:

1. CAPACITANCE CHANGE SHALL NOT EXCEED ±10%OF INITIAL VALUE.
2. DISSIPATION FACTOR SHALL BE WITHIN THE NORMAL SPECIFIED LIMITS.
3. DC LEAKAGE CURRENT SHALL BE WITHIN 125% OF NORMAL LIMIT.
4. NO REMARKABLE CHANGE IN APPEARANCE. MARKINGS TO REMAIN LEGIBLE.

CASE DIMENSIONS IN MILLIMETERS (INCHES)

CASE	EIA/IEC	L	W	H	l	a
B	3528	3.5±0.2 (0.138±0.008)	2.8±0.2 (0.110±0.008)	1.9±0.2 (0.075±0.008)	0.8±0.3 (0.031±0.012)	2.2±0.1 (0.087±0.004)
C	6032	6.0±0.3 (0.236±0.012)	3.2±0.3 (0.126±0.012)	2.5±0.3 (0.098±0.012)	1.3±0.3 (0.051±0.012)	2.2±0.1 (0.087±0.004)
D2	6045	5.8±0.3 (0.228±0.012)	4.5±0.3 (0.177±0.012)	3.1±0.3 (0.122±0.012)	1.3±0.3 (0.051±0.012)	3.1±0.1 (0.122±0.004)
D	7343	7.3±0.3 (0.287±0.012)	4.3±0.3 (0.170±0.012)	2.8±0.3 (0.110±0.012)	1.3±0.3 (0.051±0.012)	2.4±0.1 (0.095±0.004)

HIGH RELIABILITY SERIES

SAH SERIES RATINGS AND CASE CODES

CAPACITANCE		RATED VOLTAGE DC at 85 °C							
CODE	µF	4V	6.3V	10V	16V	20V	25V	35V	50V
104	0.1							A	A
154	0.15							A	B
224	0.22							A	B
334	0.33							A	B
474	0.47						A	B	C
684	0.68					A		B	C
105	1.0				A			B	C
155	1.5			A			B	C	D2, D
225	2.2		A			B		C	D2, D
335	3.3	A			B			C	
475	4.7			B			C	D2, D	
685	6.8		B			C		D2, D	
106	10	B			C		D2, D		
156	15			C		D2, D			
226	22		C		D2, D				
336	33	C		D2, D					
476	47		D2, D						
686	68	D2, D							

SAH SERIES SPECIFICATIONS

4 V DC Rated Voltage
Surge Voltage 5 VDC @ 85°C and 3.2 VDC @ 125°C

SHARMA PART NUMBER	CAP VALUE µF	DCL (MAX) µA	DF% (MAX) at+25°C	ESR(max) OHMS at 100KHz	RIPPLE (max) Irms Amps at 100 KHz
SAH A 335 M 04 R 202	3.3	0.5	6	9.0	0.088
SAH B 106 M 04 R 202	10	0.5	6	4.0	0.141
SAH C 336 M 04 R 202	33	1.3	6	2.2	0.224
SAH D2 686 M 04 R 501	68	2.7	6	1.1	0.363
SAH D 686 M 04 R 501	68	2.7	6	1.1	0.369

6.3 V DC Rated Voltage
Surge Voltage 8 VDC @ 85°C and 5 VDC @ 125°C

SHARMA PART NUMBER	CAP VALUE µF	DCL (MAX) µA	DF% (MAX) at+25°C	ESR(max) OHMS at 100KHz	RIPPLE (max) Irms Amps at 100 KHz
SAH A 225 M 06 R 202	2.2	0.5	6	9.0	0.088
SAH B 685 M 06 R 202	6.8	0.5	6	4.0	0.141
SAH C 226 M 06 R 501	22	1.4	6	2.2	0.224
SAH D2 476 M 06 R 501	47	3.0	6	1.1	0.363
SAH D 476 M 06 R 501	47	3.0	6	1.1	0.369

10 V DC Rated Voltage
Surge Voltage 13 VDC @ 85°C and 8 VDC @ 125°C

SHARMA PART NUMBER	CAP VALUE µF	DCL (MAX) µA	DF% (MAX) at+25°C	ESR(max) OHMS at 100KHz	RIPPLE (max) Irms Amps at 100 KHz
SAH A 155 M 10 R 202	1.5	0.5	6	10.0	0.084
SAH B 475 M 10 R 202	4.7	0.5	6	4.0	0.141
SAH C 156 M 10 R 501	15	1.5	6	2.2	0.224
SAH D2 336 M 10 R 501	33	3.3	6	1.1	0.363
SAH D 336 M 10 R 501	33	3.3	6	1.1	0.369

16 V DC Rated Voltage
Surge Voltage 20 VDC @ 85°C and 13 VDC @ 125°C

SHARMA PART NUMBER	CAP VALUE µF	DCL (MAX) µA	DF% (MAX) at+25°C	ESR(max) OHMS at 100KHz	RIPPLE (max) Irms Amps at 100 KHz
SAH A 105 M 16 R 202	1	0.5	4	11.0	0.080
SAH B 335 M 16 R 202	3.3	0.5	6	4.4	0.135
SAH C 106 M 16 R 501	10	1.6	6	2.2	0.224
SAH D2 226 M 16 R 501	22	3.5	6	1.1	0.363
SAH D 226 M 16 R 501	22	3.5	6	1.1	0.369

20 V DC Rated Voltage
Surge Voltage 26 VDC @ 85°C and 16 VDC @ 125°C

SHARMA PART NUMBER	CAP VALUE µF	DCL (MAX) µA	DF% (MAX) at+25°C	ESR(max) OHMS at 100KHz	RIPPLE (max) Irms Amps at 100 KHz
SAH A 684 M 20 R 202	0.68	0.5	4	12.0	0.076
SAH B 225 M 20 R 202	2.2	0.5	6	5.0	0.126
SAH C 685 M 20 R 501	6.8	1.4	6	2.4	0.274
SAH D2 156 M 20 R 501	15	3.0	6	1.1	0.363
SAH D 156 M 20 R 501	15	3.0	6	1.1	0.369

25 V DC Rated Voltage
Surge Voltage 32 VDC @ 85°C and 20 VDC @ 125°C

SHARMA PART NUMBER	CAP VALUE µF	DCL (MAX) µA	DF% (MAX) at+25°C	ESR(max) OHMS at 100KHz	RIPPLE (max) Irms Amps at 100 KHz
SAH A 474 M 25 R 202	0.47	0.5	4	14.0	0.071
SAH B 155 M 25 R 202	1.5	0.5	6	5.5	0.121
SAH C 475 M 25 R 501	4.7	1.2	6	2.4	0.214
SAH D2 106 M 25 R 501	10	2.5	6	1.2	0.348
SAH D 106 M 25 R 501	10	2.5	6	1.2	0.354

35 V DC Rated Voltage
Surge Voltage 45 VDC @ 85°C and 28 VDC @ 125°C

SHARMA PART NUMBER	CAP VALUE µF	DCL (MAX) µA	DF% (MAX) at+25°C	ESR(max) OHMS at 100KHz	RIPPLE (max) Irms Amps at 100 KHz
SAH A 104 M 35 R 202	0.1	0.5	4	24.0	0.054
SAH A 154 M 35 R 202	0.15	0.5	4	21.0	0.058
SAH A 224 M 35 R 202	0.22	0.5	4	18.0	0.062
SAH A 334 M 35 R 202	0.33	0.5	4	15.0	0.068
SAH B 474 M 35 R 202	0.47	0.5	4	10.0	0.089
SAH B 684 M 35 R 202	0.68	0.5	4	8.0	0.100
SAH B 105 M 35 R 202	1	0.5	4	6.5	0.111
SAH C 155 M 35 R 501	1.5	0.5	6	4.5	0.156
SAH C 225 M 35 R 501	2.2	0.8	6	3.5	0.177
SAH C 335 M 35 R 501	3.3	1.2	6	2.5	0.210
SAH D2 475 M 35 R 501	4.7	1.6	6	1.5	0.311
SAH D 475 M 35 R 501	4.7	1.6	6	1.5	0.316
SAH D2 685 M 35 R 501	6.8	2.4	6	1.3	0.334
SAH D 685 M 35 R 501	6.8	2.4	6	1.3	0.340

50 V DC Rated Voltage
Surge Voltage 63 VDC @ 85°C and 40 VDC @ 125°C

SHARMA PART NUMBER	CAP VALUE µF	DCL (MAX) µA	DF% (MAX) at+25°C	ESR(max) OHMS at 100KHz	RIPPLE (max) Irms Amps at 100 KHz
SAH A 104 M 50 R 202	0.1	0.5	4	22.0	0.056
SAH B 154 M 50 R 202	0.15	0.5	4	17.0	0.069
SAH B 224 M 50 R 202	0.22	0.5	4	14.0	0.076
SAH B 334 M 50 R 202	0.33	0.5	4	12.0	0.082
SAH C 474 M 50 R 501	0.47	0.5	4	8.0	0.117
SAH C 684 M 50 R 501	0.68	0.5	4	7.5	0.121
SAH C 105 M 50 R 501	1	0.5	4	5.5	0.141
SAH D2 155 M 50 R 501	1.5	0.8	6	4.0	0.132
SAH D 155 M 50 R 501	1.5	0.8	6	3.5	0.141
SAH D2 225 M 50 R 501	2.2	1.1	6	2.5	0.249
SAH D 225 M 50 R 501	2.2	1.1	6	2.5	0.241

NOTE: FOR 10% TOLERANCE CHANGE TOLERANCE CODE FROM M TO K. FOR 5% TOLERANCE CHANGE TOLERANCE CODE FROM M TO J.
STANDARD REEL SIZE AND ORIENTATION = R. FOR OTHER SEE ORDERING INFORMATION ON PAGE 3.