The TAH20 is a completely encapsulated thick film resistor in the TO220 package outline. Rated for 20 watts @ 25°C case temperature, these resistors are electrically isolated, and molded in a high temperature case.

Designed for heat sink mounting, the symmetrical package is ready for use with snap-on style heat sinks (we recommend use of thermal grease). The TAH20 Series is very low induction, and available in a wide range of resistance values in standard 5% tolerance. 1% tolerance available by special order.

FEATURES

- 20 Watt Power Rating at 25°C **Case Temperature**
- High Pulse Tolerant Design
- Quick-snap Molded Package
- Very Low Inductance Design Resistor Package Electrically
- Isolated from Heat Sink Low Thermal Resistance to Heat
- Sink @ RTH<6.25°C/W • Tube Packaging Available

APPLICATIONS

- Frequency Conversion
- High Frequency Balancing
- Snubbers

Ohmite's new TCH35 TO220 package resistor provides 35W of steady state power when properly used in today's well defined heat sink applications.

These very low induction resistors are built under proprietary processes that deliver 75% more power handling capability than other TO220 package resistors of similar size.

Standard lead forms are provided for manual or automatic insertion.

A single screw mounting tab connects to the heat sink and should be accompanied by the use of a thermal compound. The TCH35 Series offers a low thermal resistance to the heat sink of <4.28°C/W.

FEATURES

- 35W Power Rating @ 25°C
- Very Low Inductance Design
- Single Screw Mounting
- Low Thermal Resistance to Heat Sink @ RTH<4.28°C/W
- Resistance Element is Electrically Insulated from Metal Heat Sink Mounting Tab

APPLICATIONS

- Switching Power Supplies
- Snubbers
- High Frequency

Voltage Regulation

Low Energy Pulse Loading

SPECIFICATIONS

Electrical

Resistance Range: 0.05Ω to 10K Ω , other values available upon request

Tolerance: ±5% std.

- 1% Available on request **Temperature Coefficient:**
- Referenced to 25°C, ∆R taken at +105°C 1 to 10Ω: ±(100ppm+0.002Ω)/°C 10Ω & up: ±50ppm/°C

Max Operating Voltage: 350V

- Dielectric Strength: 1,800 VAC
- Power Rating: 20W @ 25°C case temperature; see derating curve, next page
- Insulation Resistance: 10GΩ min.

Momentary Overload:

- 2x rated power for 5 seconds where applied voltage ≤1.5 times max. operating voltage. $\Delta R \pm$ $(0.3\% + 0.001\Omega)$ max.
- Terminal Material: Copper Terminal Plating: Lead Free Solder (97% Tin, 3% Silver)
- Mounting: Requires the use of a snap-on style heat sink. A thermal compound should be prop-
- erly applied. Solder Process: The TAH20 can-
- not exceed 260°C for more than 10 seconds during soldering process.

SPECIFICATIONS

Electrical

- Resistance Range: 0.1Ω to $10K\Omega$ (higher values on request subject to derating)
- **Resistance Tolerance:**
- ± 5% standard
- ± 1% available on request **Temperature Coefficient:**
- Referenced to 25°C. ∆R taken at +105°C
- 10 Ω and above: ±50 ppm°C 1Ω to 10Ω : ±(100ppm +0.002Ω)/°C

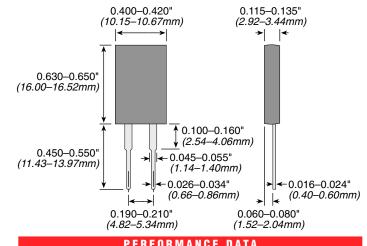
Max. Operating Voltage: 350V Dielectric Strength: 1800 VAC Insulation Resistance: 10GQ min.

- Momentary Overload: 2x rated power for 5 seconds as long as the applied voltage ≤ 1.5 times the continuous operating voltage, where $\Delta R \pm (0.3\% + 0.01\Omega)$ max Terminal Material: Copper Terminal Plating: Lead Free Solder (97% Tin, 3% Silver)
- Maximum Torque: 0.9 Nm Power Rating: 35 Watts @ 25°C case temperature; see derating curve, next page
- Working Temperature Range: -55°C to +175°C
- Solder Process: The TCH35 cannot exceed 260°C for more than 10 seconds during soldering process.



TAH20 Series

20 Watt TO220 Style Thick Film Power Resistors **RoHS Compliant**



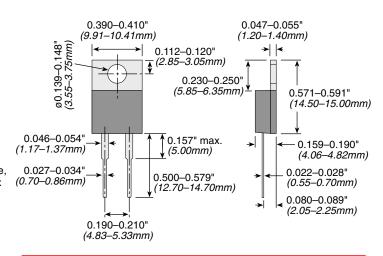
	PERFURMANCE DAI	A
Load Life	MIL-R-39009, 2000 Hours @ Rated Pwi	r ΔR = ±(1.0% + 0.001) Ω
Thermal Shock	MIL-R-STD-202, Method 107, Cond. F	$\Delta R = \pm (0.3\% + 0.001) \Omega \text{ max}$
High Freq Vibration	MIL-R-STD-202, Method 204, Cond. D	$\Delta R = \pm (0.2\% + 0.001) \Omega \text{ max}$
Terminal Strength	MIL-R-STD-202, Method 211, Cond. A (Pull Test) 2.4N	$\Delta R = \pm (0.2\% + 0.001) \Omega \max$
Moisture Resistance	MIL-R-STD-202, Method 106	$\Delta R = \pm (0.5\% + 0.01) \Omega \text{ max}$

(continued on next page)



TCH35 Series

35 Watt TO220 Style Thick Film Power Resistors **RoHS Compliant**



PERFORMANCE DATA

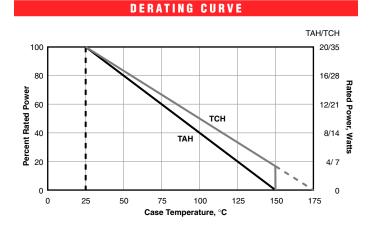
Load Life	MIL-R-39009, 2000 Hours @ Rated Pwi	$\Delta R = \pm (1.0\% + 0.01) \Omega$		
Thermal Shock	MIL-R-STD-202, Method 107, Cond. F	$\Delta R = \pm (0.3\% + 0.01) \Omega \text{ max}$		
High Freq Vibration	MIL-R-STD-202, Method 204, Cond. D	$\Delta R = \pm (0.2\% + 0.01) \Omega max$		
Terminal Strength	MIL-R-STD-202, Method 211, Cond. A (Pull Test) 2.4N	$\Delta R = \pm (0.2\% + 0.01) \Omega \max$		
Moisture Resistance	MIL-R-STD-202. Method 106	$\Delta R = \pm (0.5\% + 0.01) \Omega \text{ max}$		

(continued on next page)

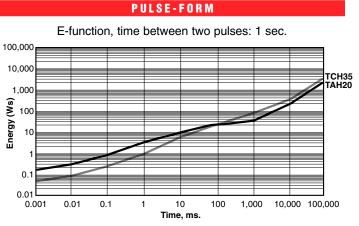
Ohmite Mfg. Co. 1600 Golf Rd., Suite 850, Rolling Meadows, IL 60008 • Tel. 1-866-9-OHMITE • Fax 1-847-574-7522 • www.ohmite.com • info@ohmite.com

TAH20/TCH35 Series

20 Watt & 35 Watt TO220 Series Thick Film Power Resistors (continued)



ORDERING INFORMATION



STANDARD VALUES

	Package Code	Tolerance F = 1% J = 5% Standard	E24 s'
TCH35 = 35W TCH35 = 35W TAH20 = 20W	5 P 1 0 R 0 Ohm Value Example: 2R40 = 2.4 Ohms 2K40 = 2400 Ohms	JE RoHS Compliant Non-compliant version not recommended for new designs	

E24 standard values (+25 & 50), 1% and 5% tolerance

	0.10	1.0	10	100	1,000	10,000
	0.11	1.1	11	110	1,100	
	0.12	1.2	12	120	1,200	
	0.13	1.3	13	130	1,300	
	0.15	1.5	15	150	1,500	
	0.16	1.6	16	160	1,600	
	0.18	1.8	18	180	1,800	
	0.20	2.0	20	200	2,000	20,000
	0.22	2.2	22	220	2,200	
	0.24	2.4	24	240	2,400	
	0.25	2.5	25	250	2,500	
	0.27	2.7	27	270	2,700	
	0.30	3.0	30	300	3,000	
	0.33	3.3	33	330	3,300	
	0.36	3.6	36	360	3,600	
	0.39	3.9	39	390	3,900	
	0.43	4.3	43	430	4,300	
	0.47	4.7	47	470	4,700	
0.050	0.50	5.0	50	500	5,000	
0.051	0.51	5.1	51	510	5,100	
0.056	0.56	5.6	56	560	5,600	
0.062	0.62	6.2	62	620	6,200	
0.068	0.68	6.8	68	680	6,800	
0.075	0.75	7.5	75	750	7,500	
0.082	0.82	8.2	82	820	8,200	
0.091	0.91	9.1	91	910	9,100	

Consult factory for current stock disposition.