

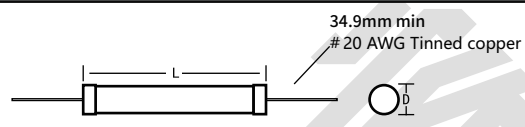
**Small size, Anti-pulse, High reliability, AEC-Q200 qualified**  
**Single pulse energy up to 1400J, suitable for capacitor charging and discharging**  
**perfect replacement for wirewound resistor**

### Characteristics

Solid ceramic resistors are suitable for high peak power, high energy pulses conditions and applications which require compact size and high reliability. Its internal structure guarantee nH-level non-inductive characteristics and ensures uniform distribution of energy in the resistor body. Compared with traditional film resistors and wirewound resistors, solid ceramic resistors have better chemical inertness, thermal stability and heat dissipation capability. The solid ceramic resistor can still work perfectly under extremely high temperature conditions, which makes this kind of resistor much more reliable than wirewound resistors and film resistors.

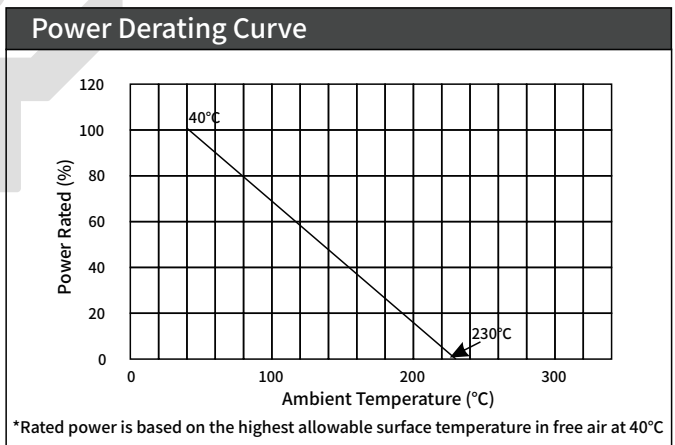


Specifications & Dimensions										
Series	Resistance Range (Ω)	Preferred Resistance (Ω)	End Cap Diameter of DS D (mm)*	End Cap Diameter of BS D (mm)*	Length L (mm)	Rated Power 40°C (W)	Peak Power (J)	Peak Voltage (V)	Peak Current (A)	Weight (g)
251AEC	10-2000	25, 33, 50, 75, 100, 150	9±2	10.5±2	28.6±2	3.5	400	2,500	150	3.0
252AEC	20-5000		9±2	10.5±2	54.0±2	6	900	3,000	190	6.0
253AEC	20-5000		9±2	10.5±2	79.4±2	9	1400	6,000	190	9.4



\*Tolerance of diameter is influenced by ceramics sintered.

Performance	
Operating temp.	-55°C to +230°C
TCR	-800ppm/°C
VCR Max value based on per kilovolt and per inch	-1.0%
Short-Time Overload 10 × rated power, 5s on, 90s off, 10 cycles	±2%
Load life 1000 hrs, rated power	±5%
Thermal Shock -55°C to +125°C, 10 cycles	±3%
Moisture Resistance MIL-STD-202, method 103	±5%



Part Number Information											
Example: 251AEC250KBS ( 251AEC 25Ω ±10% )											
2	5	1	A	E	C	2	5	0	K	B	S
Series 251AEC 252AEC 253AEC			Resistance 1R0=1Ω 100=10Ω 101=100Ω 102=1KΩ			Tolerance J=±5% K=±10% M=±20%			Code DS=Standard BS=Enhanced*		

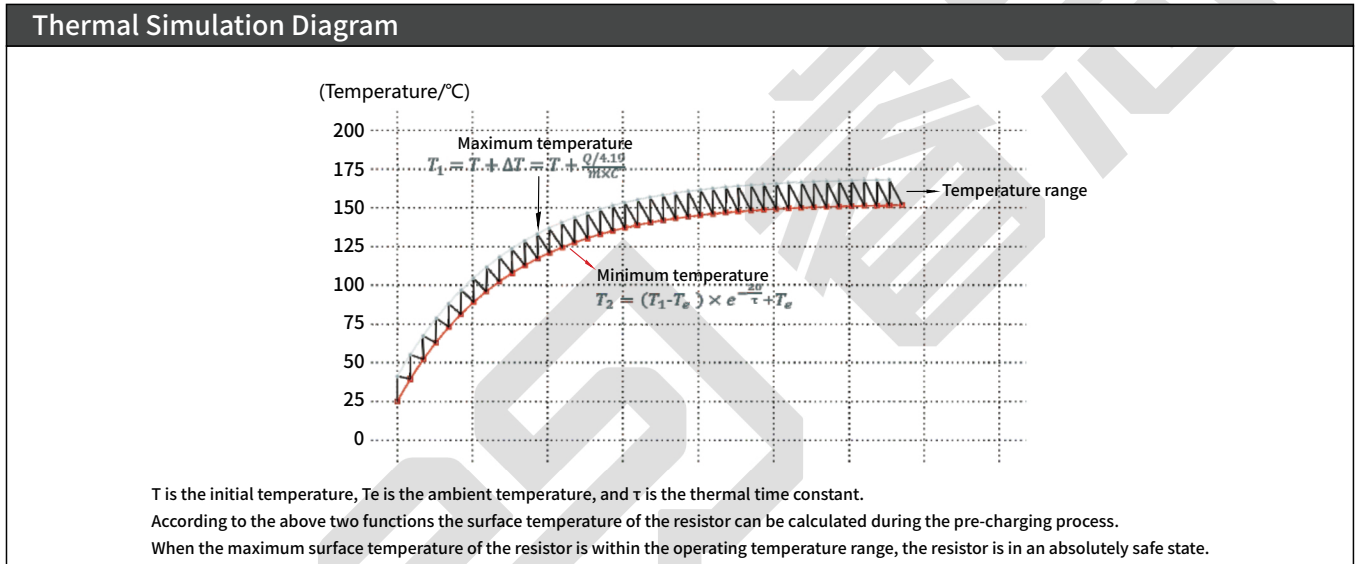
\*The enhanced type improve the insulation strength by using high temperature silicone resin for secondary encapsulation.

List of Pre-Charge Resistor Conditions			
No.	Items	Value	Unit
1	Capacitance value		uF
2	Battery pack voltage		V
3	The voltage required to charge		V
4	The time required to reach the charging voltage		ms
5	The number of times of consecutive pulses		times
6	The interval time between two consecutive pulses		s
7	The duration that the resistor is required to work normally when shorting out		ms
8	Can pre-charging resistors be mounted on PCBs		Yes/No

Please inform our sales engineer of value in the above table for evaluation.

Items	Type		
	Wirewound resistor	Film resistor	Solid ceramic resistor
Anti-pulse ability	Medium	Poor	Excellent
Reliability	Poor	Poor	Excellent
Size	Large	Heat sink is needed	Small
Price	Vary	Moderate	Moderate

Compared with wirewound and film resistors, solid ceramic resistors have obvious advantages in all parameters.



Recommend Part Number							
Model	Resistance (Ω)	Tolerance (%)	Rated Energy (J)	Model	Resistance (Ω)	Tolerance (%)	Rated Energy (J)
251AEC250KBS	25	±10	400	252AEC101KBS	100	±10	900
251AEC330KBS	33	±10	400	252AEC151KBS	150	±10	900
251AEC500KBS	50	±10	400	252AEC201KBS	200	±10	900
251AEC750KBS	75	±10	400	252AEC301KBS	300	±10	900
251AEC101KBS	100	±10	400	252AEC401KBS	400	±10	900
251AEC151KBS	150	±10	400	253AEC300KBS	30	±10	1400
252AEC200KBS	20	±10	900	253AEC330KBS	33	±10	1400
252AEC250KBS	25	±10	900	253AEC500KBS	50	±10	1400
252AEC300KBS	30	±10	900	253AEC750KBS	75	±10	1400
252AEC330KBS	33	±10	900	253AEC101KBS	100	±10	1400
252AEC500KBS	50	±10	900	253AEC151KBS	150	±10	1400
252AEC750KBS	75	±10	900				