Power shunt Resistors
Axial, low inductance and low ohmic
Open frame



RoHS compliant

ELECTRICAL SPECIFICATIONS

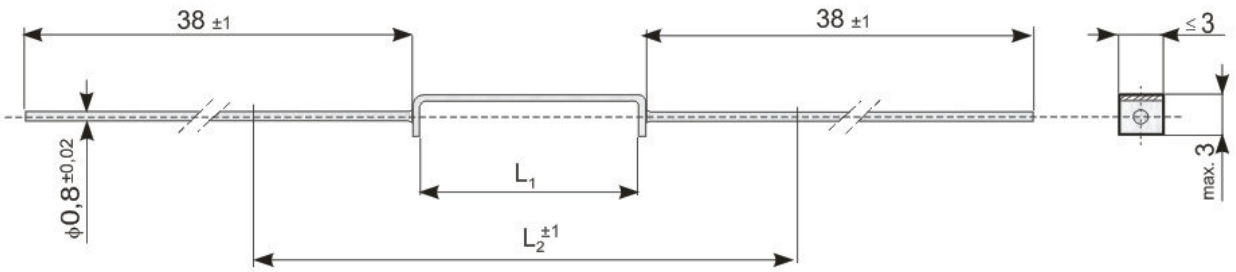
Type		KN350-0	KN351-0	KN352-0
Nominal Power rating P_{70}	[W]	1	2	3
Resistance range	[Ω] Min	0R003	0R004	0R005
	Max	0R051	0R068	0R1
E-Series			E24 >0R01	
Tolerances	± [%]		1, 2, 3, 5	
Temperature coefficient	[10^{-6}*K^{-1}]		+ 200 … + 1200 Depends on value	
Temperature range	[°C]		-55 … +300	
Thermal resistance	[KW^{-1}]	200	100	70
Dielectric withstanding voltage *IEC115-1 clause 4.7 (1[min])*	[V]		non insulated	
Max. working voltage	$[V]_{RMS}$		$\sqrt{P_{70} * R}$	

PERFORMANCE DATA

Derating linear	[°C]	70…300 (0W)
Climatic category		55/200/56
Failure Rate *(Total, ϑ_0, max, 60% cont. lev.)*	[10^{-9} h^{-1}]	appr. 10 depends on value
Endurance *IEC60115-1 clause 4.25* (P_{70}, @ 70[°C], 1000[h])	± [%]	3,0
Damp heat, steady state *IEC115-1clause 4.24* *(40[°C], 93[% r.h.], 56[d])*	± [%]	0,5
Climatic sequence *IEC115-1 clause4.23*	± [%]	0,5
Terminal strength	± [%]	0,5
Terminal Tensile Strength	[N]	min. 25
Resistance to soldering heat *IEC115-1 clause 4.18* *($260^{\pm5}$[°C], $3,5^{\pm1}$[s])*	± [%]	± 0,2
Solderability *IEC 60068-2-20-T* *($245^{\pm5}$[°C], $3^{\pm0.5}$[s])*		Solder bath method (> 95% coverage)
Marking *IEC60062*		Value imprinted

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DIMENSIONS [mm]



Type	L1	L2
KN350-0	12 … 14,5	40
KN351-0	17,5 … 21,5	45
KN352-0	29 … 34	60

Measuring length L_2: Resistance value is measured over the centered length L_2 on terminals free of oxide and contaminations. Differing conditions require adequate corrections ($R_{terminal}$ = 0,4 [mΩ/cm]).

PACKAGING

The standard packaging for KN in axial type is bulk, dimensions below.



Type	Packaging	Pieces	Pack. Code
KN350	Bulk	500	B
KN351		500	
KN352		500	

ORDERING EXAMPLE

KN351-0	5	B	0R015
Type	*Tolerance*	*Pack-Code*	*R-Value*

Power shunt Resistors
Radial, low inductance and low ohmic
Open frame



RoHS compliant

ELECTRICAL SPECIFICATIONS

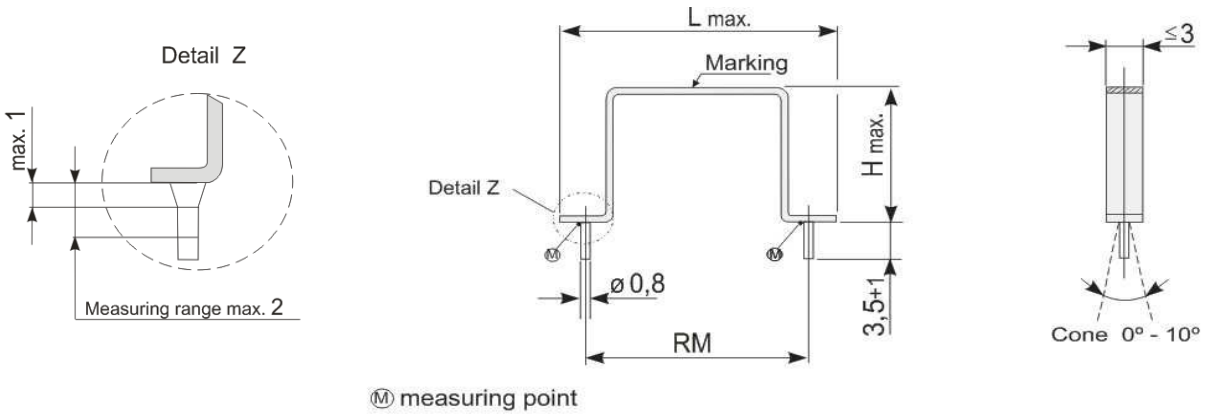
Type			KN350-009	KN351-009	KN351-010	KN352-009 KN352-010 KN352-011	KN353-009 KN353-010 KN353-011
Nominal Power rating P_{70}	[W]		1	2	1,5	2,5	3,0
Resistance range	[Ω]	Min	0R003	0R003	0R003	0R005	0R005
		Max	0R051	0R068	0R068	0R12	0R12
E-Series			E24 >0R01				
Tolerances	± [%]		1, 2, 3, 5				
Temperature coefficient	[10^{-6}*K^{-1}]		+ 200 … + 1200 Depends on value				
Temperature range	[°C]		-55 … +300				
Thermal resistance	[KW^{-1}]		230	115	153	92	77
Dielectric withstanding voltage *IEC115-1 clause 4.7 (1[min])*	[V]		non insulated				
Max. working voltage	$[V]_{RMS}$		$\sqrt{P_{70} * R}$				

PERFORMANCE DATA

Derating linear	[°C]	70…300 (0W)
Climatic category		55/200/56
Failure Rate *(Total, ϑ_0, max, 60% cont. lev.)*	[10^{-9} h^{-1}]	appr. 10 depends on value
Endurance *IEC60115-1 clause 4.25* (P_{70}, @ 70[°C], 1000[h])	± [%]	3,0
Damp heat, steady state *IEC115-1clause 4.24* *(40[°C], 93[% r.h.], 56[d])*	± [%]	0,5
Climatic sequence *IEC115-1 clause4.23*	± [%]	0,5
Terminal strength	± [%]	0,5
Terminal Tensile Strength	[N]	min. 25
Resistance to soldering heat *IEC115-1 clause 4.18* *($260^{\pm5}$[°C], $3{,}5^{\pm1}$[s])*	± [%]	± 0,2
Solderability *IEC 60068-2-20-T* *($245^{\pm5}$[°C], $3^{\pm0.5}$[s])*		Solder bath method (> 95% coverage)
Marking *IEC60062*		Value imprinted

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DIMENSIONS [mm]



Type	RM	H	L
KN350-009	10	6,5	16
KN351-009		10,5	
KN352-009		17,0	
KN353-009		20,0	
KN351-010	15	8,0	21
KN352-010		14,5	
KN353-010		18,0	
KN352-011	20	12,0	26
KN353-011		15,0	

Construction: The resistive elements consist of a flat metal-band. Spot welded Cu-terminals ensure high stability of Contacts. Thus, this construction results in a non-inductive resistor of both high stability and overload capacity.

PACKAGING

The standard packaging for KN in radial type is bulk, dimensions below.



Type	Packaging	Pieces	Pack. Code
KN350	Bulk	1000	B
KN351		1000	
KN352		500	
KN353		500	

ORDERING EXAMPLE

KN350-009	**5**	**B**	**0R015**
Type	*Tolerance*	*Pack-Code*	*R-Value*

Power Shunt Resistors
Axial, low inductance and low ohmic, Ceramic case



RoHS compliant

ELECTRICAL SPECIFICATIONS

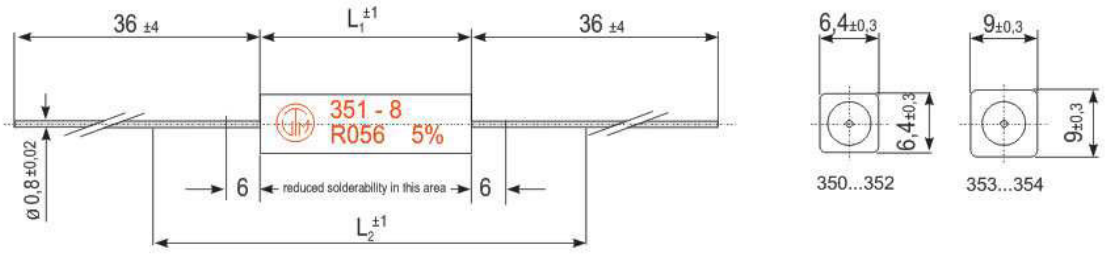
Type			KN350-8	KN351-8	KN352-8	KN353-8	KN354-8
Nominal Power rating P_{70}	[W]		See next page				
Resistance range	[Ω]	Min	0R003	0R004	0R005	0R004	0R005
		Max	0R051	0R068	0R1	0R068	0R1
E-Series			E24 >0R01				
Tolerances	± [%]		1, 2, 3, 5				
Temperature coefficient	$[10^{-6}*K^{-1}]$		+ 200 … + 1200 Depends on value				
Temperature range	[°C]		-55 … +250				
Thermal resistance	$[KW^{-1}]$		65	50	38	35	30
Dielectric withstanding voltage *IEC115-1 clause 4.7 (1[min])*	[V]		2000				
Insulation resistance	[MΩ]		$> 10^4$				
Max. working voltage	$[V]_{RMS}$		$\sqrt{P_{70} * R}$				

PERFORMANCE DATA

Derating linear	[°C]	70…250 (0W)
Climatic category		55/200/56
Failure Rate *(Total, ϑ_0, max, 60% cont. lev.)*	$[10^{-9}\ h^{-1}]$	appr. 10 depends on value
Endurance *IEC60115-1 clause 4.25* (P_{70}, @ 70[°C], 1000[h])	± [%]	3,0
Damp heat, steady state *IEC115-1clause 4.24* *(40[°C], 93[% r.h.], 56[d])*	± [%]	0,5
Climatic sequence *IEC115-1 clause4.23*	± [%]	0,5
Terminal strength	± [%]	0,5
Terminal Tensile Strength	[N]	min. 25
Resistance to soldering heat *IEC115-1 clause 4.18* *($260^{\pm5}$[°C], $3{,}5^{\pm1}$[s])*	± [%]	± 0,2
Solderability *IEC 60068-2-20-T* *($245^{\pm5}$[°C], $3^{\pm0.5}$[s])*		Solder bath method (> 95% coverage)
Marking *IEC60062*		Printed in clear

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DIMENSIONS [mm]



	KN350-8	KN351-8	KN352-8	KN353-8	KN354-8
L1	18	25	38	25	38
L2	40	45	60	45	60

Measuring length L_2: Resistance value is measured over the centered length L_2 on terminals free of oxide and contaminations. Differing conditions require adequate corrections ($R_{terminal}$ = 0,4 mΩ/cm).

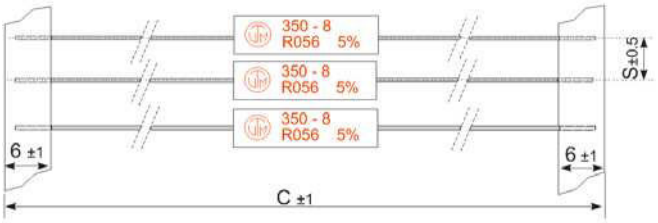
ELECTRICAL PERFORMANCE

Nominal Power rating [W]		
Type	**Resistance value**	**Rated power [W] $P_{70°C}$**
KN350-8	0R003	4,5
	0R004 … 0R051	5
KN351-8	0R004 … 0R068	6
KN352-8	0R005 ... 0R1	8
KN353-8	0R004 … 0R068	8
KN354-8	0R005 ... 0R1	10

PACKAGING

The standard packaging for KN in axial type is bulk, dimensions below.





Type	Packaging	Pieces	Pack. Code
KN350	Bulk	200	B
KN351		200	
KN352		200	
KN353		200	
KN354		200	

Type	Packaging	Pieces	Pack. Code	C	S
KN350	Taped in Reel	1000	R	85	10
KN351		1000		95	10
KN352		1000		95	10
KN353		500		95	10
KN354		500		95	10

ALTERNATIVE LEAD CONFIGURATIONS

This type KN, is also available in a different pre-forming, as shown below, other's upon request.

THROUGH HOLE VERSION

*For horizontal and vertical pre-forming please consult your local sales contact.

Radial	Radial Kink	Axial	Axial Kink
			

ORDERING EXAMPLE

KN351-8	**5**	**B**	**0R056**
Type	*Tolerance*	*Pack-Code*	*R-Value*