

Reinforced Winding Wirewound Power Resistor



FEATURES

- Very high dissipation
- High energy absorption and high overloads
- Suitable for the most severe conditions
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

- Filter
- Precharge
- Braking

DESIGN SUPPORT TOOLS

[click logo to get started](#)
3D
Models
Available

STANDARD ELECTRICAL SPECIFICATIONS

GLOBAL MODEL	POWER RATING W	RESISTANCE RANGE Ω	TOLERANCE ⁽¹⁾ $\pm$ %	$U_{LIM.}$ V
C52T	900	8.2 to 100K	5, 10	4200
C52T Li	900	0.33 to 270	5, 10	4200
C42T	480	1.0 to 56K	5, 10	3000
C38T	270	1.0 to 27K	5, 10	1900

Note

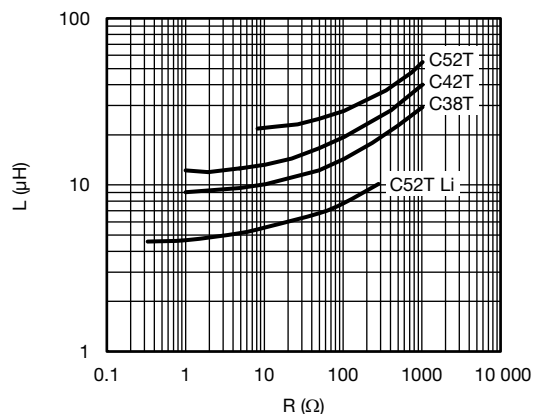
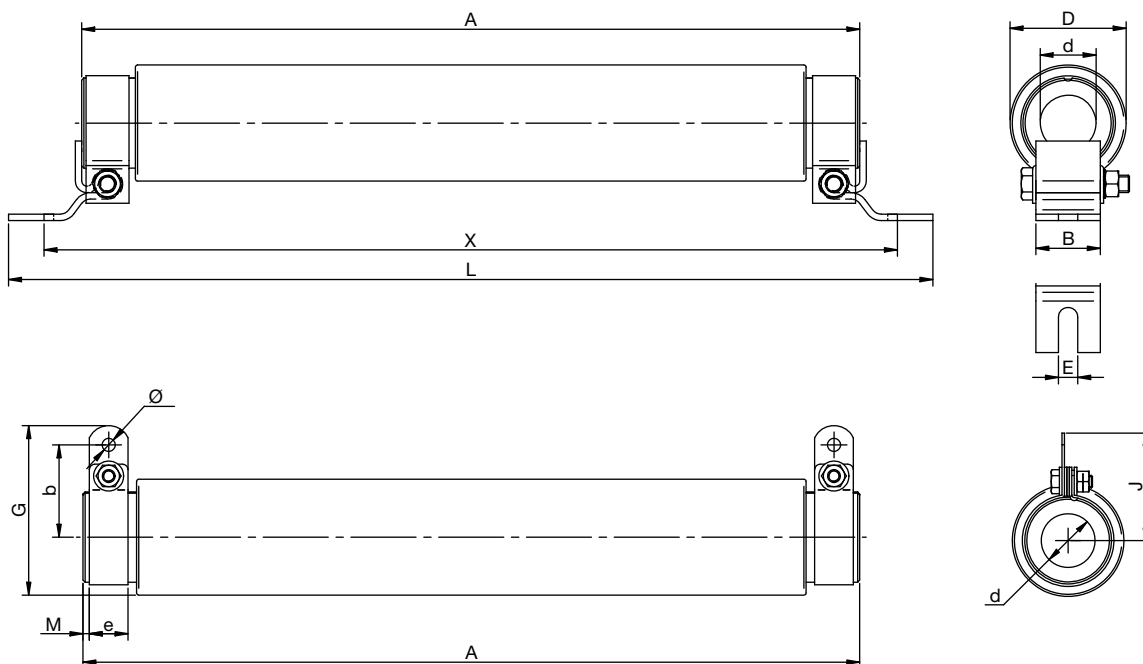
⁽¹⁾ For $R_n < 3.3 \Omega$

TECHNICAL SPECIFICATIONS

PARAMETER	UNIT	RESISTOR CHARACTERISTICS
Temperature coefficient	ppm/°C	75 ppm/°C (typical)
Operating temperature range	°C	-55 to +450

GENERAL CHARACTERISTICS

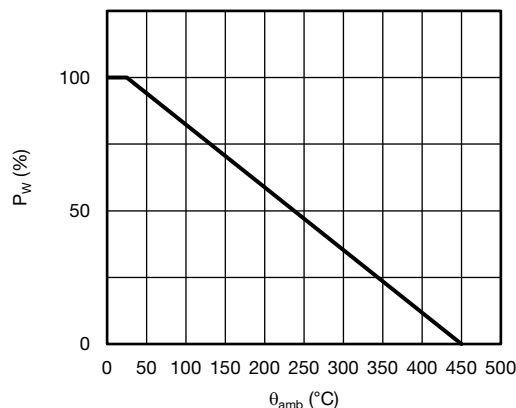
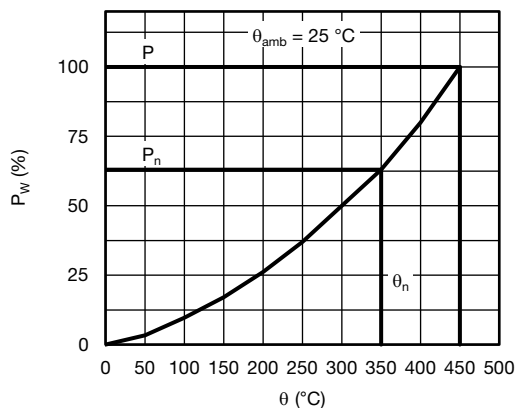
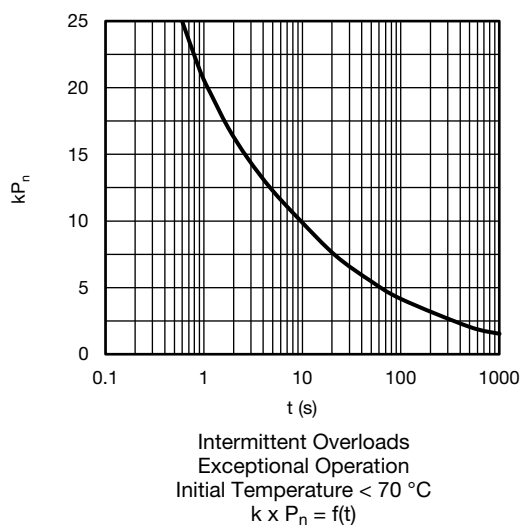
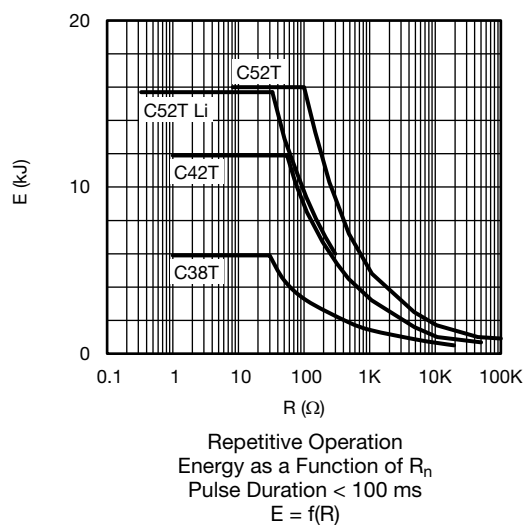
Core	Grooved ceramic
Winding	Double spiral, NiCr alloy
Coating	Special and vitreous
Ohmic values	E12
Traction lug outputs	C..TF version
Collars outputs	C..TN version
Low inductance	Li version (with TF terminals only)

INDUCTANCE VALUE AS A FUNCTION OF R_n

DIMENSIONS in millimeters AND WEIGHT in g


TYPE	C52T	C42T	C38T
A	362 ± 7	250 ± 4	168 ± 4
B 0 + 1	30	25	24
b	43 ± 1.5	33 ± 1	28.5 ± 1
D max.	54	44	40
d	26 ± 0.5	20 ± 0.5	17 ± 0.35
E	9 ± 0.5	9 ± 0.5	6.5 ± 0.2
e ± 1	18	13	9
G max.	88	63	55
H max.	72	62	53
h ± 2	45	30	27
J ± 1	52	39	33.5
L max.	440	320	230
M	8 + 0/- 4	5 + 0/-2	5 ± 2
Ø	6.2 ± 0.2	5.7 ± 0.5	5 ± 0.8
X	400 ± 6	285 ± 2	198 ± 2
Weight	1500	550	350

PERFORMANCES			
TESTS	CONDITIONS	REQUIREMENTS	TYPICAL VALUES
Overloads	10 P _n (temp. nom.), 5 s	± 2 %	10 P _n , 30 s, 1 %
Climatic	-55 °C, 5 cycles, +200 °C	3 % or 0.05 Ω ⁽¹⁾ Collar insulated N 10 ² MΩ	1 %
Damp heat	56 days 95 % HR		0.1 %
Thermal shocks	P _n -55 °C	2 % or 0.05 Ω ⁽¹⁾	0.2 %
Shocks	Severity 50 A	0.5 % or 0.05 Ω ⁽¹⁾	0.5 %
Vibrations	Severity 55/10	0.5 % or 0.05 Ω ⁽¹⁾	0.5 %
Endurance	500 cycles P _n 90 min/30 min	5 %	1.5 %

Note
⁽¹⁾ The higher of either value.

DISSIPATION

OVERLOADS

PERMISSIBLE ENERGY


**OPTIONS** (Consult us)

- Other values than E12 series
- Intermediate terminals
- Insulated mounting

ORDERING INFORMATION

C52T	F	LI	10K	± 5 %	XXX	BO1
MODEL	CONNECTIONS	LOW INDUCTIVE WINDING Optional	RESISTANCE VALUE	TOLERANCE ± 5 % ± 10 % Other on request	CUSTOM DESIGN Optional On request: special value, tolerance shape, M5 terminals, etc.	PACKAGING

GLOBAL PART NUMBER INFORMATION

C 5 2 T F L I 6 R 6 0 J B 8 3 7 1 2 3 4 5 6 7															
1		2		3		4		5		6		7			
PRODUCT TYPE		LEADS		OPTION (if applicable)		RESISTANCE VALUE		TOLERANCE		PACKAGING		INDUSTRIALIZATION NUMBER			
C38T C42T C52T		F = traction lugs N = collars		LI		The first three digits are significant figures and the last specifies the number of zeros to follow, R designates decimal point. 4702 = 47 kΩ 4R7 = 4.7 Ω		J = 5 % K = 10 %		B = box Box quantity depends of model and size		3 specific digits (if applicable)			

EXAMPLES

MODEL	DESCRIPTION	PART NUMBER
C52TF	C 52 TF LI 6U6 5 % 837 BO1	C52TFLI6R60JB837
C42TF	C 42 TF 4U7 5 % BO14	C42TF4R70JB



Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Vishay:](#)

[1A065522](#) [A066147](#) [C38TF1001JB](#) [C42TF2200JB](#) [C42TF1501JB](#) [C38TF1200JB](#) [C42TF15R0JB](#) [C52TF1002JB](#)
[C52TF15R0JB](#) [C52TF1001JB](#) [C52TF1000JB](#) [C52TF68R0JB](#) [C42TF4R70JB](#)