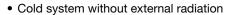


Vishay MCB

Power Resistors Cooled by Auxiliary Heatsink (Not Supplied) Thick Film Technology



FEATURES







- Non-inductive
- Screw-on or fast-on outputs
- Material categorization: for definitions of compliance please see www.vishav.com/doc?99912

LINKS TO ADDITIONAL RESOURCES



STANDARD ELECTRICAL SPECIFICATIONS						
MODEL	RESISTANCE RANGE Ω	MAX. RATED POWER P ₆₀ °C W	TOLERANCE ± %	TEMPERATURE COEFFICIENT ± ppm/°C	E-SERIES OHMIC VALUES	
RCEC ISO	0.33 to 1M	100	10, 5 ⁽¹⁾	250 (typical)	E 24	

Note

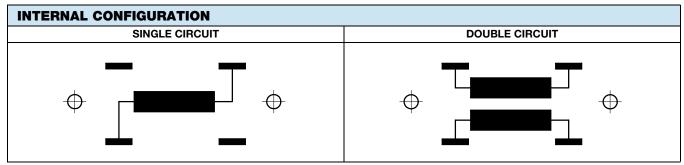
(1) On request

MECHANICAL SPECIFICATIONS				
UL 94 flame classifications Material comply with the standard UL 94 V-0				
Resistive element	Cermet			
Substrate	Alumina			
Encapsulation	Resin filled case			

TECHNICAL SPECIFICATIONS					
PARAMETER	RCEC ISO				
Nominal power rating at 115 °C	25 W				
Maximum power rating at 100 °C	50 W				
Operating temperature range	-40 °C to +125 °C				
Maximum operating voltage	1500 V				
Dielectric strength V _{RMS} (50 Hz / 1 min)	2500 V				
Creepage distance	10 mm				
Clearance distance	5.5 mm				
Capacitance: ground	36 pF				
Capacitance: parallel	12 pF				
Partial discharge	On request				
Inductance	≤ 50 nH				
Insulation resistance	$10^5 M\Omega$ at $500 V_{CC}$				
Weight (max.)	20 g				

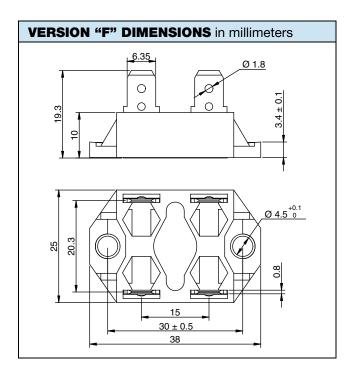
Revision: 24-Apr-2020 1 Document Number: 32506

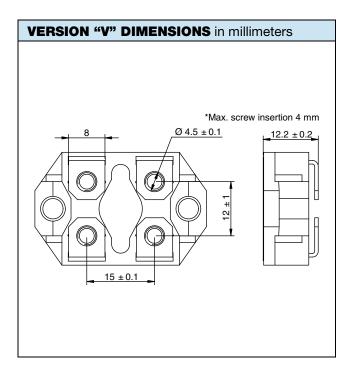




Note

• Tolerance on ohm value for double circuit: ± 10 %





PERFORMANCES					
TESTS	CONDITIONS	REQUIREMENTS	TYPICAL VALUES		
Momentary overload	4 P _n / 10 s	2 %	0.2 %		
Humidity (steady state)	56 days, 40 °C, 95 % HR	2 % or 0.05 Ω insul. > 10^3 $M\Omega$	0.2 %		
VRT	-40 °C to +125 °C 5 cycles	2 % or 0.05 Ω ⁽¹⁾	0.2 %		
Mechanical shock	40 A / 4000	0.5 % or 0.05 Ω ⁽¹⁾	0.25 %		
Vibration	500 / 10	0.5 % or 0.05 Ω ⁽¹⁾	0.25 %		
Terminals strength	130 Ncm / 100 N	1 % or 0.05 Ω ⁽¹⁾	0.1 %		
Endurance	2000 cycles P _n 30 min / 30 min	5 %	0.2 %		

Note

ENERGY ABSORPTION

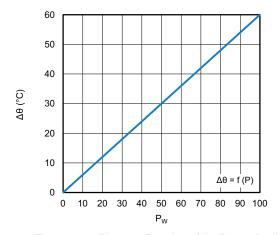
With single resistor, repetitive operation: 0.4 J/t = 50 μs

Other t values: consult us

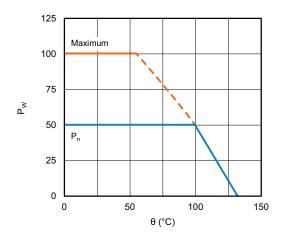
⁽¹⁾ The higher of either value



DISSIPATION



Temperature Rise as a Function of the Power Applied Overall Thermal Resistance 0.6 °C/W (See Assembly)



Permanent Applicate Power as a Function of Heatsink Temperature

MECHANICAL ASSEMBLY

Head screw, low or normal height without washers.

Maximum tightening torque: 80 Ncm, mechanical mounting 130 Ncm, electrical connection

COOLING

The temperature of the heatsink may be maintained at the specified values with:

- Forced air ventilation
- · Internal circulation of a liquid cooling
- Heatsink contact surface: Ra 6.3 μm
- Evenness defect: 0.05 mm max.
- Surface temperature gradient (isotherm): 20 °C max.
- Thermal compound not supplied (resistance < 0.025 °C/W / 0.05 mm)

The user must select the thermal resistance of the heatsink according to the power applied.

ORDERING INFORMATION										
RCEC	ISO	F	D	MP	100K	5 %	100K	5 %	XXX	BO15
MODEL	STYLE	TERMINALS		OPTION	RESISTANCE VALUE	TOLERANCE	RESISTANCE VALUE	TOLERANCE	CUSTOM	PACKAGING
		F = faston S = screws	Single Double Triple (on request)	Common point for double value	Value for single, first value for double	± 5 % ± 10 % Other on request	Second value for double	± 5 % ± 10 % Other on request		



ishay.com Vishay MCB

GLOBAL PART NUMBER INFORMATION					
R C E C I S 0 V S 1 0 R 0 K B					
1	2	3	4	5	6
GLOBAL MODEL	LEAD	OHMIC VALUE	TOLERANCE	PACKAGING	INDUSTRIALIZATION NUMBER
RCEC ISO	Screws simple = VS Screws double = VD Screws triple = VT Faston simple = FS Faston double = FD Faston triple = FT	The first three digits are significant figures and the last specifies the number of zeros to follow, R designates decimal point. $4702 = 47 \text{ k}\Omega$ $56R0 = 56 \Omega$ In case of double or triple value => value = sum of the 2 or 3 value	J = 5 % K = 10 %	B = box	3 specific digits (if applicable)

EXAMPLES				
MODEL	DESCRIPTION	PART NUMBER		
RCEC ISO	RCEC ISO VS 10U 10 % BO5	RCECISOVS10R0KB		
RCEC ISO	RCEC ISO FD MP 8K2 10 % 8K2 10 % 921 BO5	RCECISOFD1642KB921		
RCEC ISO	RCEC ISO FS 15U 10 % 994 BO5	RCECISOFS15R0KB994		



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