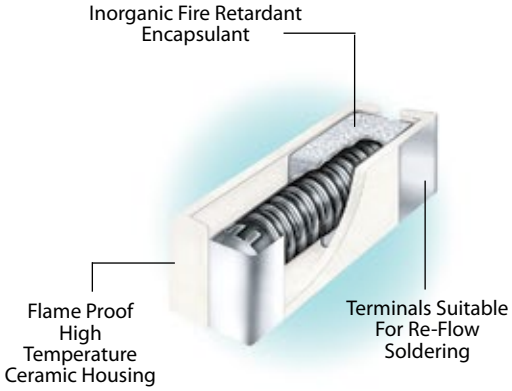


SURFACE MOUNT RESISTORS CERAMIC ENCASED TYPE

HCAS

SERIES

POWER TYPE

Ceramic Encased Wire Wound Resistors Surface Mount - Fire Retardant

- Fusible safety version available
- Tape and Reel packing available
- Non Inductive style with Aryton - Perry winding available
- 2W to 3W
- R10 to 5K6

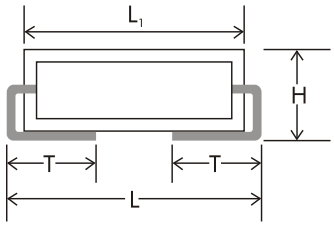
AEC-Q200 Qualified

Pb-free RoHS COMPLIANT

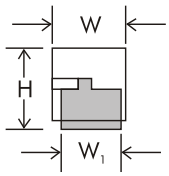
SURFACE MOUNT RESISTORS CERAMIC ENCASED TYPE

HCAS

PHYSICAL CONFIGURATION



SIDE VIEW



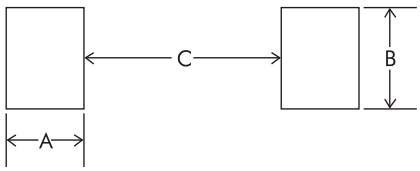
PROFILE

HTR TYPE	POWER RATING 70°C	DIMENSIONS (mm)						RESISTANCE RANGE		TYPICAL WEIGHT PER PC (gms)	SIZE	PACKING NO. OF PCS PER REEL
		L	L_1	H	W	W_1	T	min	max			
C2S	2W	11.0 (±0.8)	10.0 (±0.7)	5.3 (±0.6)	7.0 (±0.7)	5.5 (±0.3)	2.25 (min)	R10	1K6	0.8	4527	1000
C3S	3W	17.0 (±0.8)	16.0 (±0.7)	7.8 (±0.6)	7.0 (±0.7)	5.5 (±0.3)	2.5 (min)	R10	5K6	2.0	6927	600

• For Non Inductive winding, please reduce maximum resistance to one half of value shown.

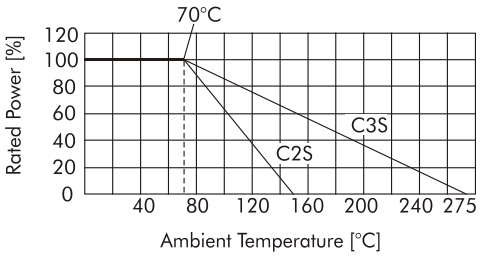
IMPORTANT MOUNTING / ASSEMBLY DATA

For the guidance of the design engineer, our applications laboratory has given the recommended pad size and geometry which is shown below :

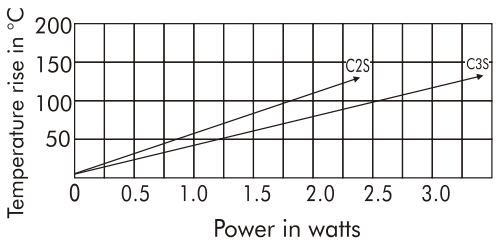


HTR TYPE	DIMENSIONS (mm)		
	A	B	C
C2S	3.94	5.84	5.21
C3S	3.94	5.97	11.94

DERATING CURVE



TEMPERATURE RISE CURVE



SURFACE MOUNT RESISTORS CERAMIC ENCASED TYPE

HCAS

ELECTRICAL AND ENVIRONMENTAL CHARACTERISTICS / DATA

PARAMETER/PERFORMANCE TEST & TEST METHOD	PERFORMANCE REQUIREMENTS
Power Rating (Rated Ambient Temperature)	Full Power dissipation at 70°C and linearly derated to zero at 275°C for C3S / C3FS & at 160°C for C2S / C2FS (Refer Derating Curve above)
Resistance Tolerances Available	±10% (K); ±5% (J); ±3% (H); ±2% (G); ±1% (F)
Operating Temperature Range	-55°C to +160°C (C2S / C2SFS) and -55°C to +275°C (C3S / C3SFS) with suitable derating as per derating curve
Voltage Rating / Limiting Voltage / Max Working Voltage	$V=\sqrt{PxR}$
Voltage Proof / Dielectric Withstanding Voltage (based on 1000V rms for 60 secs)	ΔR ± [0.2% + R05] - No flashover or mechanical damage
Insulation Resistance (MIL STD 202F -Test Method 302)	>1000M (Min)
Short Time Overload (5 x Rated Power for 5 secs)	ΔR ± [0.2% + R05] - Average
Temperature Co-efficient of Resistance	<1R0 ±80 ppm/°C <100R ±60 ppm/°C >100R ±90 ppm/°C or ±30 ppm/°C (Depending on wire selected)
Thermal Shock [-65°C to +125°C, 5 cycles, 15 min. at each extreme temperature]	ΔR ± [0.2% + R05] - Average
Temperature Rise (Ambient 30°C)	Refer Temperature Rise Curve shown above
Moisture Resistance (MIL STD 202F - Test Method 106E with step 7b eliminated)	ΔR ± [0.5% + R05] - Average
Damp Heat (Steady State) **/ Humidity** (40°C at 95% R.H for 250 hours)	ΔR ± [0.5% + R05] - Typical
Endurance - Load Life (70°C with limiting voltage - 1.5 hours on / 0.5 hours off for 1000 hours)	ΔR ± [1.0% + R05] - Average
Solvent Resistance [IPA for 60 secs ± 10 secs]	No effect on case filling / marking

MECHANICAL SPECIFICATIONS

PARAMETER/PERFORMANCE TEST & TEST METHOD	PERFORMANCE REQUIREMENTS
Resistance to Soldering Heat (260°C - 270°C for 4 secs)	ΔR ± [0.5% + R05] - Typical
Solderability (MIL STD 202F - Test Method 208F)	Must meet the requirements laid down (95% satisfactory coverage)

- At HTR, a special "Safety Version" is available in HCAS series for resistance values ≥10R wherein the resistor will fuse instantaneously when mains voltage 220/240V is applied with no flame or explosion.
- For resistance values <10R, the fusing time and suitability must be tested and validated by the buyer for his particular application.
- For Tape and Reel packing, add 100% to typical weight per pc given to ascertain gross weight of consignment.

Note: The ceramic cases used may be steatite ceramic or corderite ceramic or high alumina ceramic. Hence, the ceramic cases may be off-white or variations of brown and variations of grey; colours which are inherent to these ceramic materials.

ORDERING INFORMATION

Series	HTR Type	Packing	Resistance Value	Tolerance
HCAS	C2S / C2S*	Bulk C2S / C2S* Tape & Reel C2STR / C2S*TR	10R	J

1. For RoHS version - C2S *
2. For Non Inductive type - N C2S
3. For Tape & Reel packing - C2S TR
4. For Fusible Safety Version - C2S FS