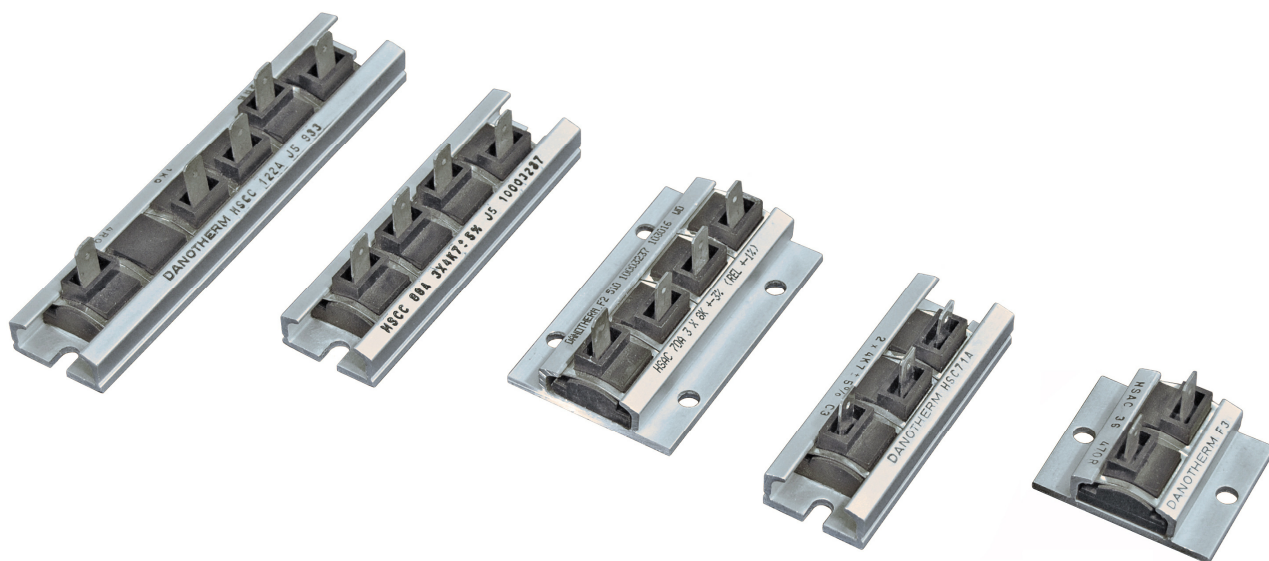


# HEAT SINK COOLED HSCC / HSAC

## POWER THICK FILM RESISTORS



### HSCC and HSAC:

POWER THICK FILM RESISTORS are supplied in a patented MODULAR construction that is ideal for customer specified RESISTOR MODULES as well as single resistors.

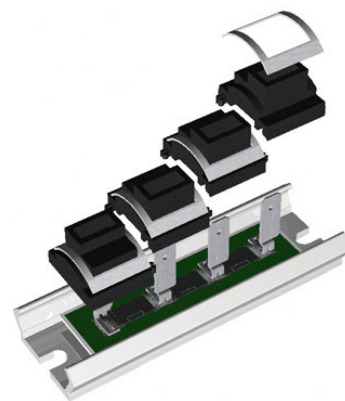
### Construction:

The resistor body is a thick film resistor printed on ceramic Alumina. A glass cover film protects the resistor and the terminals are soldered to the substrate with 300°C solder which makes the terminations reliable even at overload conditions.

The resistor is mounted in an Aluminum Profile. High temperature plastic insulators and metal springs make a well-defined stable thermal contact between the resistor element and the aluminum profile.

Between the resistor element and the profile is a heat conducting material.

The Ceramic resistor element is completely protected from mechanical damage and the resistor can be mounted to a heat sink without further notice. The below wattage curves demands the use of a heat sink compound.



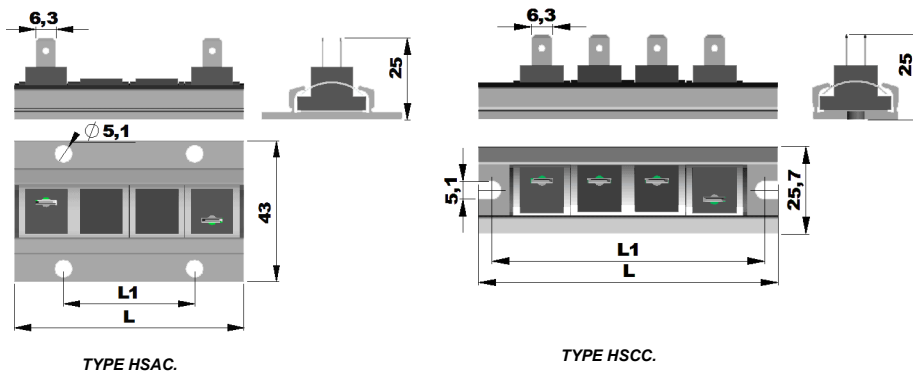
Exploded view HSCC 88.

# Heat Sink Cooled Power Thick Film Resistor - Type HSCC, HSAC

## Specifications:

Resistor tolerance:	Standard (NON-TRIMMING)	± 15%
	TRIMMED RESISTORS	± 1%, ± 0.5%
Temperature Coefficients:		± 250 PPM
Test voltage for 1 min.:		6000 VDC/ 2500 VAC
Working voltage:		1100 VDC
External Creeping Distance:		12 mm
Temperature Limits:		-40°C +125°C
Insulation:		>100M <sup>2</sup> OHM/500V
Air Distance Terminal./Ground		7 mm

TYPE: Values for standard resistors		HSCC 54 HSAC 36	HSCC 71 HSAC 52	HSCC 88 HSAC 70	HSCC 104 HSAC 87	HSCC 122 HSAC 104
Max rated wattage	W	45	105	165	225	(MODULES)
Nominal power	W	22	50	80	105	(MODULES)
Surge load in 10 sec.*()	W	90	200	350	420	(MODULES)
Max voltage between terminal	V <sup>^</sup>	1000	2000	2500	2500	(MODULES)
Thermal Resistance	°K/W	1.12	0.47	0.3	0.22	(MODULES)
Resistance Min.	Ohm	0.3	1	1.5	2	(MODULES)
Resistance Max.	MOhm	1	2	3	4	(MODULES)
<b>Mechanical Specifications:</b>						
HSCC L	mm	54	71	88	104	122
HSCC L1	mm	46	63	80	96	114
HSAC L	mm	36	52	70	87	104
HSAC L1	mm	-	-	40	50	75
Weight HSCC	g	26	33	44	55	65
Weight HSAC	g	35	45	56	70	90



## WATTAGE OF HSCC AND HSAC TYPES:

The curves show the wattage for each resistor at different heat sink temperatures for resistors up to about 100 KOHMS / modules. The MAX. Permanent temperature on the resistor surface is 150°C, and the MAX power or wattage is 400 mW/mm<sup>2</sup>

The MAX WATTAGE is the maximum constant power at which the resistor can be operated.

The NOMINAL POWER is the power at which the resistor withstand 4 times overload in 10 seconds.

Resistors can be supplied non-trimmed with resistor tolerance ±15%. If a more narrow tolerance is requested the resistor have to be trimmed. In this case the wattage has to be reduced to 70% as shown on the curves

For Modular resistors (More resistors in one package) each resistor can be loaded corresponding to the size between two terminals. The HSCC resistor shown above with 3 resistors each resistor can be loaded like a single HSCC54 resistor.

