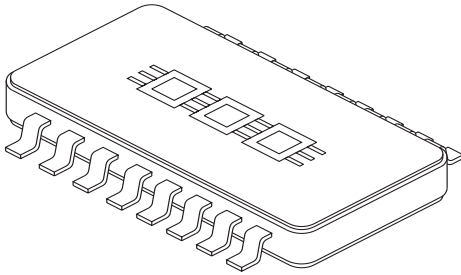


HERMETIC SURFACE MOUNT NETWORKS

HSRN - Hermetic Surface Mount Resistor Networks



HSRN-Style hermetic surface mount thin film resistor networks are fabricated to established industry dimensional standards. They feature Mini-Systems' exceptional electrical characteristics and are available in 14 and 16 lead configurations.

MECHANICAL DATA

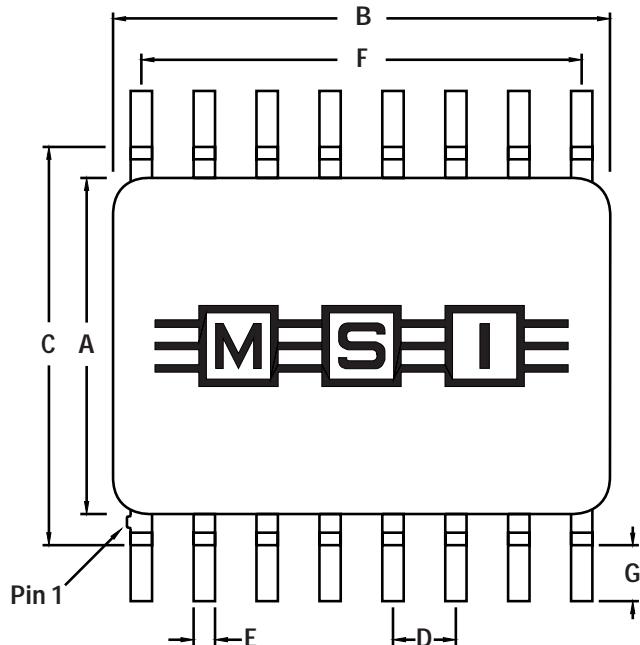
PACKAGE STYLE	SMT, HERMETIC FLAT PACK; GULLWING LEAD
PACKAGE CONFIGURATION	14 OR 16 LEADS
LEAD PITCH	50 MILS
LEAD MATERIAL	GOLD ON NICKEL PLATED KOVAR

ELECTRICAL DATA

RESISTANCE RANGE	10Ω TO 1MΩ; RESISTOR ELEMENTS TO 100MΩ AVAILABLE. CONSULT SALES
T.C.R.	±50ppm/°C STANDARD; TO ±5ppm/°C AVAILABLE; VALUE DEPENDENT
T.C. TRACKING	±2ppm/°C STANDARD; TO ±1ppm/°C AVAILABLE
ABSOLUTE TOLERANCE	0.05%, 0.1%, 0.25%, 0.5%, 1%, 2%, 5%, 10%; VALUE DEPENDENT
RATIO TOLERANCE	±1% STANDARD; AVAILABLE TO ±0.05%; VALUE DEPENDENT
CURRENT NOISE	<-30dB TYPICAL
OPERATING VOLTAGE	100 V MAX.
POWER RATING	50 mW/RESISTOR (70°C DERATED LINEARLY TO 150°C); P=E ² /R
PACKAGE POWER	400 mW*, (70°C DERATED LINEARLY TO 150°C); P=E ² /R
SHORT TERM OVERLOAD	5X RATED POWER, 25°C, 5 SEC., ±0.25% MAX. ΔR/R: ±0.1% MSI TYPICAL
HIGH TEMP EXPOSURE	150°C, 100 HRS., ±0.25% MAX. ΔR/R: ±0.03% MSI TYPICAL
THERMAL SHOCK	MIL-STD 202, METHOD 107F, ±0.25% MAX. ΔR/R: ±0.1% MSI TYPICAL
MOISTURE RESISTANCE	MIL-STD 202, METHOD 106, ±0.5% MAX. ΔR/R: ±0.1% MSI TYPICAL
OPERATING TEMP. RANGE	-55°C TO +150°C
STABILITY	1000 HRS., 70°C, 100% POWER, ±0.5% MAX. ΔR/R: ±0.1% MSI TYPICAL

Datasheet.Directory

DIMENSIONS



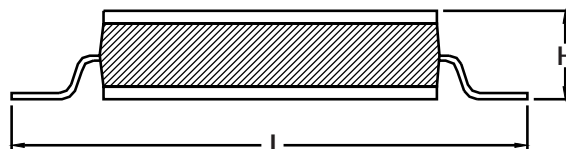
	14 LEAD	16 LEAD
A	260 max.	270 max.
B	350 max.	395 max.
C	320	320
D	50	50
E	17 ± 2	17 ± 2
F	330	350
G	45	45
H	95 max.	71 max.
I	410	410

ALL DIMENSIONS IN MILS



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DCN TF 138-A-0698



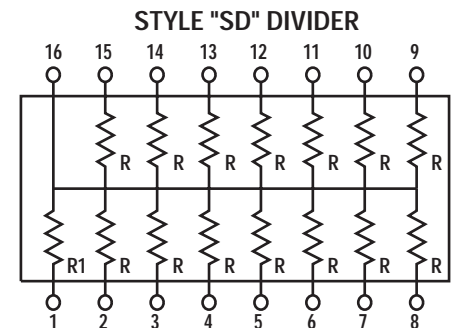
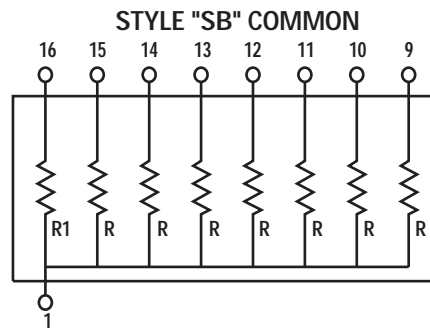
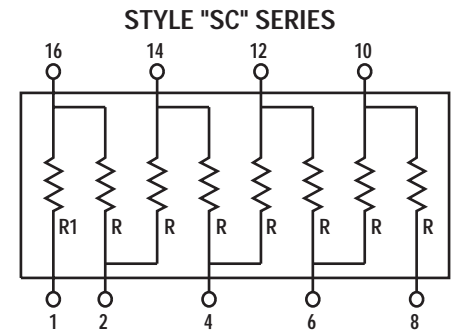
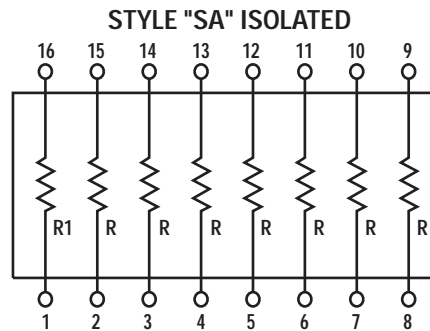
SHOWN ABOVE IS HSRN 16
Consult Sales For Custom Configurations
*Package Power for (8) Resistors



HERMETIC SURFACE MOUNT NETWORKS

HSRN - Hermetic Surface Mount Resistor Networks

SCHEMATICS



PART NUMBER DESIGNATION

HSRN	X	SX	XXXXX	X	X
SERIES	#LEADS	STYLE	VALUE/ RESISTOR	TOLERANCE	OPTION
	14	SA = Isolated	5-Digit	Q = 0.05%	A = ±50ppm/°C*
	16	SB = Common	Number: 1st	B = 0.1%	B = ±25ppm/°C
		SC = Series	4 Digits Are	C = 0.25%	C = ±10ppm/°C
		SD = Divider	Significant	D = 0.5%	D = ±5ppm/°C
			With "R" As	F = 1%	RB = 0.05% Ratio
			Decimal	G = 2%	RC = 0.1% Ratio
			Point When	J = 5%	RD = 0.5% Ratio
			Required.	K = 10%	RE = 0.25% Ratio
			5th Digit		
			Represents		
			Number of		
			Zeros.		
			EXAMPLE:		
			10001 = 10K		

EXAMPLE: HSRN-16-SA-1000F-RD = 16 Lead Pkg., 8 - 100KΩ Resistors; Isolated Connections, ±1% Tol.: ±50ppm/°C, ±0.5% Ratio.

* Always used when no other option is required.



MINI-SYSTEMS, INC.
THIN FILM DIVISION

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