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Project 4786987125

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REPORT

on

COMPONENT - Connectors for Use in Data, Signal, Control and Power Applications  
- Component

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## DESCRIPTION

## PRODUCT COVERED:

USR, CNR Component Connector, SMD Terminal Strips with Push-Buttons Cat. Nos. SMDflat 345/1 and SMDflat 345/2.

## GENERAL:

These devices are printed wiring board mounted multi-pole connectors intended for factory assembly on No. 24 - 18 AWG solid and stranded copper conductors where the acceptability of combinations is determined by UL LLC. The devices are identified as follows:

USR indicates investigation to United States Standards, UL 1977.

CNR indicates investigation to Canadian National Standards, C22.2 No. 182.3.

## RATINGS:

Cat. No.	Voltage (V ac/dc)	Current (A)	Conductor Sizes (AWG Sol/Str)
SMDflat 345/1	600	6	18, 20
		5	22
		4	24
SMDflat 345/2	320	6	18, 20
		5	22
		4	24

Flammability - V0

Disconnecting Use - see Sec Gen for required marking

## TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use only in or with complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

Conditions of Acceptability - The following are among the considerations to be made when evaluating the device in the end-use product.

1. These devices are not suitable for interrupting the flow of current by connecting or disconnecting the mating connector.
2. These devices have been subjected to the Temperature test with AWG 24, 22 and 20 solid and stranded wires, the rated currents and maximum temperature rise values tabulated below.

Series	Wire size and type	Current, A	Maximum Recorded Temperature, °C	Maximum Temperature Rise, °C
SMDflat 345	20 AWG sol	6	49.1	21.7
	20 AWG str	6	47.6	22.2
	22 AWG sol	5	43.2	17.0
	22 AWG str	5	51.3	26.3
	24 AWG sol	4	40.0	14.4
	24 AWG str	4	50.9	24.1

3. These devices employ insulating materials with properties as tabulated below at the minimum thickness employed in the connector housing, the suitability of the insulating materials based on the documented values shall be determined in the end-use application. Please note the values specified in the table when multiple materials are indicated represent the minimum values for the group of materials.

Cat. No.	Insulating Material (#)	Measured Minimum Thickness	Flame Class	HWI	HAI	RTI Elec	Max Operating Temp, °C
SMDflat 345	A	0.4 mm	V-0	3	0	150	150

(#) - Code for Insulating Body Material.

- A. [REDACTED].
  1. Dielectric strength (kV/mm): -
  2. CTI: -
4. Cat. No. SMDflat 345/1 may be used at potentials not exceeding 600 V ac/dc based on Dielectric Voltage-Withstand test conducted at 2200 V ac.
5. Cat. No. SMDflat 345/2 may be used at potentials not exceeding 320 V ac/dc based on Dielectric Voltage-Withstand test conducted at 1640 V ac.

6. The mounting means for these types of connectors may be the solder connection in PCB, its suitability shall be determined in the end use.
7. The placement of these devices within the equipment enclosure should be such that spacings between the live parts and the equipment are suitable for the particular application.
8. The electrical and mechanical contact between the connector and the printed circuit board has not been evaluated for mechanical secureness; it shall be evaluated in the end-use equipment.

## CONSTRUCTION DETAILS:

Spacings - Minimum of 1.2 mm (3/64 in.) for devices rated 250 V or less, 3.2 mm (1/8in)for devices rated greater than 250V, provided through air and over surface between live-metal parts of opposite polarity and between live parts and exposed dead-metal parts.

Markings (USR) - See Sec Gen.

Markings (CNR) - See Sec Gen.

Insulating Materials - The following Recognized Component Plastic materials (QMFZ2) are employed for the parts specified.

Series	Material Manufacturer	Grade Designation	Max Temperature, °C
SMDflat 345			150

Index to Figures and Illustrations - Refer to the following figures and illustrations for details of construction.

Series	Description	Fig. No.	Ill. No.
SMDflat 345	Housing	1	1
	Contacts	-	1

SMDflat 345  
(REPRESENTS ALL CAT. NOS.)

FIG. 1 - 3

General - See Construction Details for insulating materials.

1. Housing - Overall Dimensions as tabulated below. Refer to Ill.1, item 1 and 2 for more details.

Series	BODY (mm)			
	Width	Length	Height	Min. thickness
SMDflat 345	7.9	12.0 (1)	3.4	0.4

Note(1) - 2-poles variant.

2. Contacts - Push type, tin plated copper. For shape and dimensions refer to Ill. 1, item 3 and 4.