

CHIP SORTER

Model CS - 10



The chip tester Model CS - 10 is designed for automatic testing and sorting of chip components depending on the measuring bridge used on the machine.

Chip are tested individually in the rotary carrier plate with a sliding contact and sorted according to preset parameters. Chips are binned into 10 bins and 1 bin for untested plus out of range chips.

Chips are transported by the rotary test plate to the test position where they are probed. Depending on the options used, the machine can have up to 5 measuring probes. The vacuum prevents chips to fall out of the test plate until they are binned in one of 11 bins.

A special design of the sliding contact ensures a reliable contacting and long life time. This contact method provides accurate measurements of different parameters including very accurate test of C and tg D testing at 1 MHz.

The automatic chips feeding is provided by the bulk feeder. An video display is available on the test bridge for continuous bin counting and information of preset tolerances.

It is also possible to preset number of chips in a bin. When this number is reached, the machine stops sorting.

Fewer moving parts of the machine ensure lower maintenance costs, reliable operation and long life time of the machine.

TECHNICAL DATA :

- Max. chip size : 4,5 x 3,2 mm
- Min. chip size : 1,6 x 0,8 mm
- Dimensions: 1000 x 700 x 1500 mm
- Power requirement :
 - Electricity 220 V, 50 Hz
 - Compressed air : 6 bars, 100 l/min
 - Vacuum : 0,6 bar, 200 l/min

Option 1 :

- capacitance measurements (instrument HP 4278 A)
- Capacity : up to 50.000 pcs / hour
- Range and test accuracy :

	1 kHz	1MHz
C - range :	1000 pF - 2 uF	1 pF - 2048 nF
C - accuracy :	+- (A+0,05 pF + 0,005 % of full scale)	
	A = bridge accuracy	
D - range	0,00000 - 0,99999	0,00000 - 0,05000
D - accuracy	+ (B=(3,15 x 10 x C in nF)	+(B+(3,15x10xCin pF)
	B= bridge accuracy	

Option 2 :

- measurements of chip VDR
- instrument : KEITHLEY 2400 (200 V)
 KEITHLEY 2410 (1100 V)
- tests :
 1. Nominal VDR voltage at specified DC current of specified duration
 2. DC standby current at specified DC voltage of specified duration
 3. Non linear exponent test at specified currents (I1 and I2)
$$\alpha = \log (I2 / I1) / \log (V2 / V1)$$
- Capacities :
 - 1 instrument
 - 35.000 pcs/hour one side measurement
 - 18.000 pcs/hour two sides measurement
 - 2 instruments
 - 35.000 pcs/hour two sides measurement

Option 3 :

- measurements of chip NTC or chip PTC
- resistance measurements (instrument HP 34401 MULTIMETER)

Resistance	Resolution	Accuracy % of reading + % of range	Current source
100 ohm	100 uohm	0.010 + 0.004	1 mA
1 kohm	1 mohm	0.010 + 0.001	1 mA
10 kohm	10 mohm	0.010 + 0.001	100 uA
100 kohm	100 mohm	0.010 + 0.001	10 uA
1 Mohm	1 ohm	0.010 + 0.001	1 uA
10 Mohm	10 ohm	0.040 + 0.001	500 nA
100 Mohm	100 ohm	0.800 + 0.010	500 nA

- Capacities :
- 36.000 pcs/hour