

For electronic devices and substrate JEDEC/IPC standard temperature cycle test chambers

Compatible with temperature cycle tests required by JEDEC/IPC standards


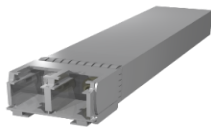

5th generation mobile communication systems (5G) makes faster communications and lower latency.

As a result, it is required to be used not only in conventional smartphones but also in a wide range of fields such as transportation, medical care, and disaster prevention.

On the other hand, further safety and reliability tests are essential because equipment failure threaten person injured and huge economic losses. For this reason, the demands for reliability tests based on the JEDEC standard and IPC standard is increasing, and we introduce a dedicated chambers that supports the temperature change rate required by the standard.



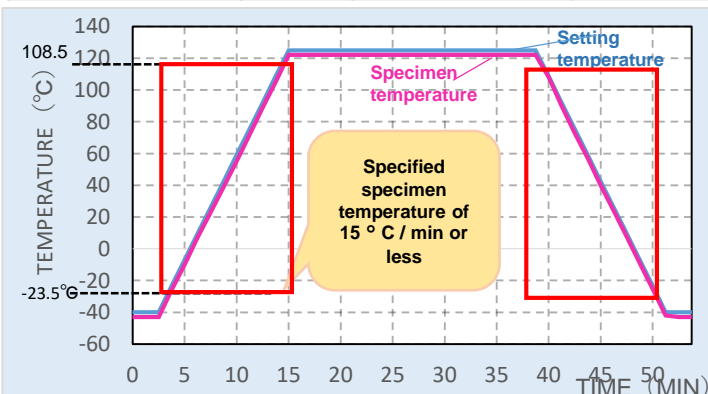
Sample example

Device type	Electronic devices / semiconductors	Optical transmission device	Terminal (smartphone) / communication module
			

Features

- It is possible to control the temperature change rate corresponding to JESD22-A104F and IPC-9701.

Test standard		Temperature setting		Temperature change rate	Soak time	Number of cycles
		High temperature(°C)	Low temperature(°C)			
JESD22-A104F	G	+125	-40	Specimen temperature, 15°C / min. or less	1 · 5 · 10 · 15min	Not specified
	I	+115	-40			
	J	+100	0			
	K	+125	0			
	L	+110	-55			
	N	+85	-40			
IPC-9701	R	+125	-25	Specimen temperature, 20°C / min. or less	Specimen 10分	200 500 1000 3000 6000
	TC1	+100	0			
	TC2	+100	-25			
	TC3	+125	-40			
	TC4	+125	-55			
	TC5	+100	-55			



<Test condition example>

Standard number : JESD22-A104E condition

High temperature : +125°C

Low temperature : -40°C

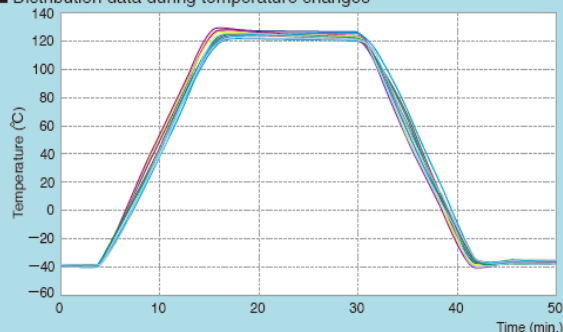
Temperature change rate : 15°C/min

Features

- **Excellent temperature distribution**
even samples are in the chamber

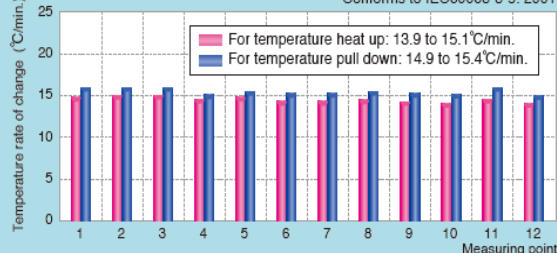
● Distribution performance during temperature changes (example)

■ Distribution data during temperature changes



■ Temperature rate of change at twelve measuring points (Average)

* Conforms to IEC60068-3-5: 2001



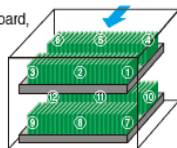
Test conditions

High temp. soak : +125°C
Low temp. soak : -40°C
Ramp rate : 15°C/min.
Control point : Air outlet sensor

Specimen : Printed Circuit Board,
145 × 130 mm,
90 pcs.

Measurement method

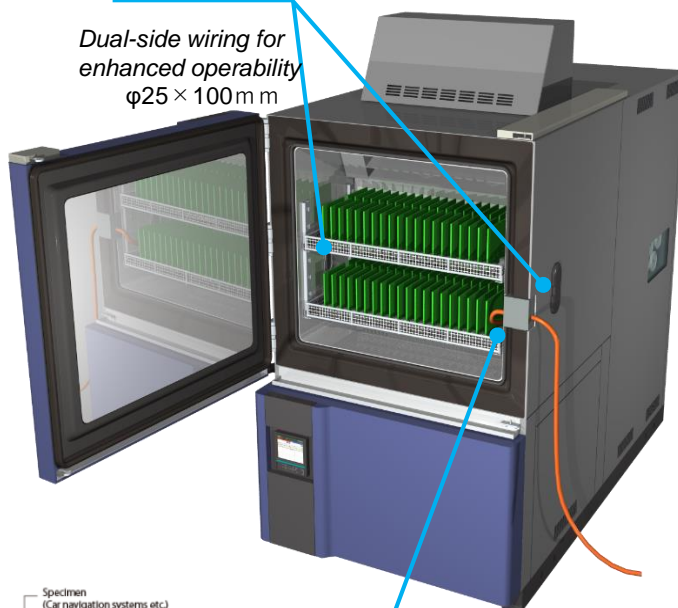
As shown on the right, thermocouples are attached to the specimens at twelve measuring points.



- **Enhanced easy operability by free access to the left and right**

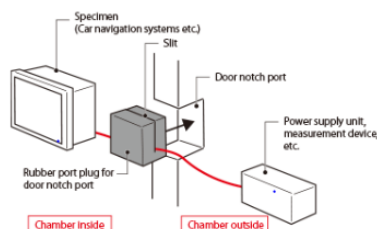
Flat cable ports

Dual-side wiring for enhanced operability
φ25 × 100 mm



Door notch

Dual-side wiring for enhanced operability
φ25 × 100 mm



Specifications

Model	Inside dimensions (mm)	Capacity	Temperature change rate
			+108.5 → -23.5°C Target temp.: +125 → -40°C
TCC-151W (Water-cooled specifications)	W800×H500×D400mm	160L	Specimen temperature: 15°C / min. 5kg of specimen (glass epoxy PCB) and 4kg of jigs

- Supports large samples and more samples



Model	HRG-357HS-25 (Water-cooled specifications)
Inside dimensions (mm)	W700 × H850 × D600mm
Capacity	357L
Compatibility Test standard	JESD22-A104E IPC-9701
Temperature change rate +108.5 → -23.5°C Target temp.: +125 → -40°C	Specimen temperature: 13°C / min. 9kg of specimen (glass epoxy PCB) and 4kg of jigs

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