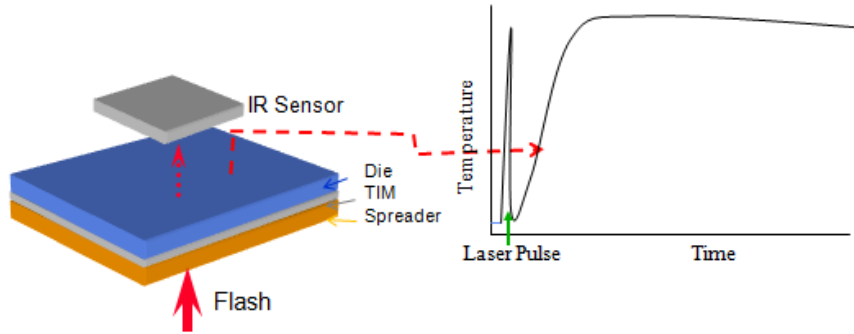


TI Tracking for PTM6000HV-SP under temperature cycling

Temperature cycling: $-40^{\circ}\text{C} \sim 150^{\circ}\text{C}$

Thermal Impedance Test Method: Laser Flash



Instrument: Netzsch Laser Flash™

$$k = (\alpha)(C_p)(\rho)$$

k = Thermal Conductivity (W/cmK)

α = Thermal Diffusivity (cm²/s)

$$\alpha = 0.13879L^2 / t_{1/2}$$

L = specimen thickness, meter

$t_{1/2}$ = the time required for the temperature rise to

reach 50% percent of ΔT_{max}

C_p = Specific Heat Capacity (J/gK)

ρ = Density (g/cm³)

- Test standard: ASTM E1461
- Thermal Impedance Both Ni-plated Cu Surfaces
 - i. Includes the CTE mismatch
 - ii. Includes actual surface finish
- Typical Coupons:
 - ✓ Pure copper, 0.5"X0.5"X0.03"
- Suitable for Accelerated Life Test

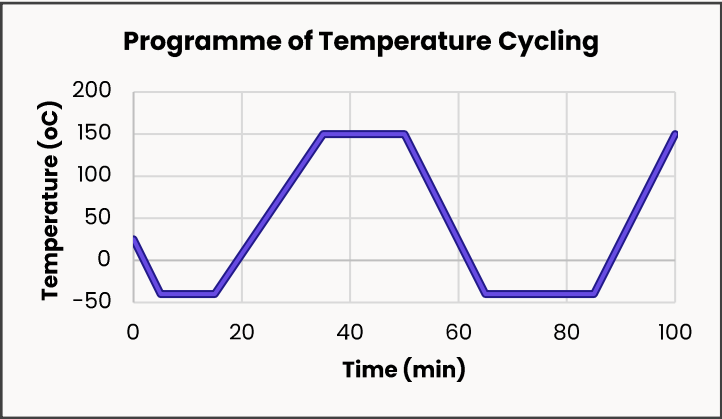


Temperature Cycling Chamber

TI Tracking under Aging _ Temperature Cycling

Test description

- i. Aging condition: Temperature Cycling
- ii. Ramp time: 15 min
- iii. Dwelling time@-40oC & 150oC: 20 min
- iv. Time for each cycle: 60 min
- v. Quantities of specimen: 8 pieces for parallel



Test description

- i. Aging condition: Temperature Cycling
- ii. -40oC~150oC

