

POWER DISSIPATION (TO-252-5-P2)

This specification is at mounted on board. Power Dissipation (P_D) depends on conditions of mounting on board. This specification is based on the measurement at the condition below:

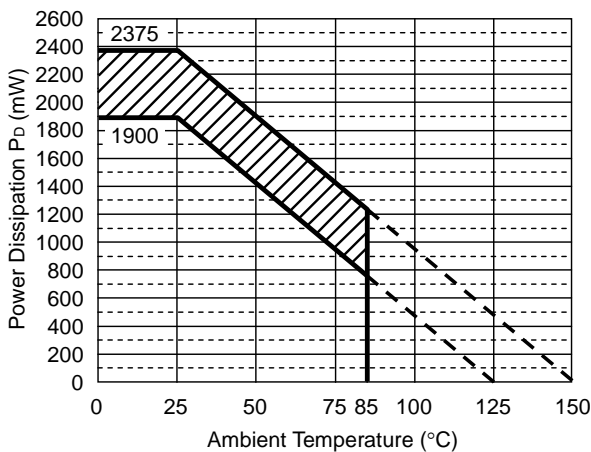
Measurement Conditions

	Standard Land Pattern	High Wattage Land Pattern
Environment	Mounting on Board (Wind velocity=0m/s)	Mounting on Board (Wind velocity=0m/s)
Board Material	Glass cloth epoxy plastic (Double sided)	Glass cloth epoxy plastic (Four-layers)
Board Dimensions	50mm × 50mm × 1.6mm	76.2mm × 114.3mm × 0.8mm
Copper Ratio	Top side : Approx. 50% , Back side : Approx. 50%	Top, Back side : Approx. 96% , 2nd, 3rd : Approx. 100%
Through-hole	φ0.5mm × 24pcs	φ0.4mm × 30pcs

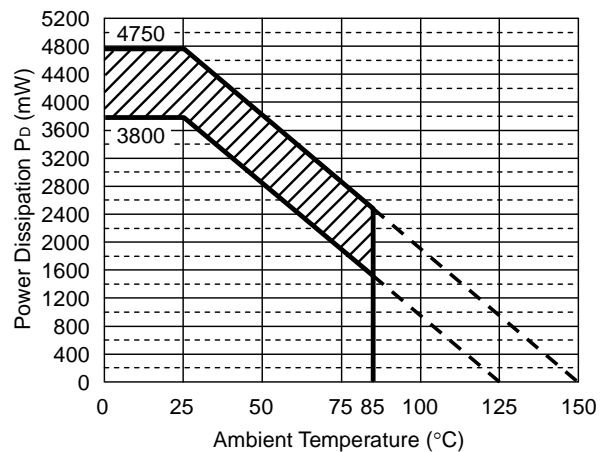
Measurement Result

(T_{opt}=25°C, T_{jmax}=125°C)

	Standard Land Pattern	High Wattage Land Pattern
Power Dissipation	1900mW	3800mW
Thermal Resistance	$\theta_{ja}=(125-25^{\circ}\text{C})/1.9\text{W}=53^{\circ}\text{C}/\text{W}$	$\theta_{ja}=(125-25^{\circ}\text{C})/3.8\text{W}=26^{\circ}\text{C}/\text{W}$
	$\theta_{jc}=17^{\circ}\text{C}/\text{W}$	$\theta_{jc}=7^{\circ}\text{C}/\text{W}$



Power Dissipation (Standard Land Pattern)



Power Dissipation (High Wattage Land Pattern)

The above graph shows the Power Dissipation of the package based on T_{jmax}=125°C and T_{jmax}=150°C.

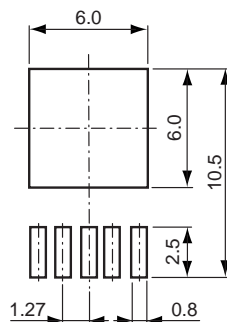
Operating the IC in the shaded area in the graph might have an influence its lifetime.

Operating time must be within the time limit described in the table below, in case of operating in the shaded area.

Product Name	Operating time	Estimated years*
R1500J	13,000hrs	9 years
R1501J		
RP108J		
RP131J		
RP132J		

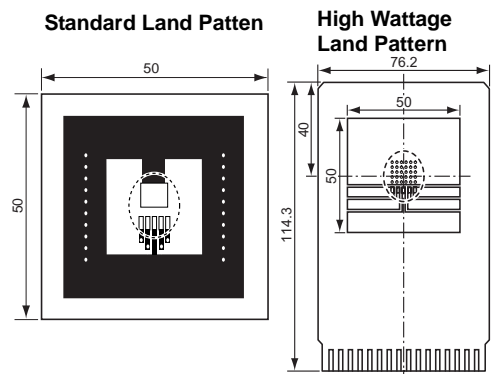
*The volume is calculated on the supposition that operating four hours/day.

Recommended Land Pattern



(Unit: mm)

Measurement Board Pattern



(Unit: mm)