

Product Name: TMPM380DFDG

Package Name: LQFP100

1. Thermal tests

Test Item	Test Condition	Failure Size / Sample Size
Resistance to Soldering Heat for Packages	Reflow peak temperature and moisture soak conditions are specified per package type. 3 times	0 / 32
Temperature Cycling	-65deg.C (20min) to 25deg.C to 150deg.C (20min) to 25deg.C 300 cycles	0 / 32
-	-	-
-	-	-

2. Mechanical tests

Test Item	Test Condition	Failure Size / Sample Size
Solderability	Solder temperature : 245deg.C for Solder type Sn-3Ag-0.5Cu Solder immersion time : 5s ,Flux type : non-active flux ,1 time	0 / 22
Lead Integrity (Tension)	Tension : according to relevant specification Maintain the specified tension for 30s	0 / 22
-	-	-
-	-	-
-	-	-

3. Life tests

Test Item	Test Condition	Failure Size / Sample Size
High Temperature Operating Life	Max operating temperature, Max operating voltage ,1000h	0 / 32
High Temperature Storage Life	Max storage temperature ,1000h	0 / 32
High Temperature High Humidity Bias	Ta=85deg.C, RH=85%, Max operating voltage ,1000h	0 / 32
Autoclave	Ta=121deg.C, RH=100%, 203kPa ,96h	0 / 32
-	-	-
-	-	-

The information contained in Reliability Test Report represents the result of our internal reliability tests conducted in accordance with JEITA ED-4701 test standards, and is provided for your reference only.

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For detailed reliability test information, such as test conditions and criteria, please contact your Toshiba sales representative.

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1.Reflow

Number: 3 times maximum

Peak : 260 deg.C

Reflow zone : 255 deg.C within 30 seconds, 217 deg.C 60 to 150 seconds

Preheat : 150 to 200 deg.C , 60 to 120 seconds

NOTE: All temperatures refer to the package body surface.

The heat-resistant temperature profile is shown in Fig.1.

The temperatures in this profile are the maximum guaranteed temperatures that the device endures.

Select the temperatures for a pre-heat and a heat most suitable for your solder paste type, etc. within the conditions described in Fig.1.

This package is dry-packed in a moisture barrier bag. After opening the bag, keep the devices at or lower than 30deg.C/ 60%RH and complete a final reflow process within 168hours.

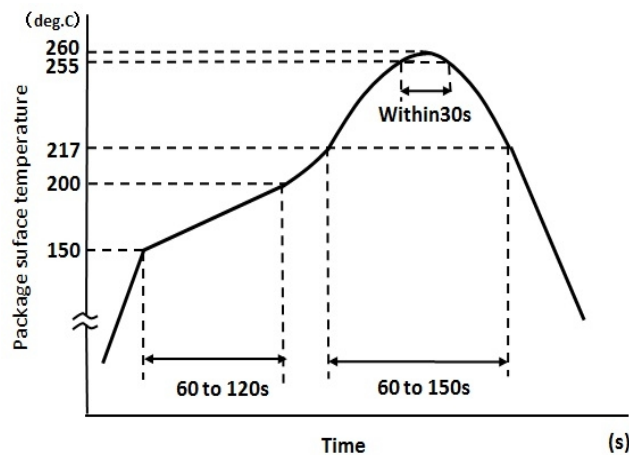


Fig.1 Example of Heat-resistant Temperature Profile

2.Others

We urge you to verify well before mounting to assure enough solder joint strength.

Always solder the Product in accordance with the heat-resistance mounting conditions set forth above. In the event the Product is soldered otherwise, the applicable product warranty, if any, is void.

Moisture Absorption Control Level (Moisture Sensitivity Level)

Product Name : TPM380FDFG

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Always store the Product under moisture sensitivity level equivalent to level 3 (JEDEC J-STD-020 Moisture Sensitivity Level). In the event the Product is stored otherwise, the applicable warranty, if any, is void.

Always perform reflow soldering in accordance with methods and conditions as specified in applicable engineering documents or specifications provided by Toshiba, or as instructed in writing by your TOSHIBA sales representative.
In the event the Product is soldered otherwise, the applicable product warranty, if any, is void.

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