



PUIaudio



Data Sheet

SMT-0827-S-2-R

Features:

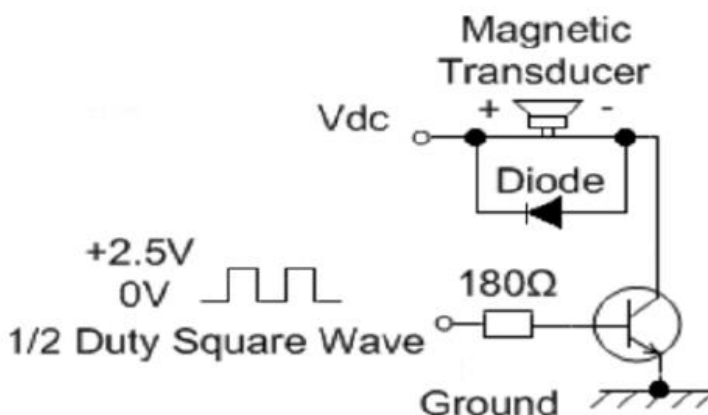
- 8.5x8.5mm SMT magnetic transducer
- 3.6V0-p, 2.7kHz

Specifications

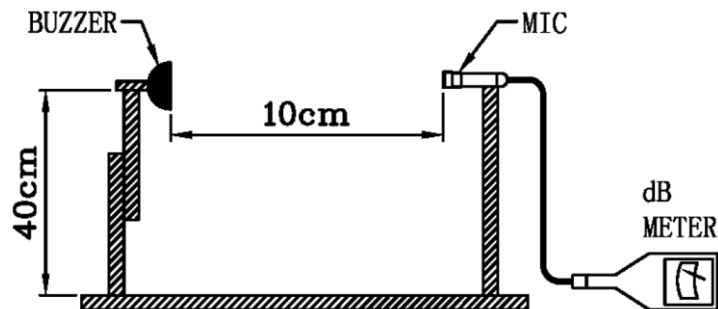
Parameters	Values	Units
Rated Voltage	3.6	V0-p
Operating Voltage Range	2.5 ~ 4.5	V0-p
Current Draw at Rated Voltage*	90	mA
Coil Resistance	15 ± 3	Ohms
Minimum SPL @ 10cm*	92	dBA
Resonant Frequency	2,700 ± 500	Hz
Housing Material	LCP	-
Terminal Material	Tin-Plated Phosphor Bronze	-
Weight	0.42	Grams
Acceptable Soldering Methods	Hand Solder @ 350C for 5s, Reflow Solder	See following pages for solder information
Environmental Compliances	RoHS/REACH	-
Moisture Sensitivity Level (MSL)	NA	-
Operating Temperature	-30 ~ +70	°C
Storage Temperature	-40 ~ +85	°C

*At rated voltage with 50% duty cycle 2.7kHz positive biased square-wave

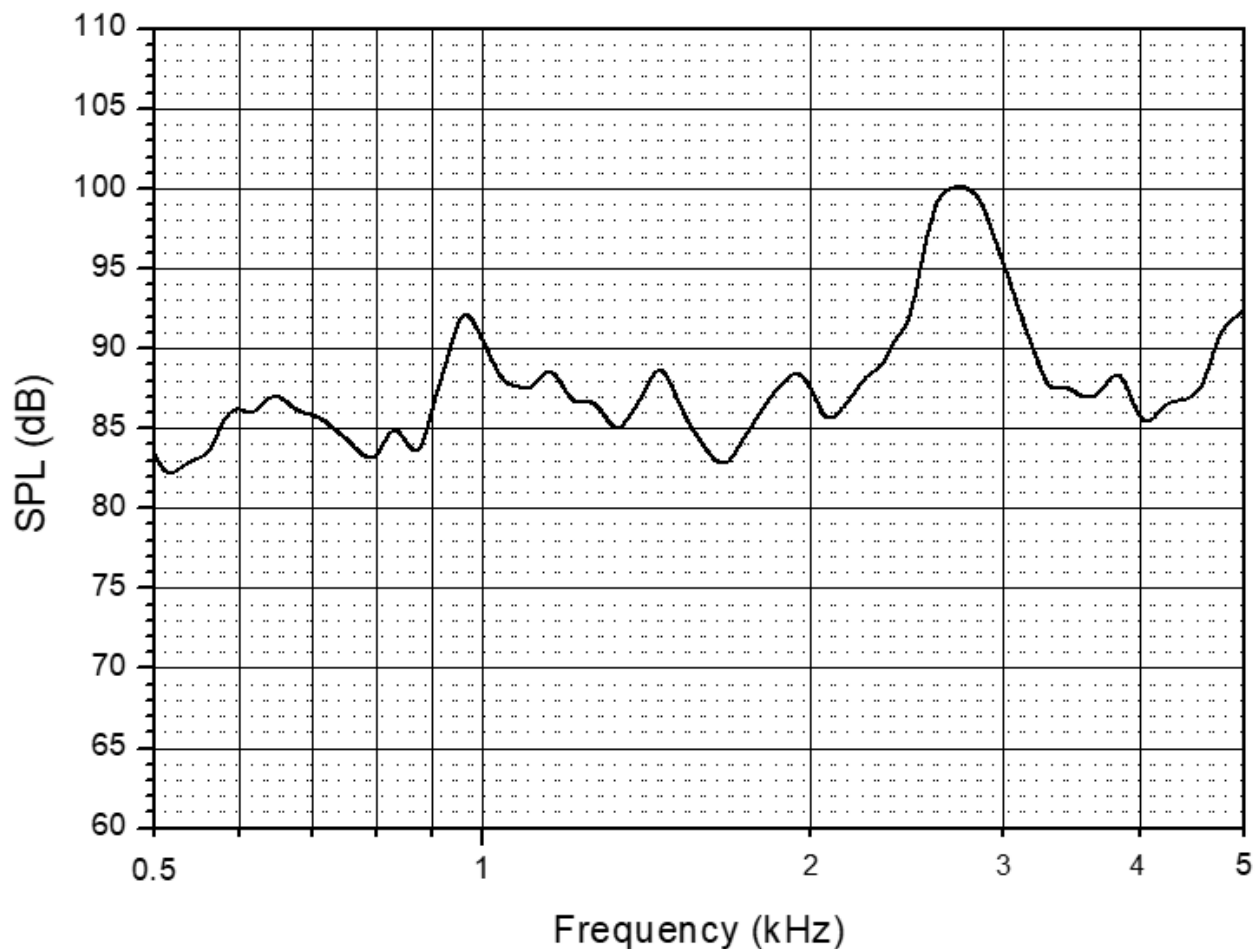
Recommended Drive Circuit (Transistor should have a $V_{ce} \leq 0.15V$ and $h_{FE} \geq 200$)



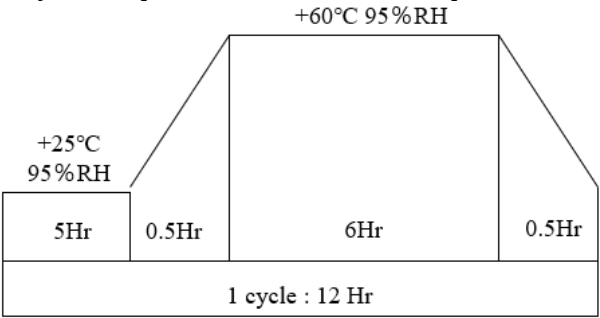
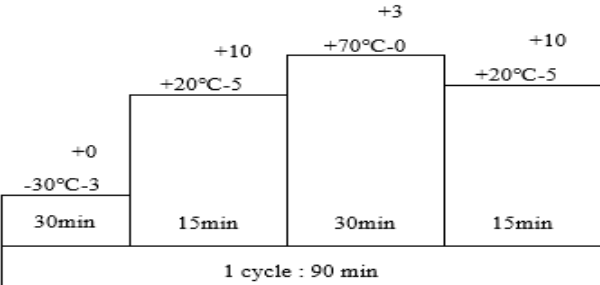
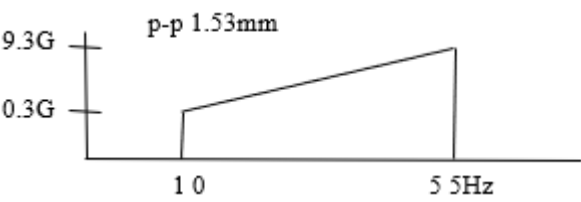
Test Condition (3.6V0-p, 2.7kHz)



Typical Frequency Response (at 10cm)

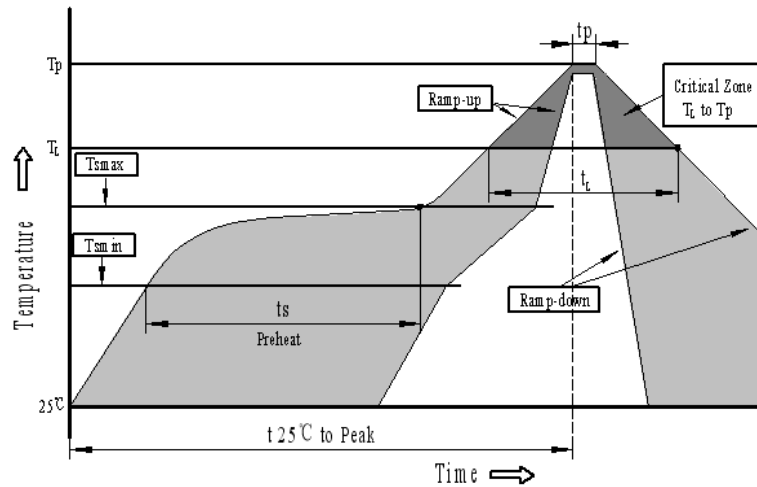


Reliability Testing

Type of Test	Test Specifications
High Temperature Test	The part shall be capable of withstanding a temperature +85°C for 96 hours, then room temperature for 2 hours
Low Temperature Test	The part shall be capable of withstanding a temperature -40°C for 96 hours, then room temperature for 2 hours
Humidity Test	10 cycles unpowered, then room temperature for 2 hours  1 cycle : 12 Hr
Life Test	Operate sound transducer continuously for 1000 hours with applying 3.6V, square wave, 1/2 duty, 2700Hz, using the test circuit as per attached drawing.
Temperature Cycle Testing	Total 5 cycles of the following without power.  1 cycle : 90 min
Vibration Test	 Test for direction of X, Y, Z for 2 hours each (6hrs total).
Drop Test	Fix sound transducer on the P.C.B with polyester film (t=0.2mm, gross weight:100g) and the height of 120cm to the direction of six surface for 3 cycles.
Solderability	Solder bath temp 235°C ± 5°C, time 2 ± 0.5 sec

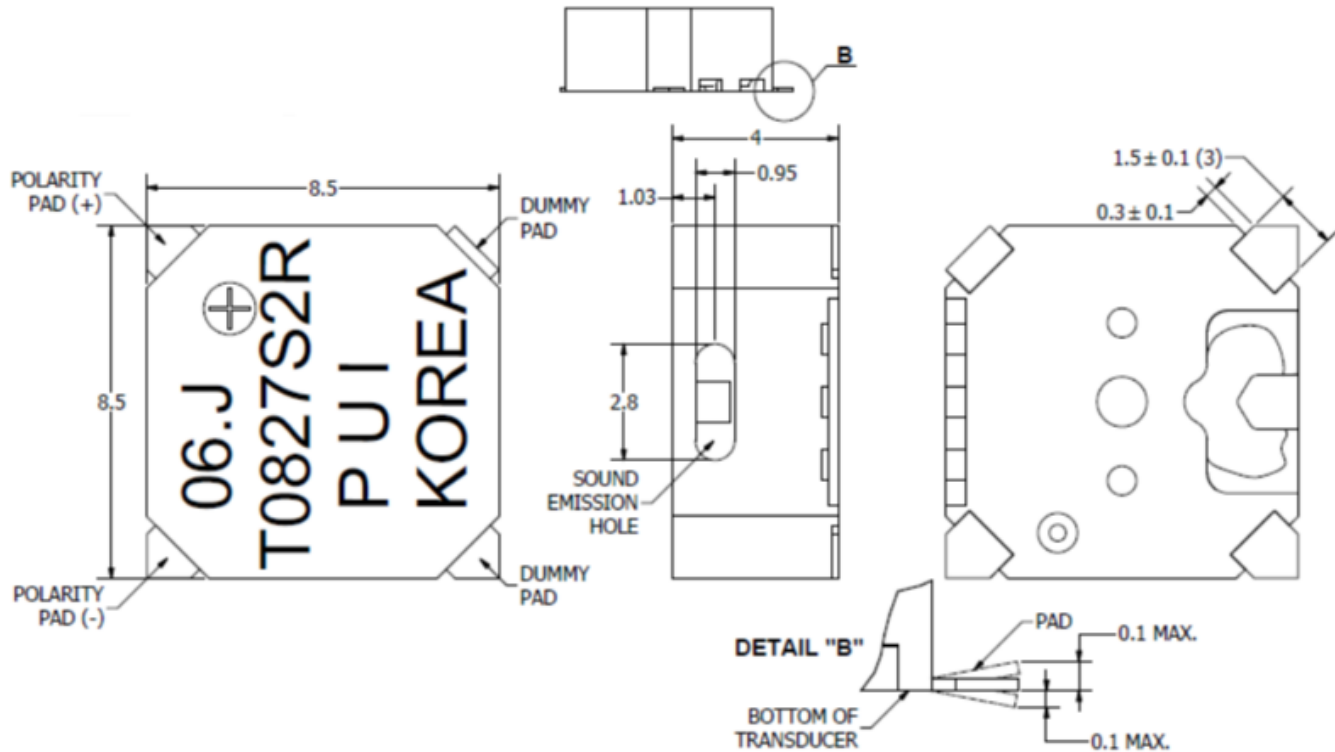
After each test, part shall meet specifications.

Recommended Reflow Soldering Procedure



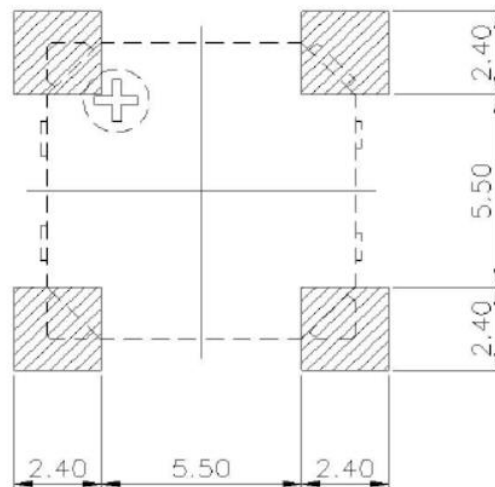
Profile Feature	Pb-Free Assembly
Average ramp-up rate (TL to Tp)	3°C/second max.
Preheat	
-Temperature Min. (T _{smin})	150°C
-Temperature Min. (T _{smax})	200°C
-Temperature Min. (Ts)	60~180 seconds
T _{smax} to TL	
-Ramp-up Rate	3°C/second max.
Reflow	
- Temperature (TL)	217°C
-Time (TL)	60~150 seconds
Peak temperature (Tp)	260°C+0/-5°C
Time within 5°C of actual Peak temperature (Tp)	6 seconds max.
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Dimensions

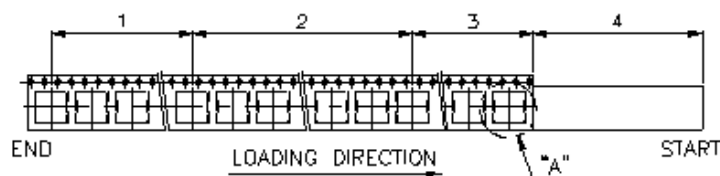
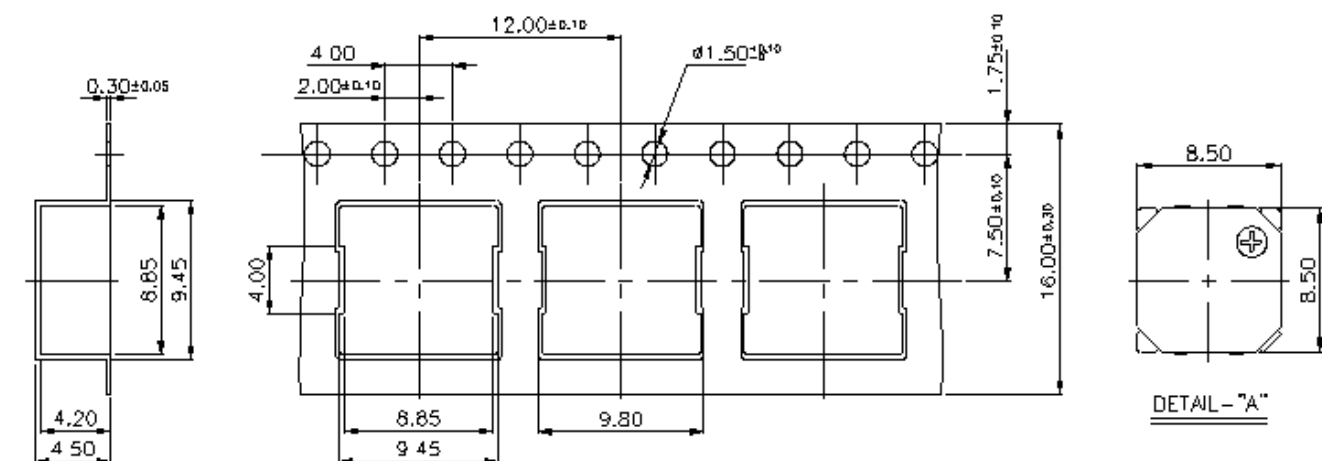
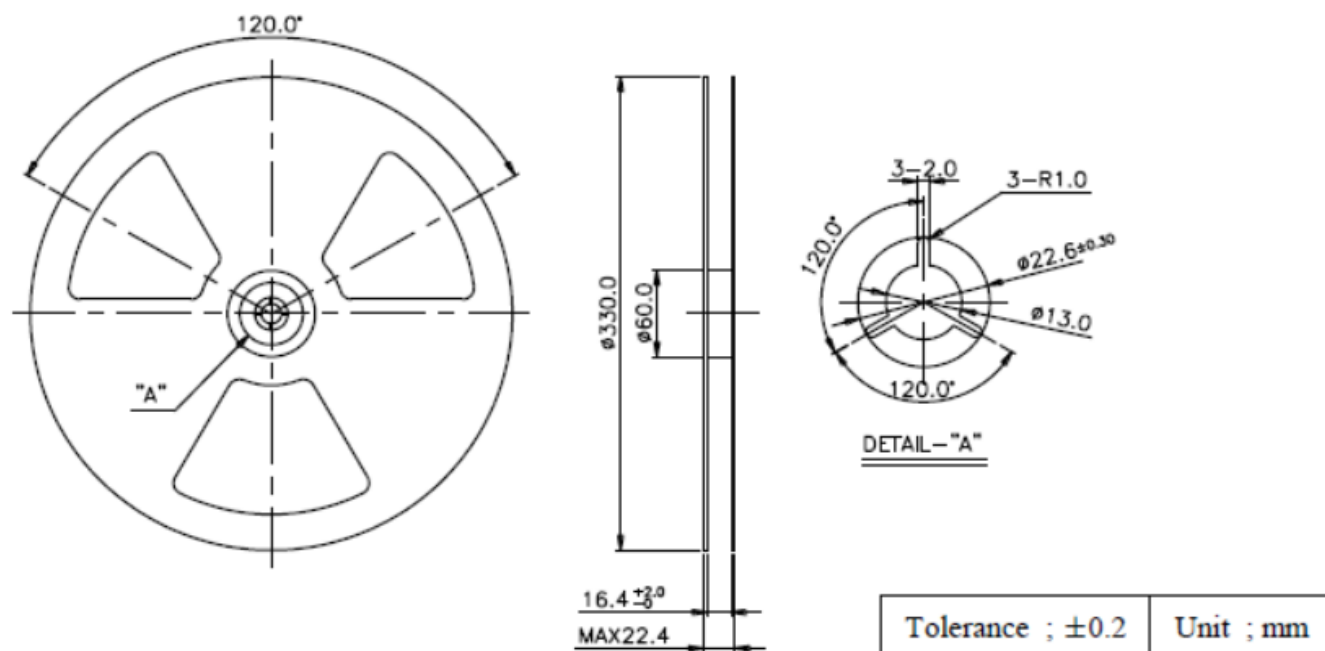


Tolerance $\pm 0.2\text{mm}$

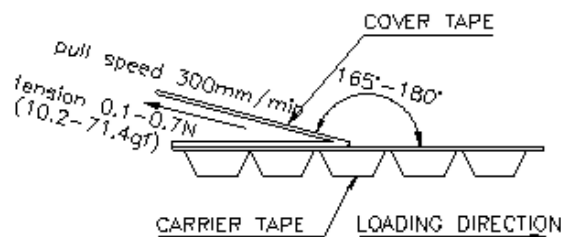
Land Pattern



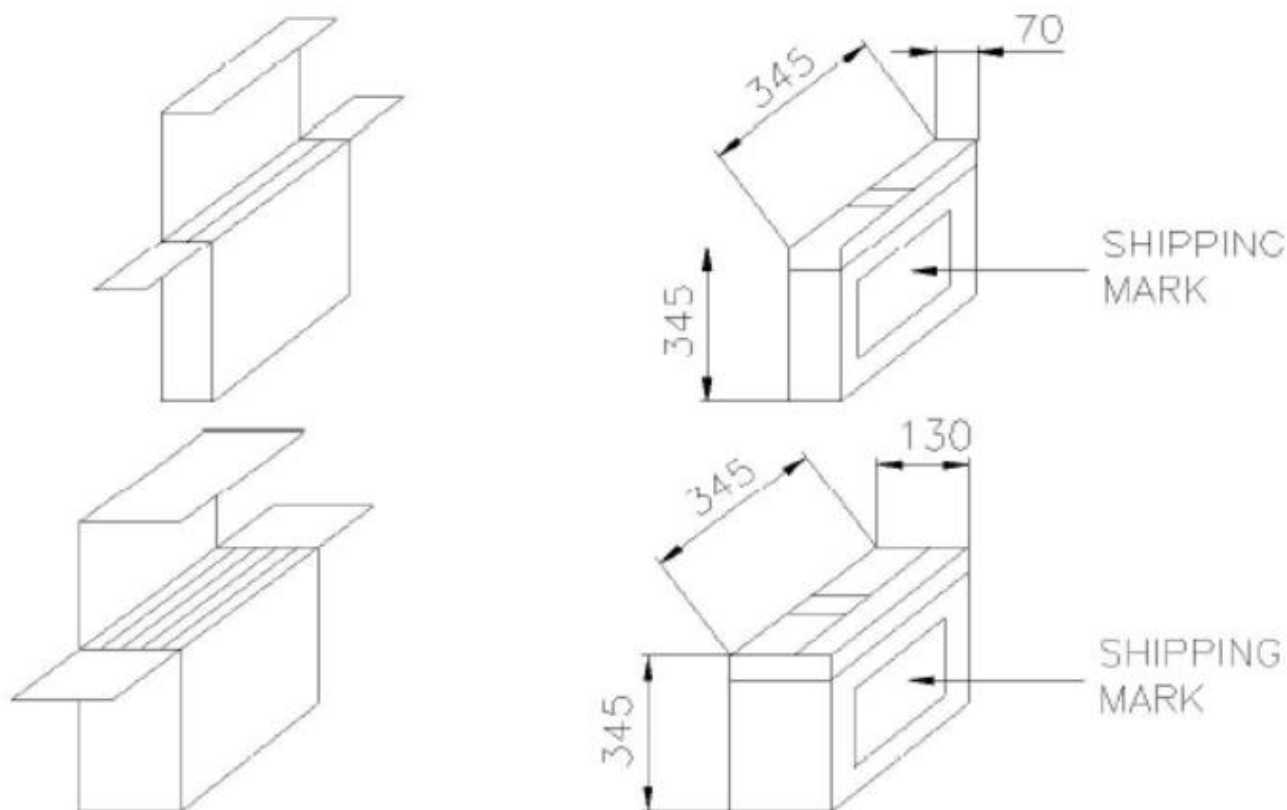
Packaging



1. BARE EMBOSS AREA : 400mm OVER(35PCS OVER)
2. CHIP MOUNT AREA : 1.000PCS
3. BARE EMBOSS AREA : 400mmOVER(35PCS OVER)
4. LEADER AREA : 100mm OVER



Tolerance ; ±0.2	Unit ; mm
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Specifications Revisions

Revision	Description	Date
-	Released from Engineering	4/1/2005
A	Added ROHS Compliance Note	8/10/2005
B	Revised to 3D Template	4/27/2010
C	Revised SPL Value	10/28/2011

Note:

- Unless otherwise specified:
 - All dimensions are in millimeters.
 - Default tolerances are $\pm 0.5\text{mm}$ and angles are $\pm 3^\circ$.
- Specifications subject to change or withdraw without notice.
- This part is ROHS 2015/863/EU Compliant.