Technical Data Sheet

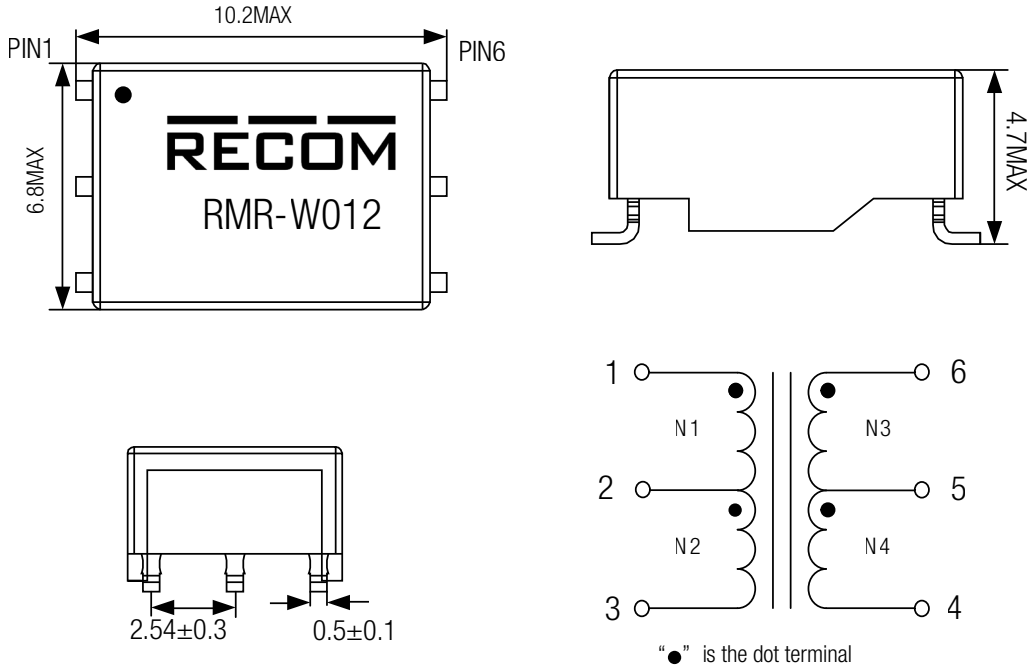
RMR-W012 ◊ Small Size Isolation Transformer

1W ◊ SMD ◊ 2.5kVAC Isolation

FEATURES

- Small-sized isolation transformer
- SMD surface mount installation
- Isolation voltage: 2500VAC/1minute
- Operating temperature: -40~125°C
- Maximum product dimensions: 10.2mm × 6.8mm × 4.7mm

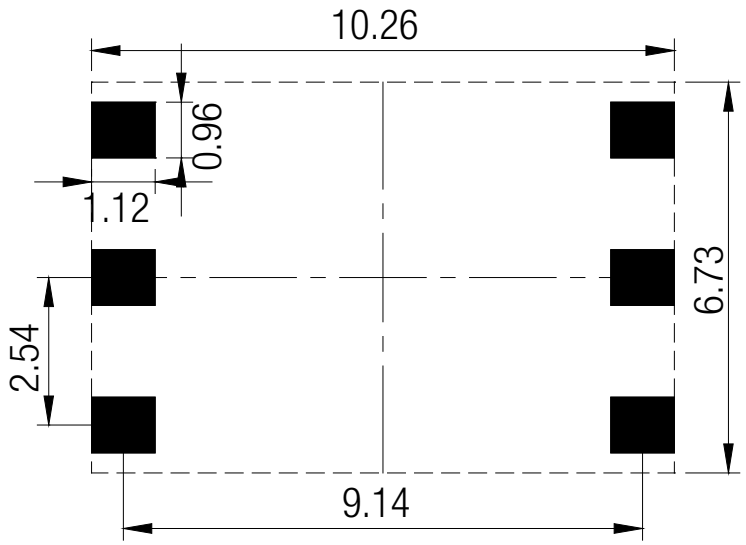
DIMENSIONS AND SCHEMATIC DIAGRAM [mm]



PRODUCT MARKING

Pin1	●
Marking	Company Logo
	Product Model

RECOMMENDED LAND PATTERN [mm]



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BASIC CHARACTERISTIC (measured @ T_{AMB}= 25°C, nominal Input and full load after warm-up time unless otherwise stated)

Properties		Test Conditions	Value	Unit
Inductance	L	(N1+N2)/100kHz/0.1V	503 min.	µH
Turns ratio	n	N1:N2:N3:N4	1:1:1.1:1.1	
DC resistance 1	R_{DC1}	N1:N2/25°C	0.16 max.	Ω
DC resistance 2	R_{DC2}	N3:N4 /25°C	0.17 max.	Ω
Voltage-µSecond	$\int_{Udt}$	N1/ bipolar waveform	12.7	Vµs
Interwinding capacitance	C_{WW}	PIN1-6/100kHz/ 0.1V/25°C	20 max.	pF
Leakage inductance	L_S	N1/100kHz/0.1V, all other terminals short	0.25 max.	µH
Isolation test voltage	V_T	N1,2: N3,4/60s/1mA	2500	VAC

GENERAL INFORMATION

Operating temperature (including temperature rise)	-40~125°C
Storage temperature	-40~125°C
Storage conditions (in original packaging)	<40°C/<75%RH
Moisture sensitivity Level (MSL)	1
Insulation grade	Functional

MATERIAL CERTIFICATION

ITEM		UL NO
1	Case	E150608
2	Wire	E253843
3	Varnish	E314793

ENVIRONMENTAL COMPLIANCE

RoHS Approval	Compliant [2011/65/EU&2015/863]
REACH Approval	Conform or declared [(EC)1907/2006]
Halogen Free	Conform [EN 14582:2016]

TYPICAL APPLICATION

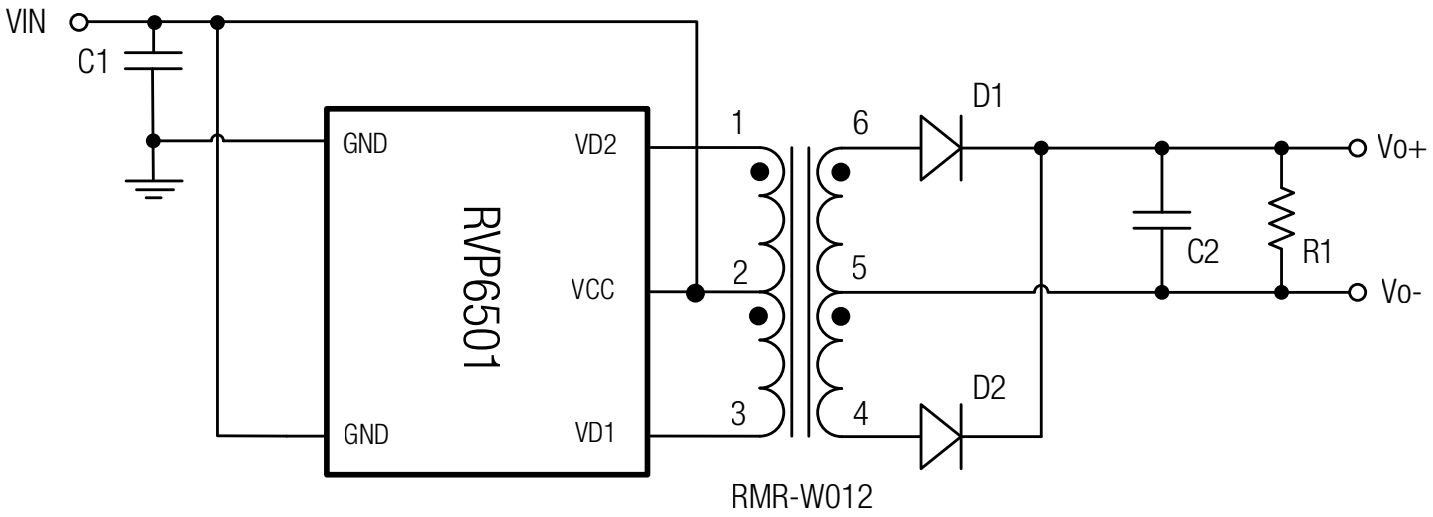
Parameter		Value	Unit
Input voltage	V_{IN}	5	VDC
Output voltage 1	V_{OUT1}	5	VDC
Output current 1	I_{OUT1}	200	mA
Switching frequency	f_{switch}	360	kHz

Input: N1/N2
Output 1: N3/N4

Table and graph show a typical application. Values may vary by application.

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REFERENCE CIRCUIT DIAGRAM



Typical Curve:

Fig 1. Typical efficiency vs Output current

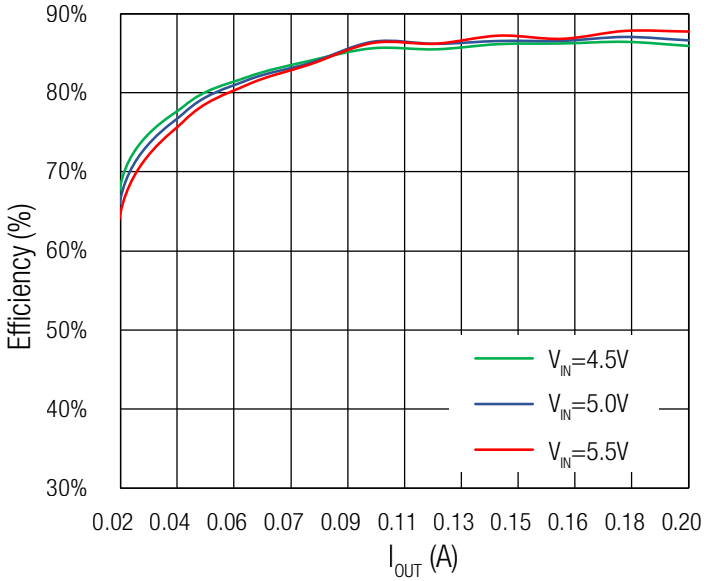
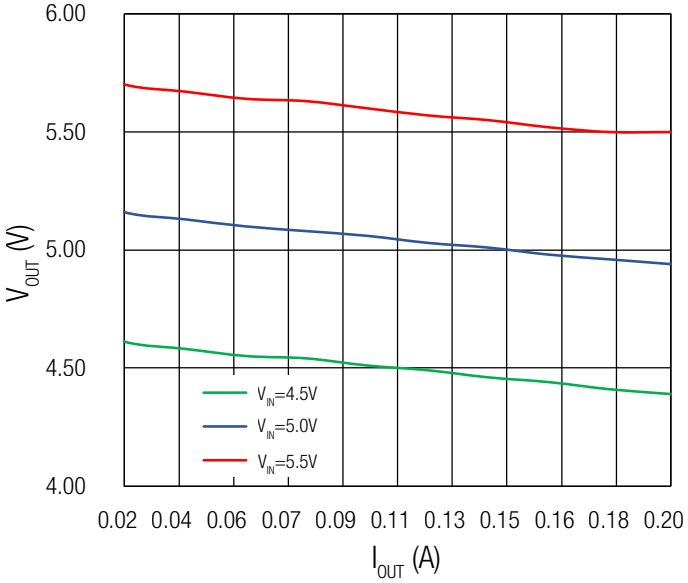


Fig 2. Typical output voltage vs Output current

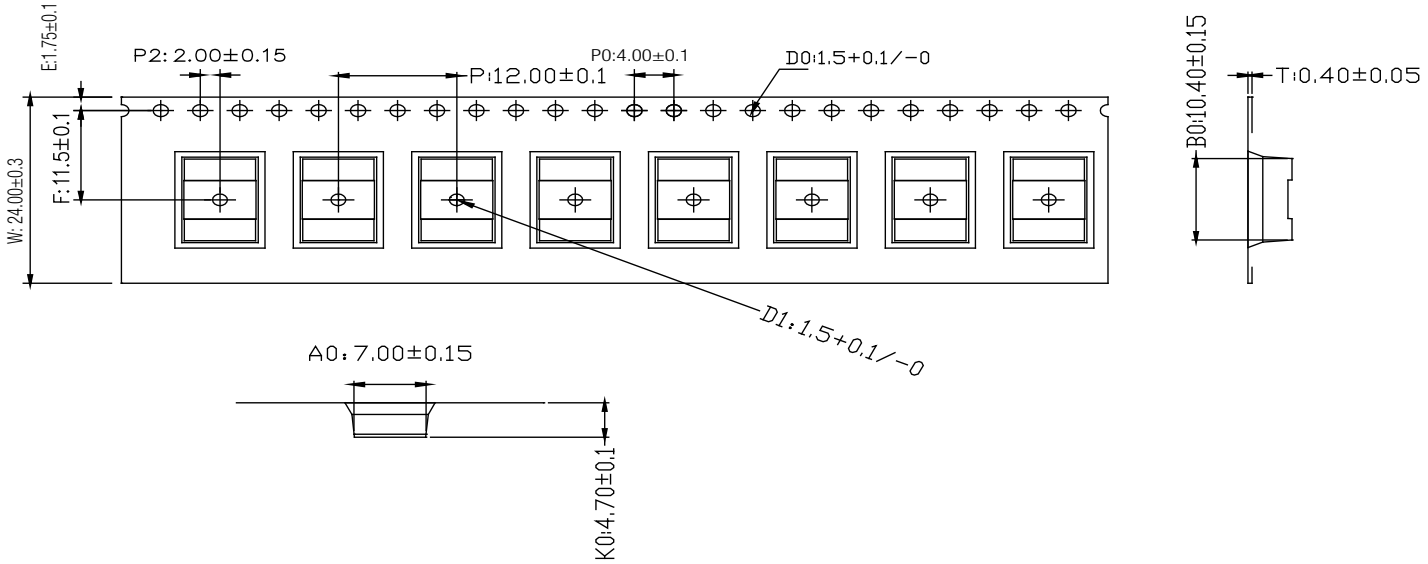


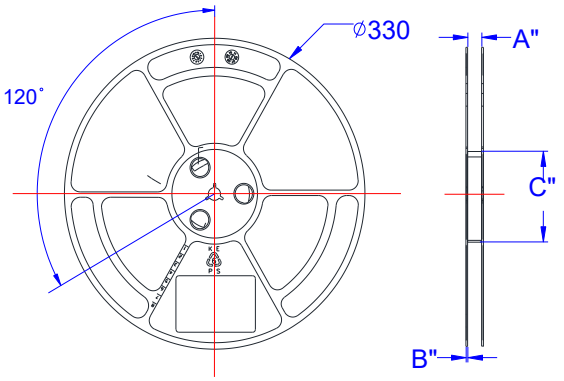
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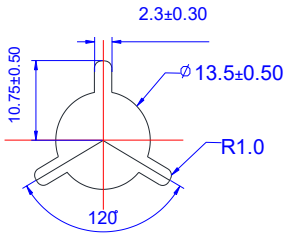
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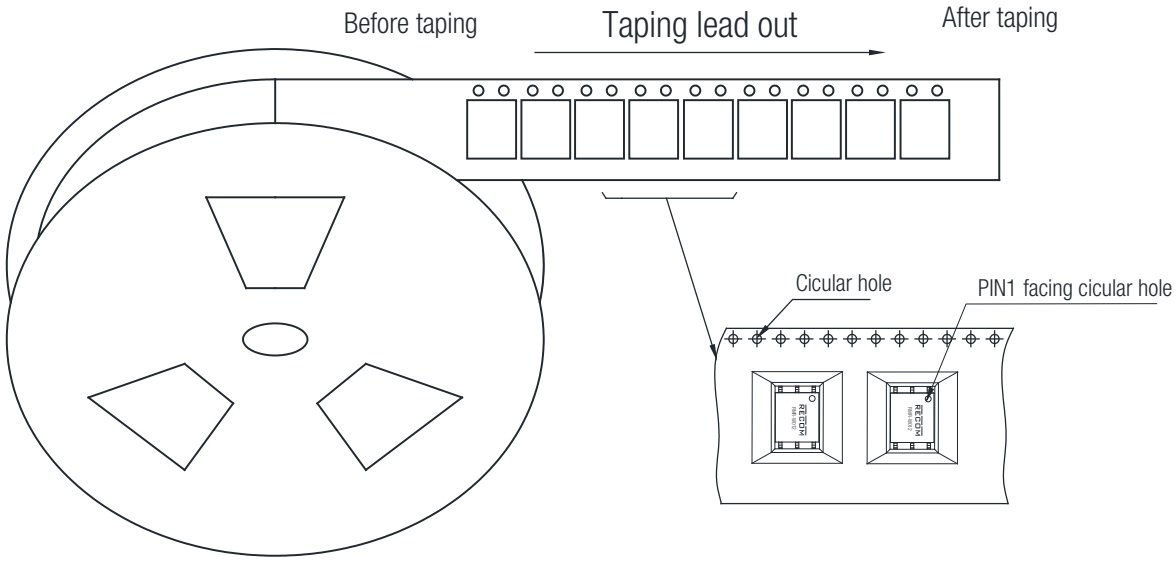
PACKAGING SPECIFICATION - TAPE & REEL [mm]													
ITRM	W	A0	B0	K0	K1	P	F	E	D0	D1	P0	P2	T
DIM	24.00	7.00	10.40	4.70	--	12.00	11.50	1.75	1.50	1.50	4.00	2.00	0.30
TOLE	+0.30 -0.30	+0.15 -0.15	+0.15 -0.15	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.10	+0.10 -0.00	+0.10 -0.00	+0.10 -0.10	+0.15 -0.15	+0.05 -0.05





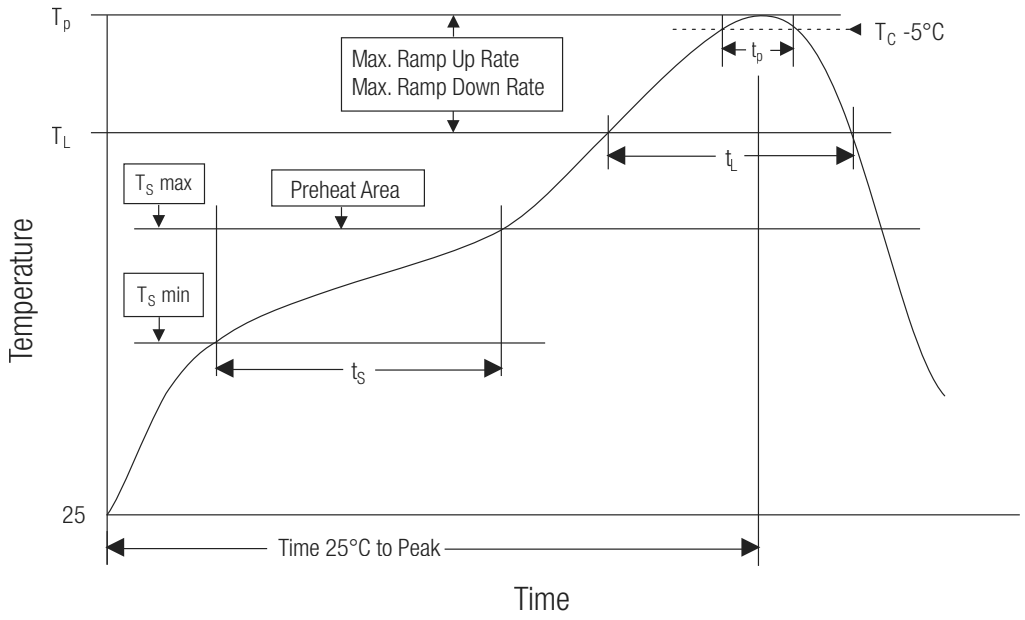


		✓			
SPEC	16	24	32	44	56
DIM A" ± 0.5	16.5	24.5	32.5	44.5	56.5
DIM B" ± 0.3	2.10	2.10	2.10	2.10	2.10
DIM C" ± 0.5	100	100	100	100	100



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REFLOW SOLDERING



Profile Feature		Value
Preheat temperature Min	$T_{s\,min}$	150°C
Preheat temperature Max	$T_{s\,max}$	200°C
Preheat time t_s from $T_{s\,min}$ to $T_{s\,max}$	t_s	100 seconds
Ramp-up rate (T_L to T_P)		3°C/second max.
Liquidous temperature	T_L	217°C
Time t_L maintained above T_L	t_L	100 seconds
Peak package body temperature	T_P	$T_P \leq T_C$, see table below
Time within 5°C of actual peak temperature	t_P	30 seconds
Ramp-down rate (T_P to T_L)		6°C/second max.
Time 25°C to peak temperature		5 minutes max.
Reflow soldering temperature		Peak temperature ≤250°C (10s)
Reflow soldering cycles		Recommended ≤ 2 Cycles

Refer to IPC/JEDEC J-STD-020F

PACKAGE CLASSIFICATION REFLOW TEMPERATURE (T_C)

Properties	Volume mm³ <350	Volume mm³ 350-2000	Volume mm³ >2000
PB-Free Assembly I Package Thickness < 1.6 mm	260°C	260°C	260°C
PB-Free Assembly I Package Thickness 1.6 mm - 2.5 mm	260°C	250°C	245°C
PB-Free Assembly I Package Thickness > 2.5 mm	250°C	245°C	245°C

Refer to IPC/JEDEC J-STD-020F

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ORDER INFORMATION

Order Code	Marking Code*	Weight (g/pcs)	Package Type	Quantity (pcs/Reel)
RMR-W012-E55S-R	RMR-W012	0.35g	Tape & Reel	1200pcs
RMR-W012-E55S-CT	RMR-W012	0.35g	Moisture Barrier Bag	5pcs

*Marking Code

RMR-W012—— Product Code

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