

MULTI-PHASE POWER INDUCTORS

SMBXX1208 SERIEIS



FEATURES:

- High current multi-phase inductor
- 100 nH per phase coupled inductor
- 12 mm wide x 8.5 mm high footprint surface mount package with 12.5 mm, 18.5 mm, 24.5 mm and 36.5 mm lengths
- Ferrite core material
- Moisture Sensitivity Level (MSL): 1

APPLICATIONS:

- For exclusive use with Maxim? Multi-phase controllers
- Voltage Regulator Modules (VRMs) and high power density VRMs
- Server and desktop
- Central processing unit (CPU)
- Graphics processing unit (GPU)
- Application specific integrated circuit (ASIC)
- Data networking and storage systems
- High current Point-of-Load (POL) modules
- Vcore regulators

ELECTRICAL CHARACTERISTICS:

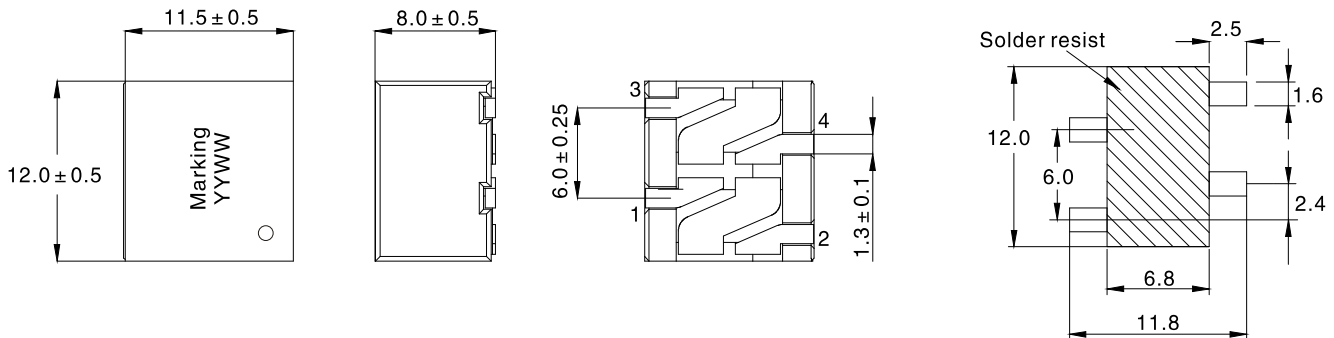
Part Number	Inductance Phases	OCL(uH)		FLL(uH) Min.	Isat 1 (A)	DCR (mΩ)Max	SCL ±20%	Isat 2 (A)	Marking
		Typ.	Min.						
SMB121208-2W-R10M	2	0.4	0.36	0.32	15	0.45	0.1	56	R10
SMB181208-3W-R10M	3	0.4	0.36	0.32	15	0.45	0.1	56	R10
SMB241208-4W-R10M	4	0.4	0.36	0.32	15	0.45	0.1	56	R10
SMB361208-6W-R10M	6	0.4	0.36	0.32	15	0.45	0.1	56	R10

1. Open Circuit Inductance (OCL) Test Parameters: 1.0 MHz/0.1 Vrms, 0.0 Adc, +105°C
2. Full Load Inductance (FLL) Test Parameters: 1.0 MHz/0.1 Vrms, Isat1, +105 °C
3. Short Circuit Inductance (SCL) Test Parameters: 1.0 MHz/0.1 Vrms, 0.0 Adc, +105 °C
 SMD121208-2W-R10M Test :short (1 & 4), measure (2 & 3), and divide by 2
 SMD181208-2W-R10M Test : short (1 & 4), (3 & 6), measure (2 & 5), and divide by 3
 SMD241208-2W-R10M Test : short (1 & 4), (3 & 6), (5 & 8) measure (2 & 7), and divide by 4
 SMD361208-2W-R10M Test :short (1 & 4), (3 & 6), (5 & 8), (7 & 10), (9 & 12) measure (2 & 11), and divide by 6
4. DCR +20 °C TEST, Each winding
5. Isat2: Based on inductance change ($\Delta L/L_0$: drop 20% Typ.) @ +105 °C
6. The specs are guaranteed at room temp as tested in production and other parameters are guaranteed by design.
7. Storage temperature range (Component): -40 °C to +125°C
8. Operating temperature range: -40°C to +125 °C(ambient plus self-temperature rise)
9. Solder reflow temperature: J-STD-020 (latest revision) compliant

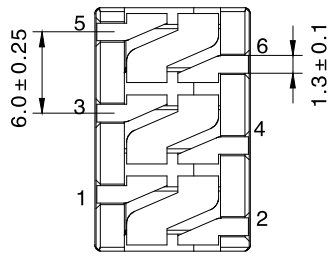
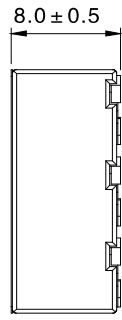
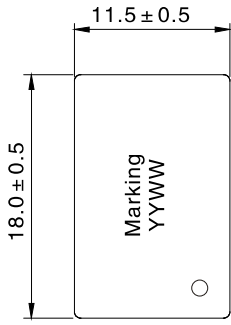
PHYSICAL CHARACTERISTICS

SMB121208-2W-R10M

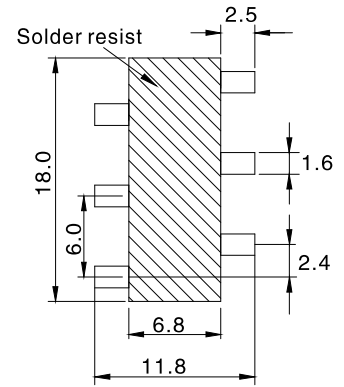
Recommended Pad layout



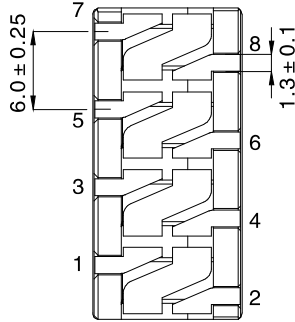
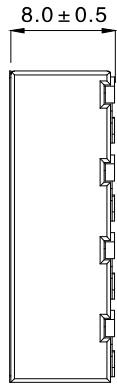
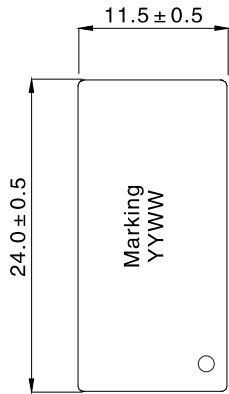
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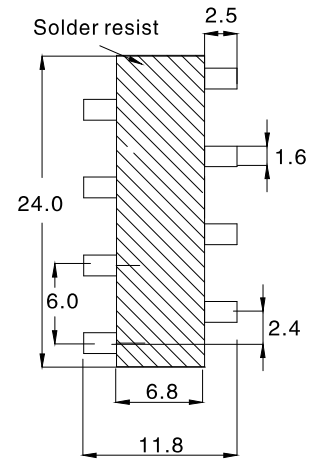
Recommended Pad layout



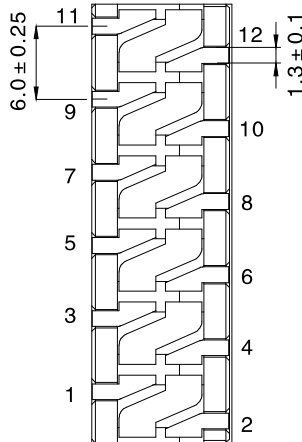
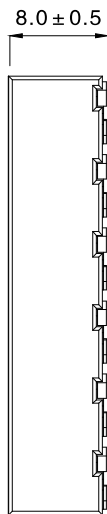
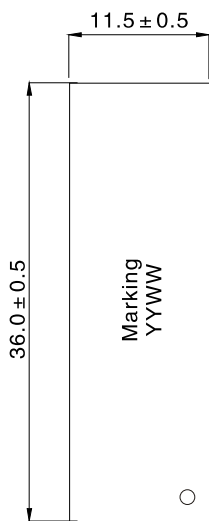
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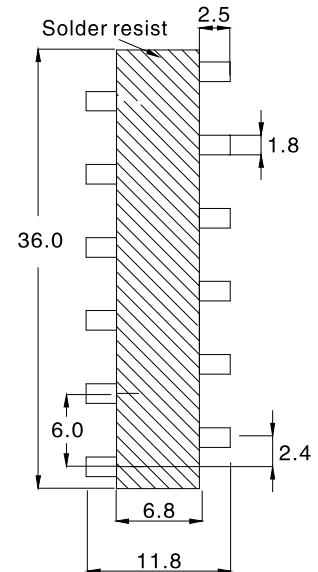
Recommended Pad layout



SMB361208-6W-R10M

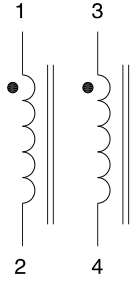


Recommended Pad layout

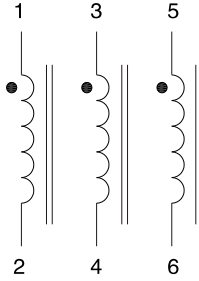


SCHEMATIC

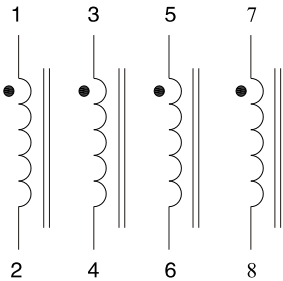
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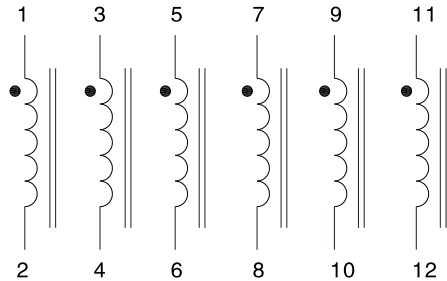
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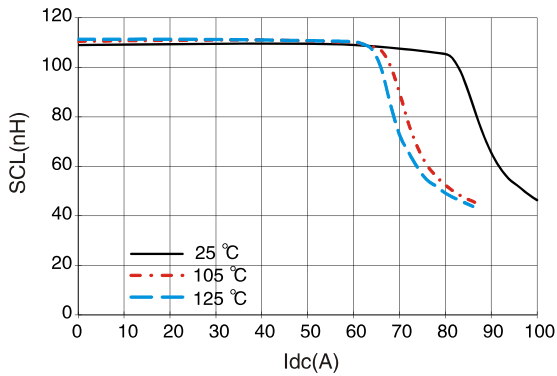


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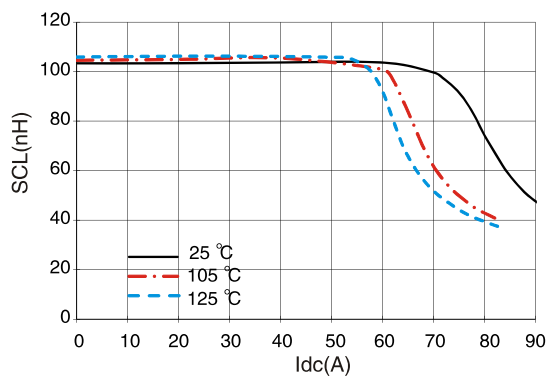


INDUCTANCE CHARACTERISTICS SCL VS. CURRENT

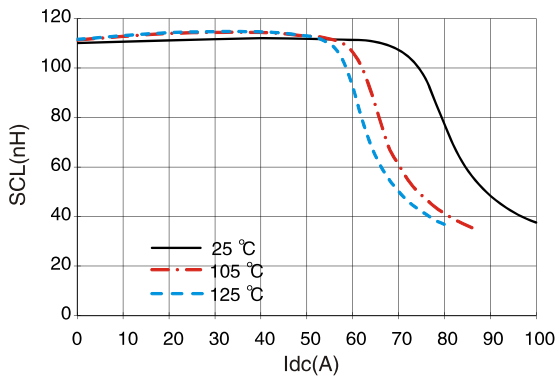
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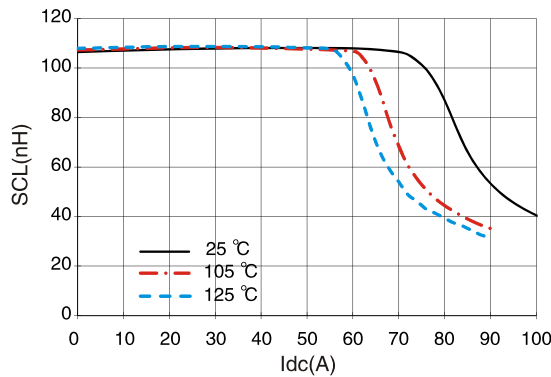
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SMB241208-4W-R10M

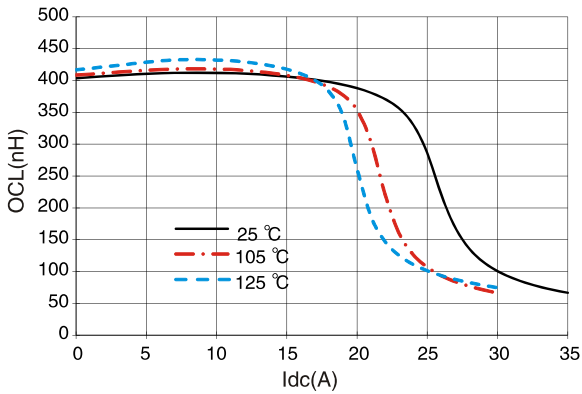


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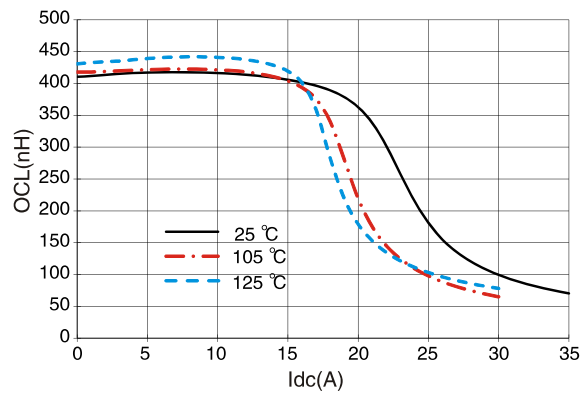


INDUCTANCE CHARACTERISTICS OCL VS. CURRENT

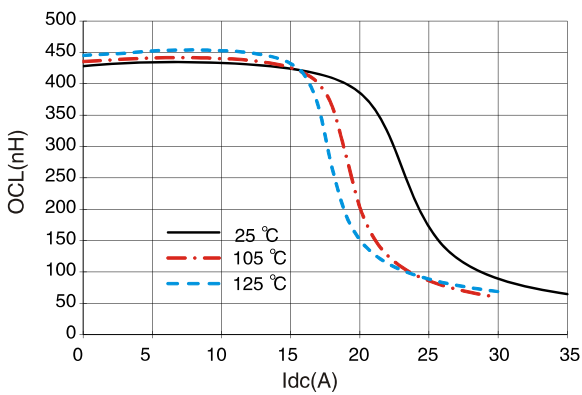
SMB121208-2W-R10M(1-2),(3-4)



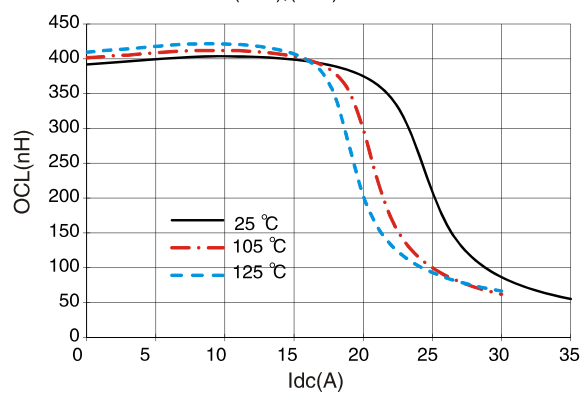
SMB181208-3W-R10M(1-2),(5-6)



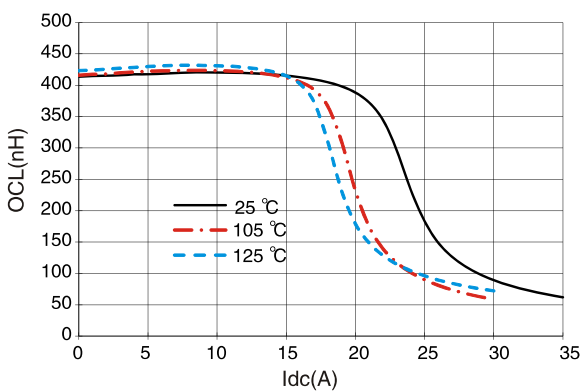
SMB181208-3W-R10M(3-4)



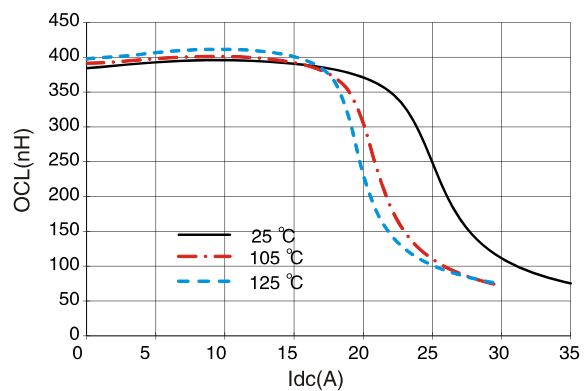
SMB241208-4W-R10M(1-2),(7-8)



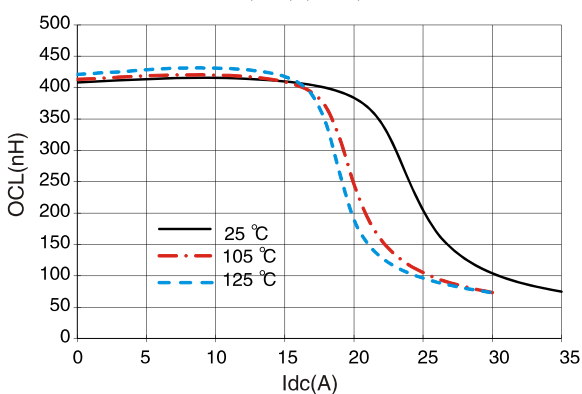
SMB241208-4W-R10M(3-4),(5-6)



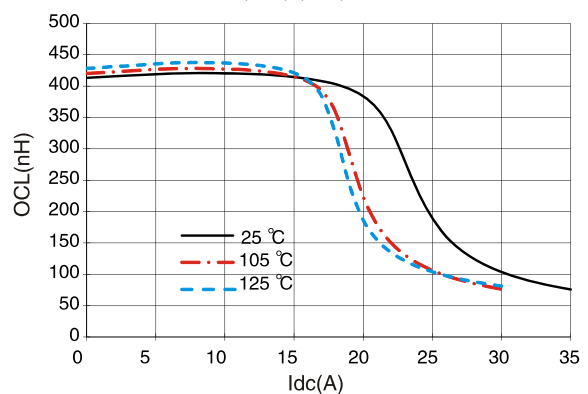
SMB361208-6W-R10M(1-2),(11-12)



SMB361208-6W-R10M(3-4),(9-10)



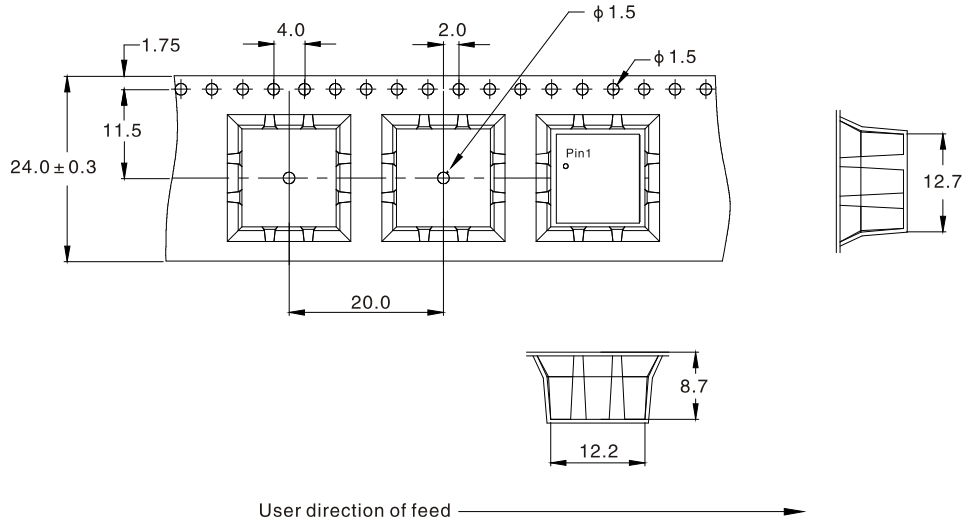
SMB361208-6W-R10M(5-6),(7-8)



PACKAGING INFORMATION

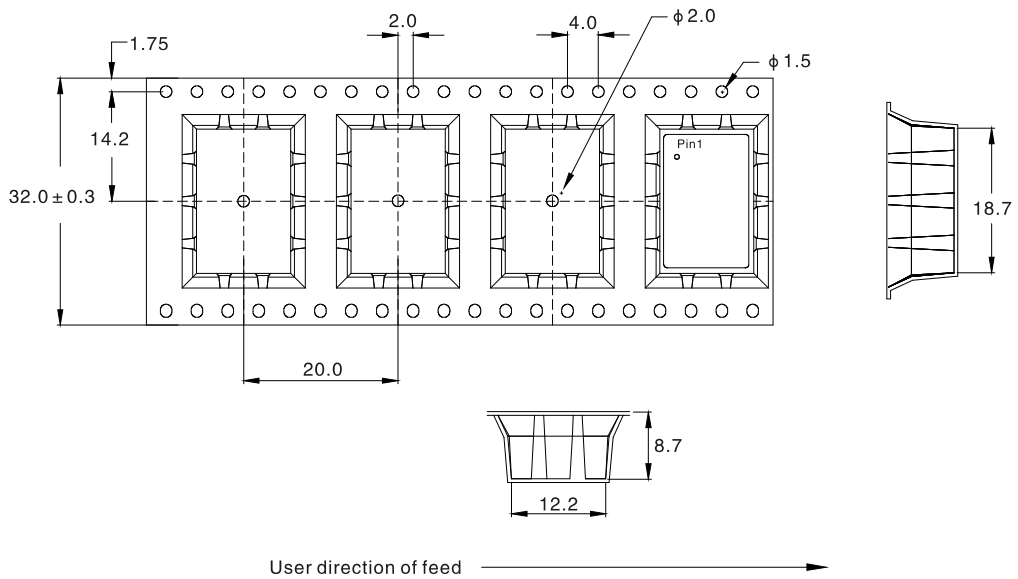
SMB121208-2W-R10M

Supplied in tape and reel packaging on a 13" diameter reel
 Drawing not to scale
 300 parts per reel



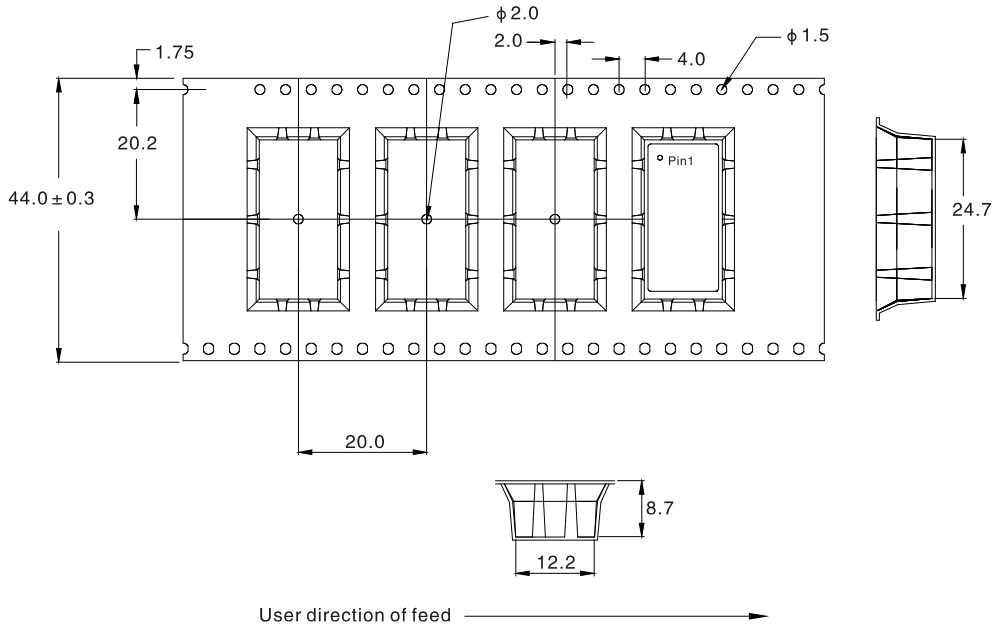
SMB181208-3W-R10M

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PACKAGING INFORMATION

SMB241208-4W-R10M
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SMB361208-6W-R10M
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