

Flat Wire Assembly Inductor-TRPQ Series

The Flat Wire Assembly Inductor is designed with a professional flat wire winding and precision assembly process. It has the advantages of compact structure, high power density, low high-frequency loss and strong anti-interference performance.



Features

- High inductance & high current, low loss, low ESR, small parasitic capacitance.
- Flat wire design for low DCR.
- Stable thermal and saturation current in varied environments.

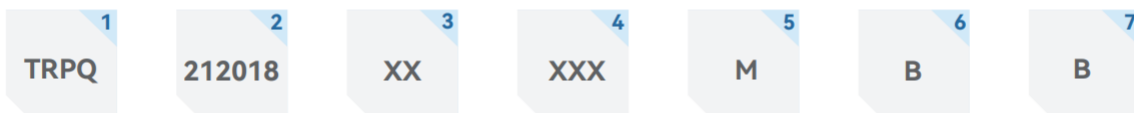
Applications

- DC-DC converters
- Server
- Battery power devices
- High current power supplies

Operating Temp

- -40°C~+125°C

Product Identification



1	Product Symbol
TRPQ	SMD Power Inductor

2	External Dimensions(mm)
212018	20.5*20.0*17.5
212022	20.5*20.0*22.2
221512	21.8*14.5*12.0
221515	21.8*14.5*14.5
221517	21.8*14.5*16.5
272423	26.5*24.0*22.5
272427	26.5*24.0*26.5
282016	27.9*19.7*15.4
282019	28.0*19.7*18.5
282219	27.5*21.5*19.0
291922	29.0*19.0*21.5
323023	32.2*30.0*22.5
323031	32.0*30.0*30.7
363436	36.0*34.2*35.7

3	Internal Code
SM	Mn-Zn
BM	BASE&Mn-Zn

4	Nominal Inductance
R47	0.47μH
1R0	1.0μH
100	10μH
101	100μH

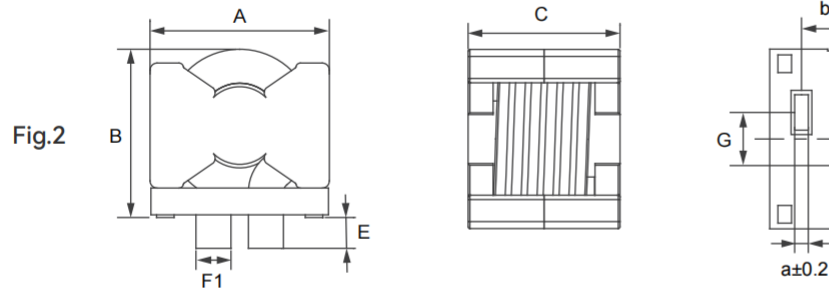
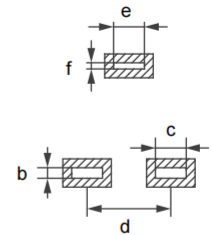
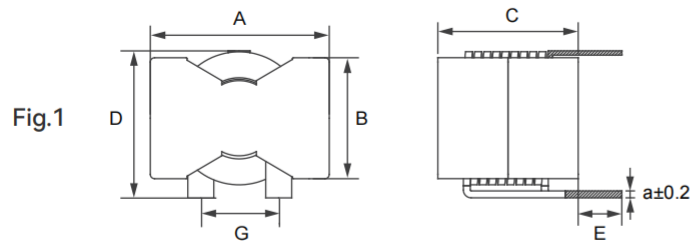
5	Inductance Tolerance
M	±20%

6	Packing
B	Bulk

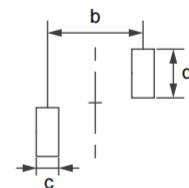
7	Internal Code
B	Special

Shape and Dimensions

Recommended pattern



Recommended pattern



Dimensions

Unit:mm

Series	A	B	C	D	E	F1	F2	G	Shape
TRPQ212018BM	20.5±0.5	20.0Max.	17.5Max.	/	3.5±1.0	4.0±0.2	/	6.0±0.5	Fig.2
TRPQ212022BM	20.5±0.5	20.0Max.	22.2Max.	/	3.5±1.0	4.0±0.2	/	6.0±0.5	Fig.2
TRPQ221512SM	21.8Max.	14.5Max.	12.0Max.	18.0Max.	5.0±1.0	3.0±0.3	2.5	9.0±0.5	Fig.1
TRPQ221515SM	21.8Max.	14.5Max.	14.5Max.	18.0Max.	5.0±1.0	3.0±0.3	2.5	9.0±0.5	Fig.1
TRPQ221517SM	21.8Max.	14.5Max.	16.5Max.	18.0Max.	5.0±1.0	3.0±0.3	2.5	9.0±0.5	Fig.1
TRPQ272423BM	26.5±0.5	24.0Max.	22.5Max.	/	3.5±1.0	4.5±0.2	/	9.0±0.5	Fig.2
TRPQ272427BM	26.5±0.5	24.0Max.	26.5Max.	/	3.5±1.0	4.5±0.2	/	9.0±0.5	Fig.2
TRPQ282016SM	27.9Max.	19.7Max.	15.4Max.	23.0Max.	3.0±0.5	4.5±0.2	3.0	10.43±0.5	Fig.1
TRPQ282019SM	28.0Max.	19.7Max.	18.5Max.	23.0Max.	3.0±0.5	4.0±0.3	3.0	10.43±0.5	Fig.1
TRPQ282219BM	27.5±0.5	21.5Max.	19.0±0.5	/	5.0±0.5	3.8±0.2	/	10.0±1.0	Fig.2
TRPQ291922BM	29.0Max.	19.0±0.4	21.5Max.	24.0Max.	5.0±0.5	0.3±0.03	/	/	Fig.2
TRPQ323023BM	32.2±0.5	30.0Max.	22.5Max.	/	4.0±1.0	6.5±0.5	/	11.0±0.5	Fig.2
TRPQ323031BM	32.0±1.0	30.0Max.	30.7Max.	/	4.0±1.0	6.5±0.2	/	11.0±0.5	Fig.2
TRPQ363436BM	36.0Max.	34.2Max.	35.7Max.	/	4.0±1.0	8.0±0.3	/	11.5±0.5	Fig.2

Dimensions

Unit:mm

Series	a	b	c	d	e	f	Shape
TRPQ212018BM	See spec table	See spec table	See spec table	5.0	/	/	Fig.2
TRPQ212022BM	See spec table	See spec table	See spec table	5.0	/	/	Fig.2
TRPQ221512SM	See spec table	See spec table	3.5	9.0	3.5	0.7	Fig.1
TRPQ221515SM	See spec table	See spec table	3.5	9.0	3.5	0.7	Fig.1
TRPQ221517SM	See spec table	See spec table	3.5	9.0	3.5	0.7	Fig.1
TRPQ272423BM	See spec table	See spec table	See spec table	5.5	/	/	Fig.2
TRPQ272427BM	See spec table	See spec table	See spec table	5.5	/	/	Fig.2
TRPQ282016SM	See spec table	See spec table	5.5	10.43	4.0	0.85	Fig.1
TRPQ282019SM	0.8	1.4	5.5	10.43	4.0	0.85	Fig.1
TRPQ282219BM	See spec table	9.0	See spec table	5.0	/	/	Fig.2
TRPQ291922BM	See spec table	See spec table	0.7	4.0	/	/	Fig.2
TRPQ323023BM	See spec table	See spec table	See spec table	7.5	/	/	Fig.2
TRPQ323031BM	See spec table	See spec table	See spec table	7.5	/	/	Fig.2
TRPQ363436BM	See spec table	See spec table	See spec table	9.5	/	/	Fig.2

Specification

TRPQ212018BM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)	c(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)				
	±20 %	Typ.	Typ.	Max.	Typ.			
TRPQ212018BM1R2MBB	1.2	75.00	63.00	0.92	0.77	1.5	9.8	2.3
TRPQ212018BM2R2MBB	2.2	51.50	47.00	1.24	1.03	1.3	10.1	2.1
TRPQ212018BM3R3MBB	3.3	44.50	42.00	2.04	1.70	1.0	10.2	1.8
TRPQ212018BM4R7MBB	4.7	35.50	37.00	2.48	2.07	0.9	10.1	1.7
TRPQ212018BM6R8MBB	6.8	31.00	28.00	4.22	3.52	0.7	10.1	1.5
TRPQ212018BM100MBB	10	24.50	22.00	5.60	4.67	0.6	10.1	1.4

TRPQ212022BM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)	c(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)				
	±20 %	Typ.	Typ.	Max.	Typ.			
TRPQ212022BMR68MBB	0.68	96.00	74.00	0.72	0.60	2.0	13.5	3.0
TRPQ212022BM1R0MBB	1.0	83.00	65.00	0.88	0.73	1.8	13.9	2.8
TRPQ212022BM1R2MBB	1.2	78.50	54.00	1.12	0.93	1.6	13.9	2.6
TRPQ212022BM1R5MBB	1.5	71.50	50.00	1.51	1.26	1.4	13.7	2.4
TRPQ212022BM2R2MBB	2.2	59.00	43.00	1.73	1.44	1.3	14.0	2.3
TRPQ212022BM3R3MBB	3.3	47.00	40.00	2.11	1.76	1.2	14.5	2.2
TRPQ212022BM4R7MBB	4.7	36.00	35.00	2.48	2.07	1.1	15.0	2.1
TRPQ212022BM6R8MBB	6.8	31.20	30.00	2.96	2.47	1.0	14.3	2.0
TRPQ212022BM8R2MBB	8.2	28.30	25.00	4.46	3.72	0.8	14.5	1.8

TRPQ221512SM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)			
	±20 %	Typ.	Typ.	Max.	Typ.		
TRPQ221512SMR47MBB	0.47	75.00	45.00	0.48	0.40	1.4	1.9
TRPQ221512SMR82MBB	0.82	55.00	45.00	0.48	0.40	1.4	1.9
TRPQ221512SM1R0MBB	1.0	62.00	35.00	1.38	1.15	0.9	1.4
TRPQ221512SM1R5MBB	1.5	60.00	35.00	1.38	1.15	0.9	1.4
TRPQ221512SM2R2MBB	2.2	50.00	28.00	2.13	1.78	0.7	1.2
TRPQ221512SM3R3MBB	3.3	35.00	28.00	2.13	1.78	0.7	1.2
TRPQ221512SM4R7MBB	4.7	24.00	28.00	2.13	1.78	0.7	1.2
TRPQ221512SM6R8MBB	6.8	18.00	28.00	2.13	1.78	0.7	1.2
TRPQ221512SM8R2MBB	8.2	13.00	28.00	2.13	1.78	0.7	1.2
TRPQ221512SM100MBB	10	13.00	16.00	5.76	4.80	0.4	0.9
TRPQ221512SM150MBB	15	10.00	16.00	5.76	4.80	0.4	0.9
TRPQ221512SM220MBB	22	10.00	14.00	8.16	6.80	0.4	0.8
TRPQ221512SM330MBB	33	7.00	14.00	8.16	6.80	0.4	0.8

TRPQ221515SM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)			
	±20 %	Typ.	Typ.	Max.	Typ.		
TRPQ221515SMR70MBB	0.70	75.00	32.00	0.79	0.66	1.2	1.8
TRPQ221515SM1R4MBB	1.4	60.00	31.50	1.02	0.86	1.2	1.8
TRPQ221515SM2R2MBB	2.2	52.00	30.50	1.58	1.32	1.0	1.5
TRPQ221515SM3R1MBB	3.1	45.00	26.00	2.30	1.92	0.8	1.2
TRPQ221515SM4R2MBB	4.2	38.00	24.00	3.04	2.54	0.7	1.1
TRPQ221515SM5R5MBB	5.5	33.00	22.00	3.96	3.30	0.6	1.0
TRPQ221515SM7R0MBB	7.0	30.00	21.00	5.10	4.25	0.5	0.9
TRPQ221515SM8R6MBB	8.6	25.00	17.00	7.08	5.90	0.4	0.7
TRPQ221515SM100MBB	10	23.00	16.00	7.80	6.50	0.4	0.7

TRPQ221515SM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)			
	±20 %	Typ.	Typ.	Max.	Typ.		
TRPQ221515SM150MBB	15	21.00	14.00	8.50	7.10	0.4	0.7
TRPQ221515SM220MBB	22	15.00	12.50	10.30	8.60	0.4	0.6
TRPQ221515SM330MBB	33	11.00	12.00	11.10	9.28	0.4	0.6
TRPQ221515SM470MBB	47	8.50	11.50	12.00	10.00	0.4	0.6

TRPQ221517SM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)			
	±20 %	Typ.	Typ.	Max.	Typ.		
TRPQ221517SM4R7MBB	4.7	42.00	22.50	3.20	2.80	0.8	1.3
TRPQ221517SM6R8MBB	6.8	30.00	22.00	3.50	3.10	0.8	1.3
TRPQ221517SM8R2MBB	8.2	25.00	22.00	3.50	3.10	0.8	1.3
TRPQ221517SM100MBB	10	24.00	17.50	5.20	4.50	0.7	1.2
TRPQ221517SM220MBB	22	11.00	17.50	5.20	4.50	0.7	1.2
TRPQ221517SM330MBB	33	10.00	12.00	12.40	10.00	0.4	0.9
TRPQ221517SM470MBB	47	7.50	12.00	12.40	10.00	0.4	0.9

TRPQ272423BM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)	c(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)				
	±20 %	Typ.	Typ.	Max.	Typ.			
TRPQ272423BM1R5MBB	1.5	100.30	71.20	0.43	0.36	2.5	10.8	3.5
TRPQ272423BM2R2MBB	2.2	84.30	58.50	0.64	0.53	2.0	11.0	3.0
TRPQ272423BM3R3MBB	3.3	74.00	43.20	1.15	0.96	1.6	12.6	2.6
TRPQ272423BM4R7MBB	4.7	59.30	37.00	1.61	1.34	1.3	11.8	2.3
TRPQ272423BM6R8MBB	6.8	46.80	36.20	2.11	1.76	1.1	11.5	2.1
TRPQ272423BM120MBB	12	37.30	25.20	3.48	2.90	0.9	11.7	1.9

TRPQ272427BM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)	c(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)				
	±20 %	Typ.	Typ.	Max.	Typ.			
TRPQ272427BM3R3MBB	3.3	67.00	51.00	0.90	0.75	2.0	15.5	3.0
TRPQ272427BM4R7MBB	4.7	59.50	40.00	1.48	1.23	1.6	16.2	2.6
TRPQ272427BM6R8MBB	6.8	50.30	33.00	2.20	1.84	1.3	15.8	2.3
TRPQ272427BM8R2MBB	8.2	45.00	30.00	2.62	2.18	1.2	15.8	2.2
TRPQ272427BM100MBB	10	41.80	28.00	2.99	2.49	1.1	16.2	2.1
TRPQ272427BM120MBB	12	37.50	26.00	3.56	2.97	1.0	16.2	2.0
TRPQ272427BM180MBB	18	29.50	23.00	4.66	3.88	0.9	15.8	1.9

TRPQ282016SM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance	
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)	
	±20 %	Typ.	Typ.	Max.	Typ.
TRPQ282016SM2R2MBB	2.2	100.00	32.00	1.65	1.45
TRPQ282016SM3R3MBB	3.3	68.00	32.00	1.65	1.45
TRPQ282016SM4R7MBB	4.7	50.00	32.00	1.65	1.45
TRPQ282016SM6R8MBB	6.8	36.00	32.00	1.65	1.45
TRPQ282016SM100MBB	10	23.00	32.00	1.65	1.45
TRPQ282016SM150MBB	15	15.00	32.00	1.65	1.45
TRPQ282016SM220MBB	22	9.60	32.00	1.65	1.45
TRPQ282016SM330MBB	33	5.90	32.00	1.65	1.45

TRPQ282019SM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance	
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)	
	±20 %	Typ.	Typ.	Max.	Typ.
TRPQ282019SM3R3MBB	3.3	94.00	30.00	2.58	2.15
TRPQ282019SM4R7MBB	4.7	65.00	30.00	2.58	2.15
TRPQ282019SM6R8MBB	6.8	48.00	30.00	2.58	2.15
TRPQ282019SM100MBB	10	33.00	30.00	2.58	2.15
TRPQ282019SM150MBB	15	24.00	30.00	2.58	2.15
TRPQ282019SM220MBB	22	15.00	30.00	2.58	2.15
TRPQ282019SM330MBB	33	10.50	30.00	2.58	2.15

TRPQ282219BM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	c(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)			
	±20 %	Typ.	Typ.	Max.	Typ.		
TRPQ282219BM4R7MBB	4.7	60.00	26.00	3.60	2.76	0.9	1.4
TRPQ282219BM5R6MBB	5.6	49.00	26.00	3.60	2.76	0.9	1.4
TRPQ282219BM6R8MBB	6.8	46.00	26.00	3.60	2.76	0.9	1.4
TRPQ282219BM100MBB	10	32.00	24.00	4.80	3.70	0.8	1.3
TRPQ282219BM150MBB	15	23.00	24.00	4.80	3.70	0.8	1.3
TRPQ282219BM220MBB	22	18.00	22.00	6.20	4.80	0.7	1.2
TRPQ282219BM330MBB	33	13.00	22.00	6.20	4.80	0.7	1.2
TRPQ282219BM470MBB	47	9.00	22.00	6.20	4.80	0.7	1.2

TRPQ291922BM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)			
	±20 %	Typ.	Typ.	Max.	Typ.		
TRPQ291922BM220MBB	22	16.00	24.05	5.39	4.90	1.5	1.8
TRPQ291922BM330MBB	33	12.50	20.05	7.59	6.90	1.3	1.6
TRPQ291922BM470MBB	47	11.00	17.50	9.68	8.80	1.3	1.6
TRPQ291922BM680MBB	68	8.50	16.00	11.33	10.30	1.3	1.6
TRPQ291922BM101MBB	100	9.00	10.50	25.19	22.90	1.0	1.3
TRPQ291922BM151MBB	150	6.70	9.00	33.66	30.60	0.9	1.2
TRPQ291922BM221MBB	220	5.20	8.15	40.10	36.45	0.9	1.2

TRPQ323023BM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)	c(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)				
	±20 %	Typ.	Typ.	Max.	Typ.			
TRPQ323023BM3R3MBB	3.3	89.20	49.50	1.06	0.88	1.5	11.2	2.5
TRPQ323023BM100MBB	10	44.50	34.20	2.08	1.73	1.0	11.3	2.0
TRPQ323023BM180MBB	18	34.60	24.30	4.15	3.46	0.7	12.2	1.7
TRPQ323023BM250MBB	25	29.00	20.70	5.52	4.60	0.6	11.4	1.6

TRPQ323031BM Series

Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)	c(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)				
	±20 %	Typ.	Typ.	Max.	Typ.			
TRPQ323031BM2R2MBB	2.2	110.00	84.00	0.47	0.39	2.7	18.0	3.9
TRPQ323031BM4R7MBB	4.7	75.00	55.00	1.06	0.88	1.8	18.8	2.8
TRPQ323031BM180MBB	18	37.00	33.00	3.52	2.93	1.0	19.6	2.0

TRPQ363436BM Series

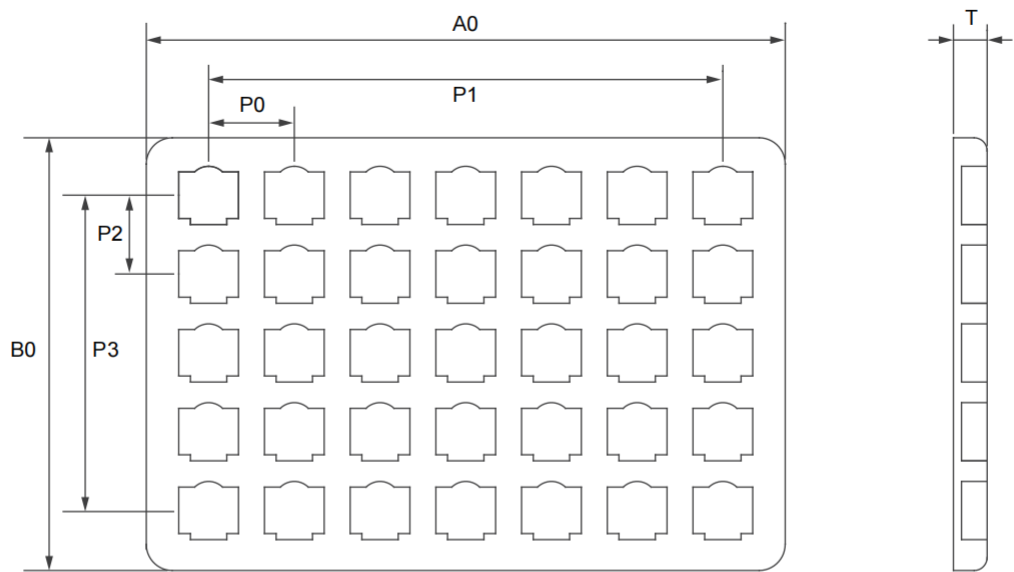
Part Number	Inductance	Saturation Current	Heat Rating Current	DC Resistance		a(mm)	b(mm)	c(mm)
	L (μH)	Isat(A)	Irms(A)	DCR(mΩ)				
	±20 %	Typ.	Typ.	Max.	Typ.			
TRPQ363436BM6R8MBB	6.8	71.00	54.00	1.60	1.36	1.5	22.7	2.5
TRPQ363436BM100MBB	10	55.50	54.00	1.60	1.36	1.5	22.7	2.5
TRPQ363436BM150MBB	15	44.00	43.00	2.30	1.85	1.3	22.5	2.3
TRPQ363436BM220MBB	22	38.00	41.00	3.60	3.00	1.0	23.0	2.0
TRPQ363436BM330MBB	33	32.00	30.00	7.00	5.80	0.7	23.6	1.7
TRPQ363436BM470MBB	47	25.70	30.00	7.00	5.80	0.7	23.6	1.7

Notes

- All data is tested based on 25 ambient temperature.
- Inductance measure condition at 100kHz, 0.1V.
- Saturation current: the actual value of DC current when the inductance decrease 20% of its initial value.
- Temperature rise current: the actual value of DC current when the temperature rise is ΔT_{40} ($T_a=25$).

Packaging Information

Bulk Dimensions



Dimensions

Series	A0	B0	P0	P1	P2	P3	T	Packaging Unit (Pcs)
TRPQ212018BM	245	195	29	203	33	132	21	40
TRPQ212022BM	245	195	29	203	33	132	21	40
TRPQ221512SM	245	195	29	203	33	132	24	40
TRPQ221515SM	245	195	35.5	177.5	33	132	22	30
TRPQ221517SM	245	195	44.3	177.5	33	132	26	25
TRPQ272423BM	245	195	44	176	40	120	26	20
TRPQ272427BM	245	195	43.5	174	41	123	30	20
TRPQ282016SM	245	195	44	176	40	120	23	20
TRPQ282019SM	245	195	44	176	40	120	23	20
TRPQ282219BM	245	195	43	172	40	120	23	20
TRPQ291922BM	245	195	44	176	34	102	28.5	20
TRPQ323023BM	245	195	51.5	155	58	112	56	12
TRPQ323031BM	245	195	51.5	155	56	112	36	12
TRPQ363436BM	245	195	71	142	80	80	39	6