



产品编码 P/N	PSSCAQ7048M-1285Mseries	测试设备 TEST INSTRUMENT	Keysight:E4991 Chroma:16502 3302
产品系列 Series	贴片耦合电感	测试频率 TEST FREQUENCY	100KHZ / 0.25V

客户名称

Customer

客户编码

Customer P/N

产品系列

Series

贴片耦合电感

SMD Coupled Inductor

产品编码

Supply P/N

PSSCAQ7048M-1285Mseries

发版号

Version

A3.0

承认日期

Endorsement Date

2026-10-12

备注

Note

谱罗德电子科技（深圳）有限公司

PuLuoDe Electronic Technology (Shenzhen) Co. LTD

制作
APPROVED

Ben

审查
CHECKED

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PREPARED

Peter

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This version is the public release version of the series. Some contents may be updated later due to product changes. PROD will not notify you of such updates. If you need a complete, accurate and definite version, please request an Product Approval Sheet from PROD



谱罗德电子科技（深圳）有限公司

PuLuoDe Electronic Technology (Shenzhen) Co., LTD

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A3.0

修订记录

REVISION RECORD

RoHS

compliant

REACH

compliant

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Version	REVISION ITEM	BEFORE REVISION	AFTER REVISION	DATE
A3.0	First Version			2026.10.12

谱罗德

PROD

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产品特点

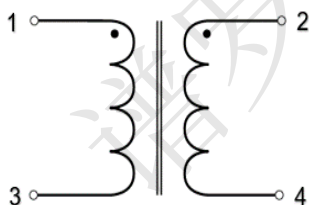
Features

- ☐ 效率高 高耦合
High efficiency, High coupling
- ☐ 较高的额定电流, 低直流阻抗
High rated current, low DCR
- ☐ 具有耦合电感与共模电感双重特性
It has dual characteristics of coupled inductance and common mode choke
- ☐ 可用于SEPIC, Zeta, Flyback等拓扑电路
can be applied to SEPIC, Zeta, flyback and other topological circuit

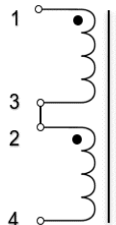


电路图示

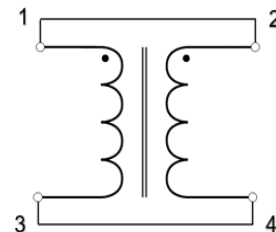
Schematics



共模/双电感
Common-mode choke or Duai Inductor



串联
Series



并联
Parallel

编码解释

Code interpretation

PSSCAQ	XXXX	XXX	M	P
类别码	尺寸系列	感值	公差	印字标识
Category code	Dimension	Inductance	Tolerance	Marking

- ◎ 规格参数基于环境温度25℃取得
All test Data is referenced to 25℃ ambient
- ◎ 电感工作环境温度：-40℃ ~ 125℃
Operating temperature range -40 °C to +125 °C
- ◎ 加载温升电流（Irms）会使电感温度上升大约 40℃ (电感初始温度+上升温度=电感最终温度)
Typical Irms would cause an approximately ΔT of 40℃
- ◎ 加载饱和电流（ISAT）会使感量下降大约30%
Typical ISAT would cause Lo to drop approximately 30%.
- ◎ 请从温升电流（IRMS）和饱和电流（ISAT）中选取一个最小值作为额定电流
Choose a minimum of IRMS and ISAT as the rated current
- ◎ 务必考虑最终的产品设计，元器件布局，线路板走线，以及使用环境过程中，电感最终温度不得超过125℃
The operating temperature of inductance do not exceed 125℃
- ◎ 使用电感时，请查阅最后一页注意事项
The announcements is on last page



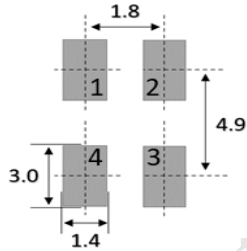
产品编码 P/N	PSSCAQ7048M-1285Mseries	测试设备 TEST INSTRUMENT	Chroma: 3302 16502 Keysight:E4991
产品系列 Series	贴片耦合电感	测试频率 TEST FREQUENCY	100KHZ / 0.25V

推荐的焊盘尺寸

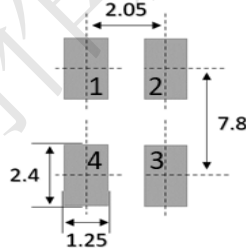
Recommended Layout

双电感/共模电感 Duai Inductor/Common mode choke

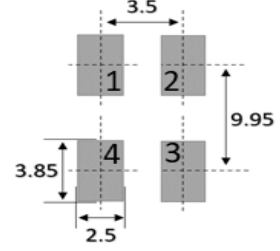
PSSCAQ7048



PSSCAQ1050

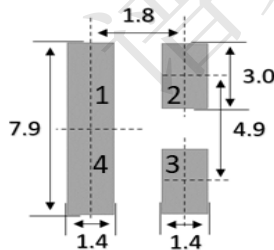


PSSCAQ1285

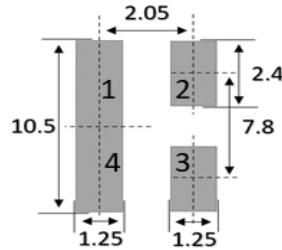


串联 Series

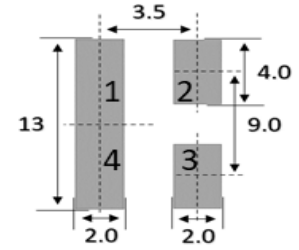
PSSCAQ7048



PSSCAQ1050

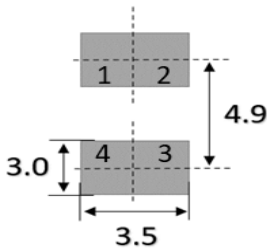


PSSCAQ1285

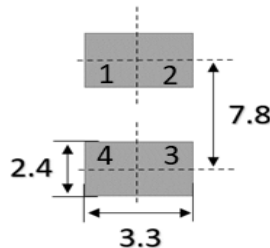


并联 Parallel

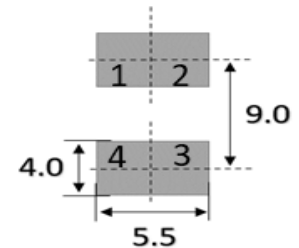
PSSCAQ7048



PSSCAQ1050



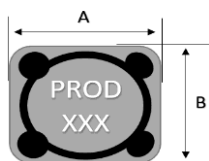
PSSCAQ1285



- © 电感值：标称电感值为单个绕组，电极并联时与之相同；当电极串联时电感值大约是标称值4倍
When leads are connected in parallel, inductance is same as the value. When leads are connected in series, inductance is four times of the value
- © DCR：标称DCR为测试单个绕组所得，电极并联时DCR大约为标称值的一半；串联时大约为标称值的2倍
DCR: The DCR values shown in the datasheet are for testing singel winding,When leads are connected in parallel, DCR is half of the value. When leads are connected in series, DCR is twice of the value.
- © 温升电流：标称温升电流为测试单个绕组所得，并联时电流值大约为标称值的1.5倍；串联时大约为标称值的一半
IRMS: The IRMS values shown in the datasheet are for testing singel winding,When leads are connected in parallel, IRMS is 1.5 times of the value, When leads are connected in series, IRMS is half of the value.
- © 饱和电流：标称饱和电流为测试单个绕组所得，并联时与之相同；串联时大约为标称值的一半
ISAT: The ISAT values shown in the datasheet are for testing singel winding,When leads are connected in parallel, ISAT is same as the value, When leads are connected in series, ISAT is half of the value.



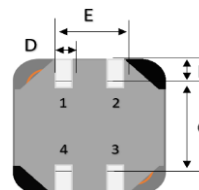
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产品系列 Series	贴片耦合电感	测试频率 TEST FREQUENCY	100KHZ / 0.25V

封装尺寸
Dimension (mm)

正视图/Front view



侧视图/Side view



底视图/Bottom view

系列 Series	封装尺寸 Dimension							最小包装 MPQ
	A	B	C	D	E	F	G	编带/卷盘
PSSCAQ7048	7.6 Max.	7.6 Max.	4.8 Max.	0.7 Typ.	2.7 Typ.	1.5 Typ.	4.5 Typ.	1000

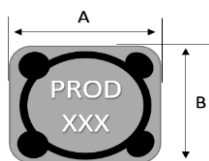
PSSCAQ7048 Series

@ 25 °C Ambient Temperture							
产品编码 P/N	感量	公差	耦合系数	DCR	温升电流 (IRMS)	饱和电流 (ISAT)	耐压
	Inductance	Tolerance	KTyp	Ω	mA	mA	Withstand voltage
	μ H	$\pm$	%	Max	$\Delta T \approx 40^{\circ}\text{C}$	drop $\approx 30\%$	Coil vs Coil DC 1mA 3s
PSSCAQ7048M-2R2M	2.2	20%	95.2%	0.042	4000	9300	600V
PSSCAQ7048M-3R3M	3.3	20%	97.2%	0.055	3400	7300	600V
PSSCAQ7048M-4R7M	4.7	20%	97.6%	0.075	2900	6500	600V
PSSCAQ7048M-5R6M	5.6	20%	97.6%	0.095	2100	5800	600V
PSSCAQ7048M-6R8M	6.8	20%	97.7%	0.1	2000	5500	600V
PSSCAQ7048M-100M	10	20%	97.8%	0.15	1900	4300	600V
PSSCAQ7048M-150M	15	20%	97.8%	0.17	1800	3800	600V
PSSCAQ7048M-220M	22	20%	97.0%	0.25	1500	3000	600V
PSSCAQ7048M-330M	33	20%	97.2%	0.36	1200	2400	600V
PSSCAQ7048M-470M	47	20%	97.3%	0.45	1100	2000	600V
PSSCAQ7048M-680M	68	20%	97.6%	0.7	700	1800	600V
PSSCAQ7048M-101M	100	20%	97.8%	1.2	600	1300	600V
PSSCAQ7048M-151M	150	20%	97.7%	1.8	550	1100	600V
PSSCAQ7048M-221M	220	20%	97.0%	2.3	490	930	600V
PSSCAQ7048M-331M	330	20%	97.3%	3.3	400	780	600V
PSSCAQ7048M-471M	470	20%	97.6%	4.5	350	660	600V
PSSCAQ7048M-681M	680	20%	97.9%	6.8	270	550	600V
PSSCAQ7048M-102M	1000	20%	97.6%	12	250	450	600V



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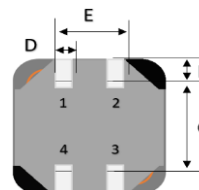
封装尺寸
Dimension (mm)



正视图/Front view



侧视图/Side view



底视图/Bottom view

系列 Series	封装尺寸 Dimension							最小包装 MPQ
	A	B	C	D	E	F	G	编带/卷盘
PSSCAQ1285	12.5 Max.	12.5 Max.	8.5 Max.	1.7 Typ.	5.0 Typ.	2.5 Typ.	7.3 Typ.	500

PSSCAQ1285 Series

@ 25 °C Ambient Temperture							
产品编码 P/N	感量	公差	耦合系数	DCR	温升电流 (IRMS)	饱和电流 (ISAT)	耐压
	Inductance	Tolerance	KTyp	Ω	mA	mA	Withstand voltage
	μH	$\pm$	%	Max	$\Delta T \approx 40^\circ\text{C}$	drop $\approx 30\%$	Coil vs Coil DC 1mA 3s
PSSCAQ1285M-R22NP	0.22	20%	90.0%	0.005	20	50	600V
PSSCAQ1285M-1R0NP	1.00	20%	92.0%	0.01	16	37	600V
PSSCAQ1285M-4R7MP	4.70	20%	97.6%	0.026	5	18	600V
PSSCAQ1285M-6R8MP	6.80	20%	98.8%	0.04	4.3	15	600V
PSSCAQ1285M-100MP	10.00	20%	98.8%	0.045	4	13	600V
PSSCAQ1285M-150MP	15.00	20%	99.0%	0.07	3.4	11	600V
PSSCAQ1285M-220MP	22.00	20%	99.1%	0.08	2.8	9.5	600V
PSSCAQ1285M-270MP	27.00	20%	99.0%	0.1	2.5	8.2	600V
PSSCAQ1285M-330MP	33.00	20%	98.9%	0.11	2.4	8	600V
PSSCAQ1285M-470MP	47.00	20%	99.6%	0.16	2	6.5	600V
PSSCAQ1285M-680MP	68.00	20%	99.4%	0.21	1.7	5.5	600V
PSSCAQ1285M-101MP	100.00	20%	99.3%	0.35	1.3	4	600V
PSSCAQ1285M-151MP	150.00	20%	99.0%	0.42	1	3.2	600V
PSSCAQ1285M-221MP	220.00	20%	99.0%	0.7	0.8	2.7	600V
PSSCAQ1285M-331MP	330.00	20%	99.0%	1.1	0.75	2.3	600V
PSSCAQ1285M-471MP	470.00	20%	99.0%	1.8	0.65	2.1	600V
PSSCAQ1285M-681MP	680.00	20%	99.0%	2.9	0.55	2	600V
PSSCAQ1285M-102MP	1000.00	20%	95.0%	3.2	0.45	1.5	600V



特性曲线

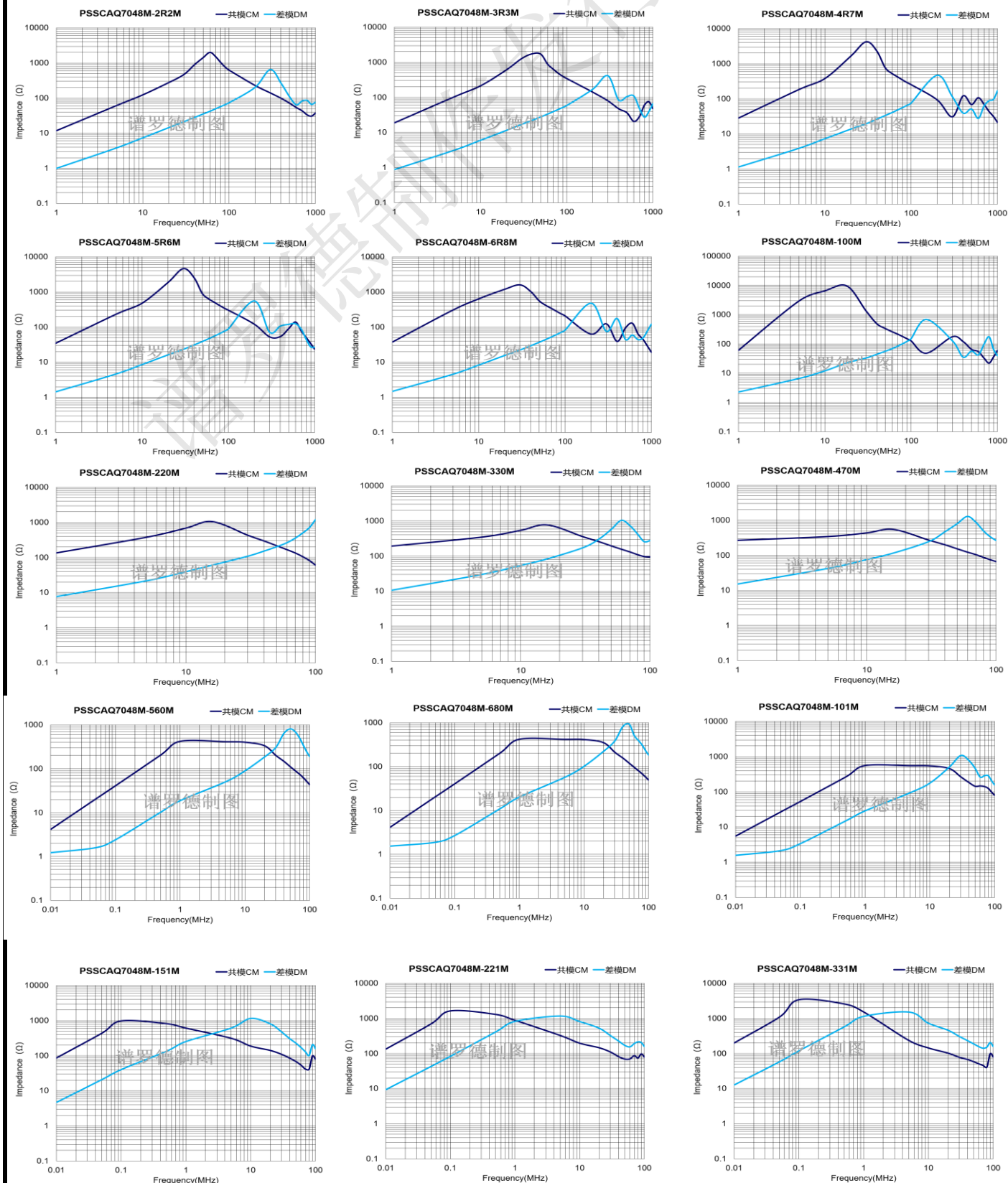
Performance Curves



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特性曲线

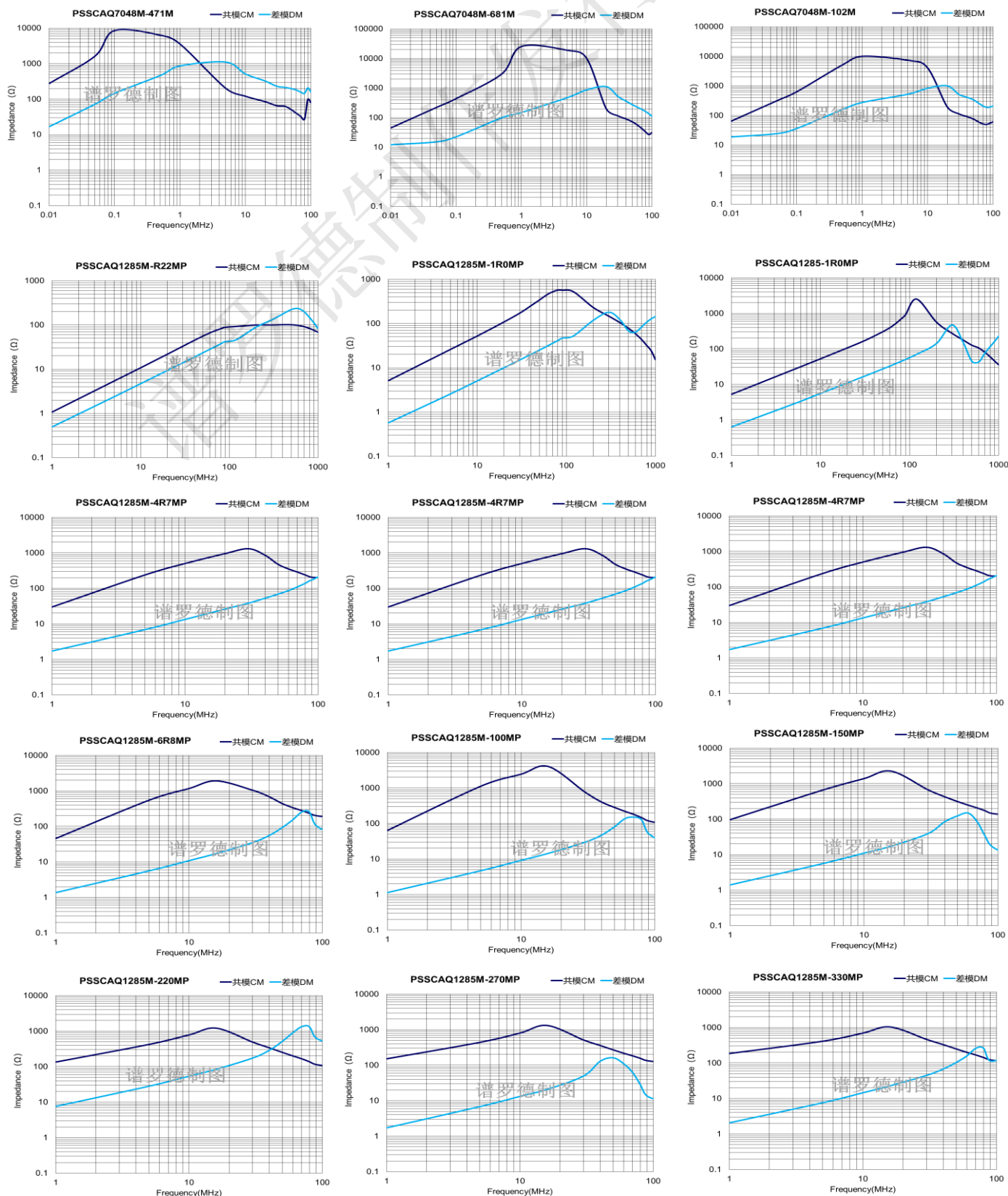
Performance Curves



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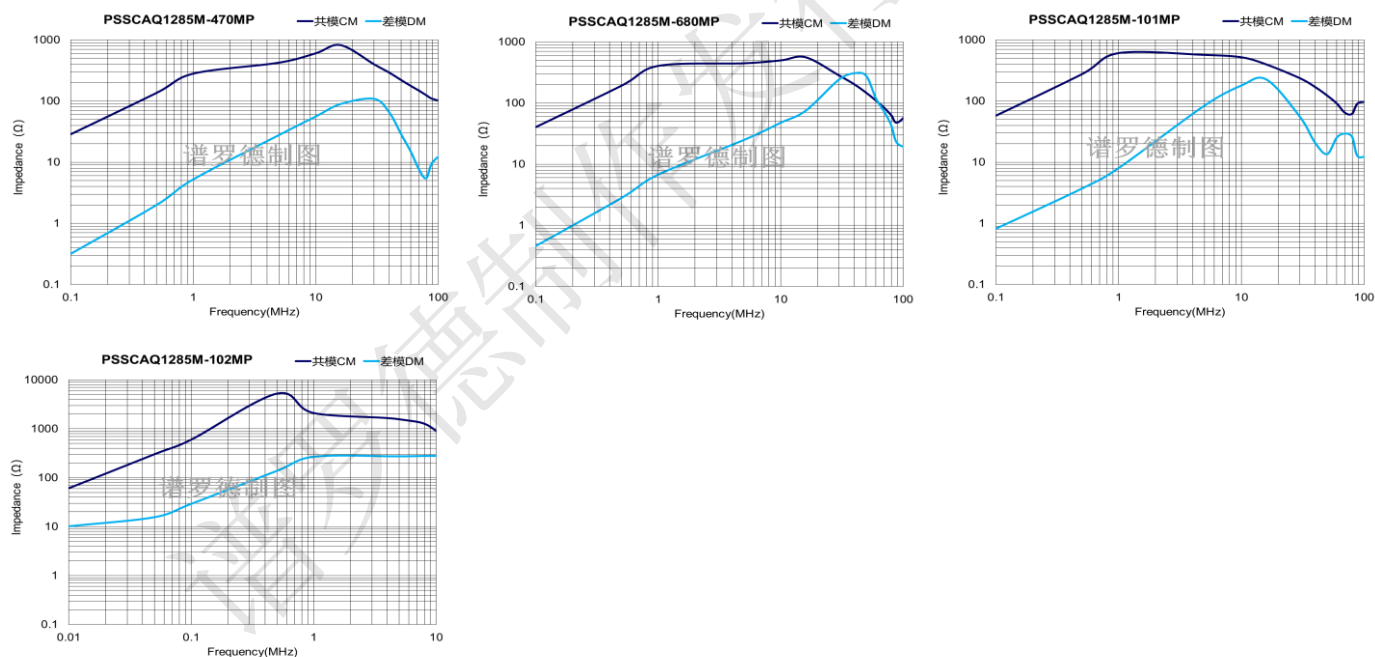
Performance Curves



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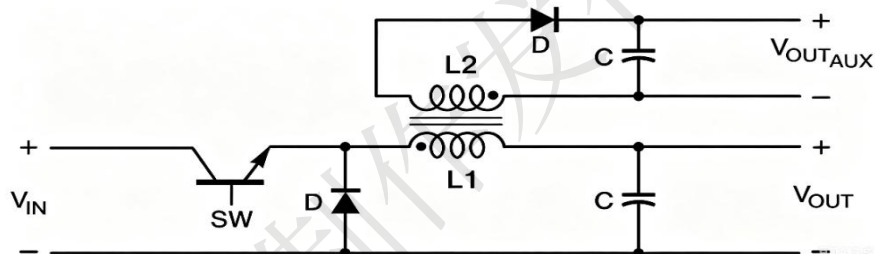
特性曲线

Performance Curves

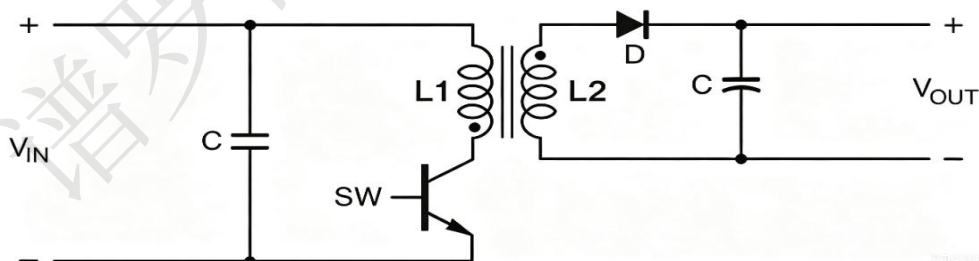


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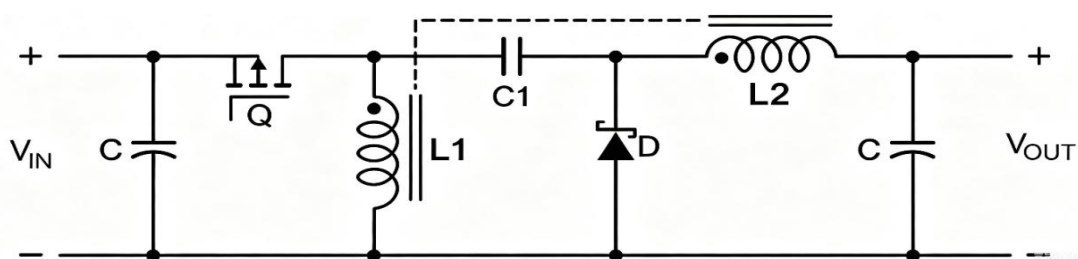
*典型的带辅助输出的降压转换器/Buck Converter with Auxiliary Output



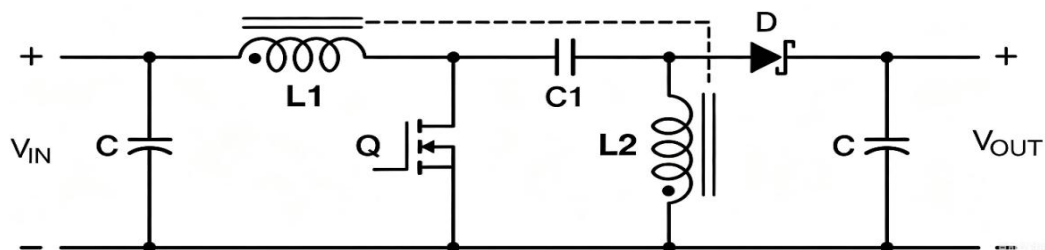
*典型反激式变换器/Flyback Converter



*典型的Zeta电路/Zeta Converter



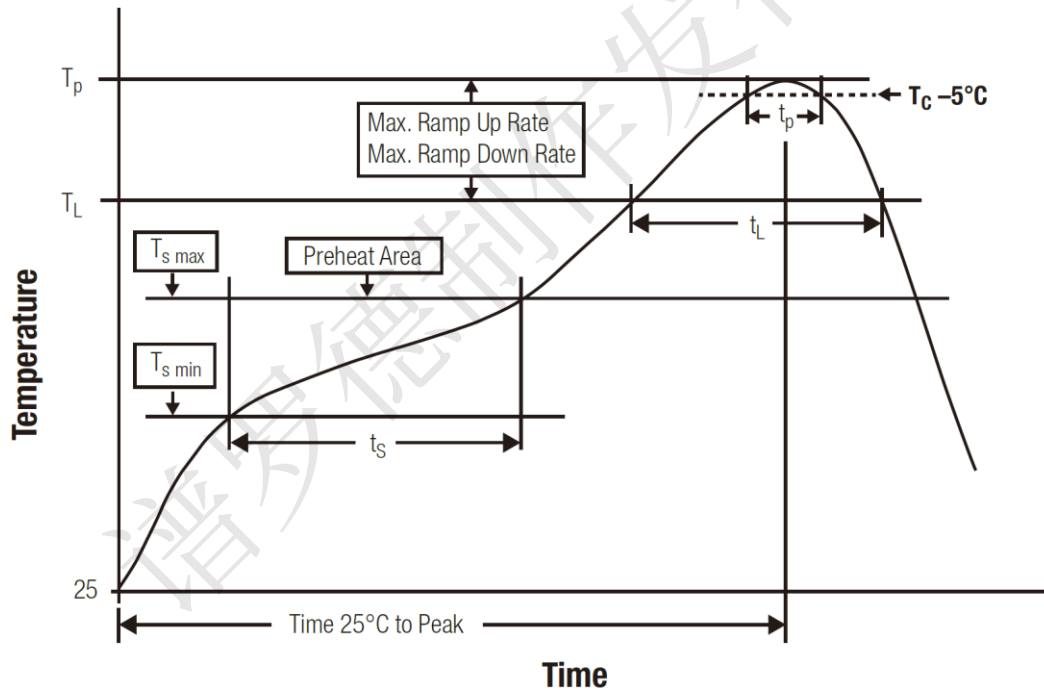
*典型的SEPIC电路/SEPIC Converter



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焊接温度（推荐）

Recommended Classification Wave Soldering Profile



Classification Reflow Soldering Profile:

Profile Feature	Item	Value
Preheat Temperature Min	Ts min	150 °C
Preheat Temperature Max	Ts max	200 °C
Preheat Time t_s from $T_{s\ min}$ to $T_{s\ max}$	ts	60 - 120 seconds
Ramp-up Rate (T_L to T_P)		3 °C/ second max.
Liquidous Temperature	TL	217 °C
Time t_L maintained above T_L	tL	60 - 150 seconds
Peak package body temperature	Tp	$T_p \leq T_c$, see Table below
Time within 5°C of actual peaktemperature	t p	20 - 30 seconds
Ramp-down Rate (T_P to T_L)		6 °C/ second max.
Time 25°C to peak temperature		8 minutes max.

Package Classification Reflow Temperature (T_c):

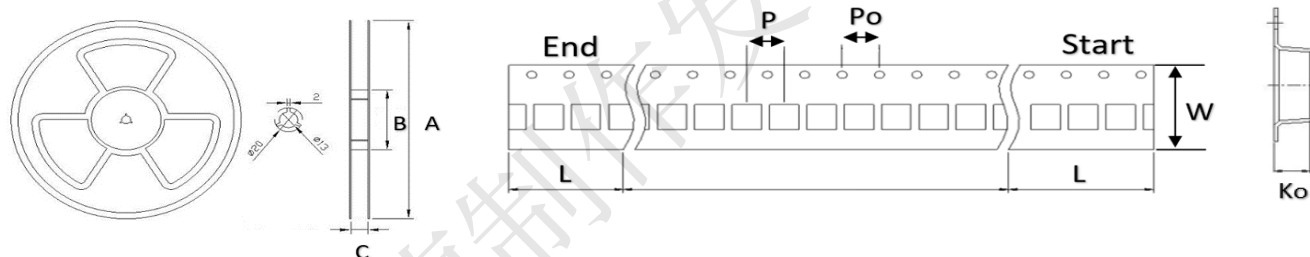
Properties	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly Package Thickness < 1.6 mm	260°C	260°C	260°C
PB-Free Assembly Package Thickness 1.6 mm - 2.5 mm	260°C	250°C	245°C
PB-Free Assembly Package Thickness > 2.5 mm	250°C	245°C	245°C

* 参考标准: IPC/ JEDEC J-STD-020E refer standard to: IPC/ JEDEC J-STD-020E

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载带卷盘尺寸 : (mm)

Packing Dimension



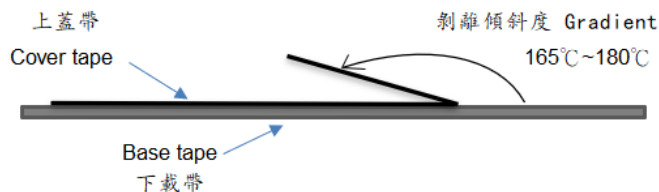
系列 Series	A	B	C	W	P	Po	Ko	L
PSPHAQ7048	330	100	17	16	12	4	5.0	前后预留大约 30空格
PSPHAQ1050	330	100	25	24	16	4	5.2	
PSPHAQ1265	330	100	25	24	16	4	6.7	
PSPHAQ1285	330	100	25	24	16	4	8.7	

载带剥离力:

Typical Pulling Force

对上盖带施加力: 20g~120g内即可与下载带剥离

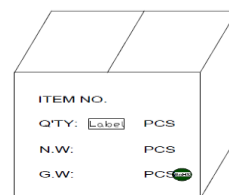
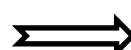
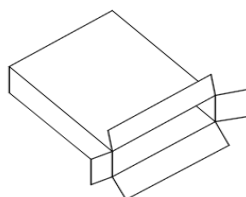
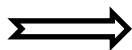
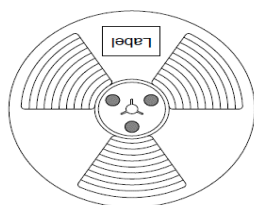
Tape Peeling off force: 20g~120g



卷盘
MPQ

内盒
Middle box

外箱
Outer box



系列 Series	卷盘 MPQ	内盒 Middle box	外箱 Outer box
PSPHAQ7048	1000pcs	3000pcs	9000pcs
PSPHAQ1050	1000pcs	3000pcs	9000pcs
PSPHAQ1265	500pcs	1000pcs	3000pcs
PSPHAQ1285	500pcs	1000pcs	3000pcs



注意事项

使用本产品时，请注意以下事项

- ◎ 产品保存期限为12个月，保存条件：温度5~40℃，湿度10~75%RH以内，超过保存期限可能会使元器件电极发生氧化，存储标准可参照：IEC_61760-2-2021
This components storage life is 12 months, Storage Temperature: TEMP.5~40℃; RH10%~75%. Please use this components within the warranty period. refer standard to: IEC_61760-2-2021
- ◎ 请勿在极端环境下使用和保存（高盐，强酸，强碱，强辐射等）。
Do not use this component in special environments, such as high salt content, strong acid, strong alkali, strong corrosion and other special environments.
- ◎ 焊接前请先预热,预热与焊接温度之间温差建议控制在150℃以内;焊接标准参考：IPC/ JEDEC J-STD-020E
Please preheat the product before welding; it is recommended to control the preheating temperature and welding temperature within 150℃. refer standard to: IPC/ JEDEC J-STD-020E
- ◎ 元器件焊接后需重新拆卸焊接修正时，请遵循规格书规定的条件范围；过高的加热温度以及反复的拆卸可能会导致元器件失效。
When repairing this component, the temperature used for disassembly should not exceed the datasheet limit and do not disassemble it frequently to prevent damage to the component.
- ◎ 请勿用清洗剂、丙酮等腐蚀性液体接触该元器件，这可能会侵蚀元器件本体以至于失效。
Do not use acetone or other corrosive liquids to contact this component or it will cause it to fail.
- ◎ 元器件焊接到线路板后，请注意不可因线路板整体变形或局部变形而施加给电感剩余应力，这可能会导致元器件脱落、破损失效。
When this component is soldered to the circuit board, you need to pay attention to the stress applied to it by the PCB, which may cause it to fall off or damaged fail.
- ◎ 元器件通电后温度会随电流的增大而上升，设计时请务必考虑留有余量。
Self heating (Rated Current or Irms) occurs when the power is turned ON, so the tolerance should be sufficient for the set thermal design.
- ◎ 过高的静电会损坏该元器件，请注意静电防护。
Too high static electricity will cause permanent damage to the product, please pay attention to electrostatic protection.
- ◎ 本元器件作为磁性产品，设计时请务必考虑周边元器件与本产品可能产生的耦合效应影响。
This magnetic component needs to be considered for coupling effects in the application.
- ◎ 谱罗德并不能完全掌握或熟悉客户的特定应用以及要求，贵司有责任和义务验证此元器件以及元器件规格书中的描述是否满足于贵司的设计要求；需要指出是：即使按照现有的技术标准操作，该元器件依然有几率在典型寿命结束前发生故障，谱罗德强烈建议贵司对于该元器件在一些典型的严苛应用中，例如安规产品，工业产品、医疗产品、车载产品、航空/航天等产品应用，对于该元器件可能存在的失效情况做适当的冗余设计，以此避免该元器件在失效时造成严重后果；特别提醒：对于特定的应用对象谱罗德强烈要求贵司同谱罗德取得书面的许可，否则谱罗德不予承担元器件失效带来的任何责任，特定对象包括且不限于：车用，航空航天，安规产品，军用以及贵司对元器件有严苛要求的产品。
PROD cannot fully understand and be familiar with customers' specific applications and requirements. Your company has the responsibility and obligation to verify whether the components and the description in the component specification meet your design requirements. Special reminder: Even if operated in accordance with existing technical standards, this component still has a chance of failure before the end of its typical life. PROD strongly recommends that your company make appropriate redundant designs for possible failure situations of this component in some typical harsh applications, such as safety products, industrial products, medical products, automotive products, aviation/aerospace products, etc., so as to avoid serious consequences when the component fails.
PROD Requirements: For specific application item, PROD strongly requires your (or company) to obtain written permission from PROD, otherwise PROD will not bear any responsibility for component failure. Specific item list include but are not limited to: automotive, aerospace, safety products, military and products that your company has strict requirements on components.



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