

A wide-angle, nighttime photograph of the Hong Kong skyline, featuring numerous illuminated skyscrapers and buildings reflected in the water. The image is used as a background for the top portion of the slide.

江苏海矽美电子科技有限公司

TO-263M

超薄封装产品介绍



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特点

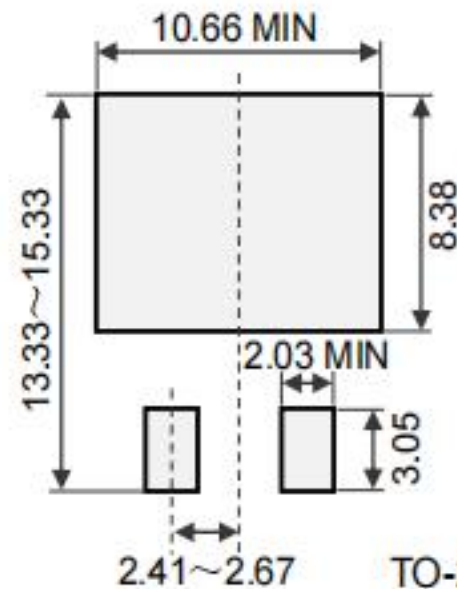
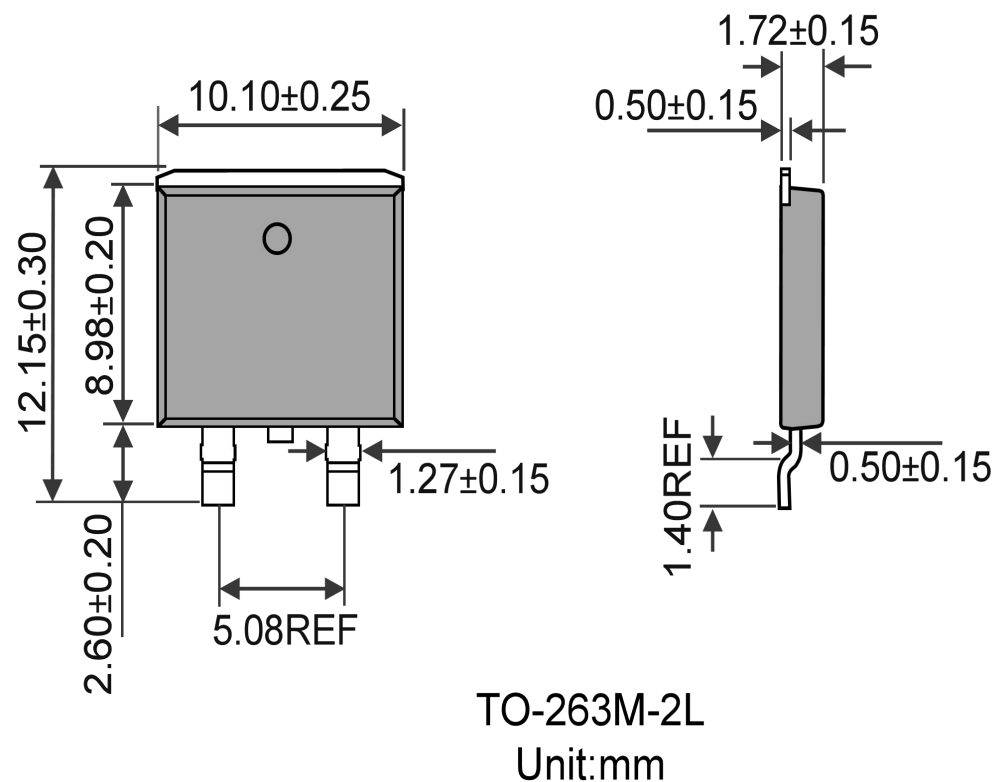
薄型表面贴片封装 TO-263M

- 低高度（1.7mm典型值）
- 高散热化
- 可同TO-263-2L封装实行引脚兼容
- 提升效率
- 可提供工规产品
- 对比TO-277、DFN封装，可以最大限度提高额定功率，实现小型化和节省空间的设计。



产品尺寸

• TO-263M封装尺寸

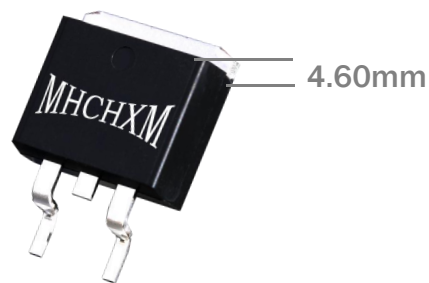


TO-263M-2L
Unnoted Tolerance: ± 0.05
Unit:mm

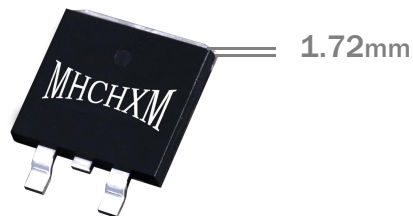
- 低厚度：与传统TO-263相比，厚度减少了约60%
- 兼容性：TO-263M与TO-263外形设计相似，具备兼容性
- 高散热化：TO-263M芯片与外部端子通过铝带连接，扩大散热面积，实现高散热效果

产品尺寸优势对比

传统型封装
新型封装
对比



▲传统型
TO-263-2L



▲新型
TO-263M-2L

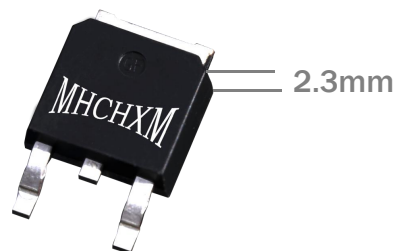


厚度减少60%

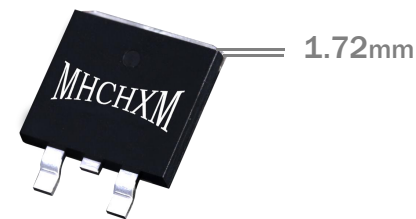
TO-263AB、
TO252、
TO263M
厚度对比



▲ TO-263-2L



▲ TO-252-2L



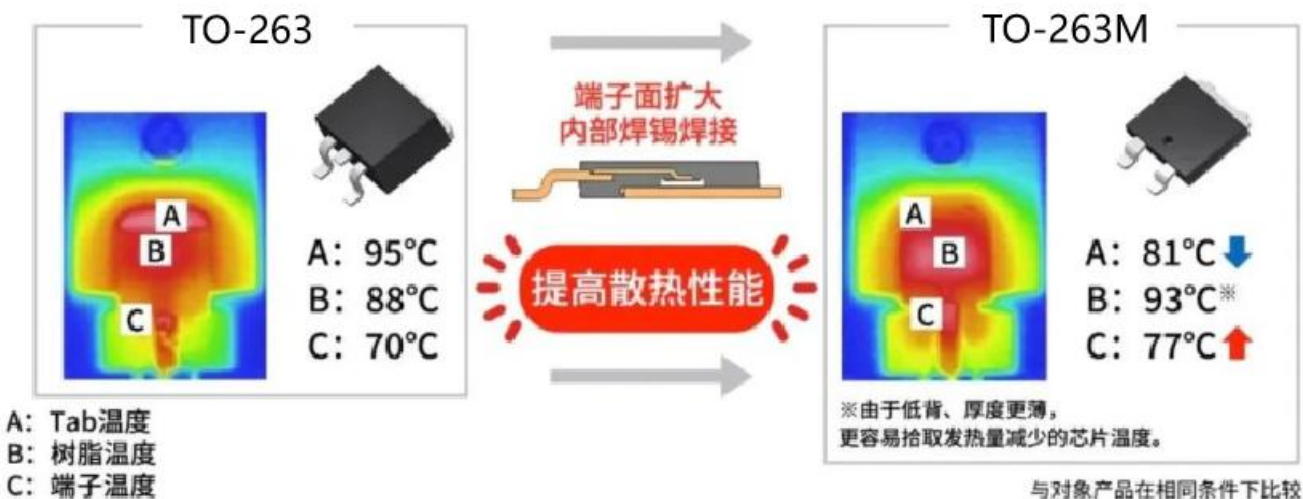
▲ TO-263M-2L

TO-263M通过降低厚度，与TO-263相比厚度减少约60%，与TO-252相比，塑封体尺寸更大，提高散热效果。

发热对比

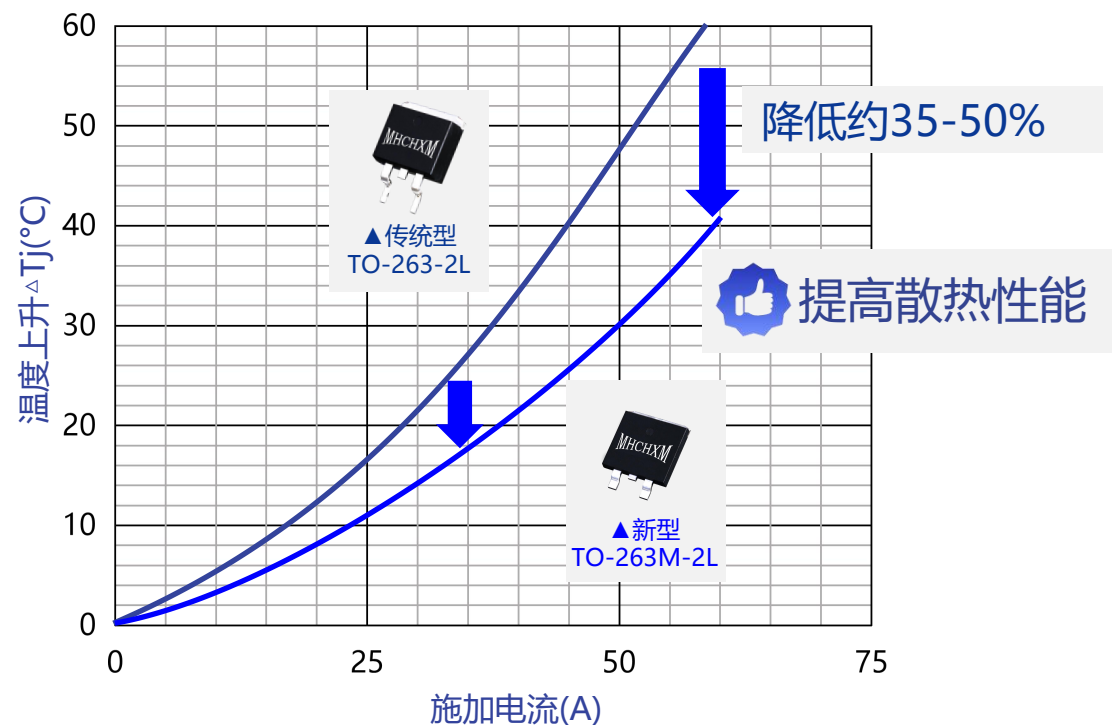
对于10A/45V SKY

通过扩大端子面，进行内部铝带焊接，提高散热性



对于40A/45V SKY

与TO-263相比，TO-263M的温升降低约35-50%，改善了散热性。



TO-263M温升比TO-263降低约35~50%，改善了散热性。

产品系列

TO-263M

- 1.肖特基二极管
- 2.低正向肖特基二极管
- 3.快恢复二极管
- 4.超快恢复二极管
- 5.整流二极管
- 6.SIC二极管
- 7.SGT MOS

● 肖特基二极管

Part Number	Package	Max.Reverse Voltage	Max.Aver.Rect.Cu rrent	Peak Fwd.Surge Current	Max.Fwd.Voltage @25°C&Rated Io		Maximum Reverse Current @25°C&Rated VRM	Operating
		VRRM (V)	IF (A)	IFSM (A)	Rated IF (A)	VF (V)	IR (uA)	TJ (°C)
MBR2045M	TO-263M-2L	45	20	220×2	10	0.6	100	125
MBR3045M	TO-263M-2L	45	30	380×2	15	0.65	100	150
MBR4045M	TO-263M-2L	45	40	380×2	20	0.62	100	150
MBR6045M	TO-263M-2L	45	60	400×2	30	0.61	80	150
MBR2060M	TO-263M-2L	60	20	210×2	10	0.75	50	150
MBR3060M	TO-263M-2L	60	30	320×2	15	0.75	50	150
MBR4060M	TO-263M-2L	60	40	360×2	20	0.75	200	150
MBR6060M	TO-263M-2L	60	60	380×2	30	0.75	50	150
MBR20100M	TO-263M-2L	100	20	200×2	10	0.85	10	150
MBR30100M	TO-263M-2L	100	30	345×2	15	0.85	10	150
MBR40100M	TO-263M-2L	100	40	360×2	20	0.85	10	150
MBR40H100M	TO-263M-2L	100	40	450×2	20	0.83	10	175
MBR60100M	TO-263M-2L	100	60	400×2	30	0.85	20	150
MBR10150M	TO-263M-2L	150	10	150×2	5	0.88	10	150
MBR20150M	TO-263M-2L	150	20	200×2	10	0.9	10	150
MBR20H150M	TO-263M-2L	150	20	190×2	10	0.9	10	175
MBR30150M	TO-263M-2L	150	30	340×2	15	0.9	10	150
MBR30H150M	TO-263M-2L	150	30	340×2	15	0.88	10	175
MBR40150M	TO-263M-2L	150	40	350×2	20	0.9	10	150
MBR60150M	TO-263M-2L	150	60	450×2	30	0.88	10	150
MBR10200M	TO-263M-2L	200	10	140×2	5	0.9	10	150
MBR10H200M	TO-263M-2L	200	10	150×2	5	0.85	10	175

● 肖特基二极管

Part Number	Package	Max.Reverse Voltage	Max.Aver.Rect.Cu rrent	Peak Fwd.Surge Current	Max.Fwd.Voltage @25°C&Rated Io		Maximum Reverse Current @25°C&Rated VRM	Operating
		VRRM (V)	IF (A)	IFSM (A)	Rated IF (A)	VF (V)	IR (uA)	TJ (°C)
MBR20H200M	TO-263M-2L	200	20	160×2	10	0.9	10	175
MBR30200M	TO-263M-2L	200	30	320×2	15	0.9	10	150
MBR30H200M	TO-263M-2L	200	30	300×2	15	0.9	10	175
MBR40200M	TO-263M-2L	200	40	390×2	20	0.9	10	150
MBR40H200M	TO-263M-2L	200	40	360×2	20	0.9	10	175
MBR60200M	TO-263M-2L	200	60	450×2	30	0.9	20	150
MBR20H250M	TO-263M-2L	250	20	210×2	10	0.9	10	175
MBR30H250M	TO-263M-2L	250	30	210×2	15	0.93	10	175
MBR40H250AM	TO-263M-2L	250	40	350	40	0.95	10	175
MBR60H250M	TO-263M-2L	250	60	400×2	30	0.95	10	175
MBR20H300M	TO-263M-2L	300	20	180×2	10	1.1	10	175
MBR30H300M	TO-263M-2L	300	30	160×2	15	1	10	175
MBR60H300M	TO-263M-2L	300	60	360×2	30	0.95	10	175

● 低正向肖特基二极管

Part Number	Package	Max.Reverse Voltage	Max.Aver.Rect.Curr ent	Peak Fwd.Surge Current	Max.Fwd.Voltage @25°C&Rated Io		Maximum Reverse Current @25°C&Rated VRM	Operating
		VRRM (V)	IF (A)	IFSM (A)	Rated IF (A)	VF (V)	IR (uA)	TJ (°C)
EBR10L45M	TO-263M-2L	45	10	80×2	5	0.46	100	125
EBR20L45M	TO-263M-2L	45	20	160×2	10	0.55	100	150
EBR30L45M	TO-263M-2L	45	30	250×2	15	0.52	130	150
EBR40L45M	TO-263M-2L	45	40	220×2	20	0.55	200	150
EBR20L60M	TO-263M-2L	60	20	160×2	10	0.6	100	150
EBR30L60M	TO-263M-2L	60	30	260×2	15	0.63	200	150
EBR40L60M	TO-263M-2L	60	40	220×2	20	0.6	200	150
EBR20L80M	TO-263M-2L	80	20	180×2	10	0.65	100	150
EBR30L80M	TO-263M-2L	80	30	180×2	15	0.7	100	150
EBR40L80M	TO-263M-2L	80	40	300×2	20	0.7	50	150
EBR60L80M	TO-263M-2L	80	60	270×2	30	0.74	100	150
EBR10L100M	TO-263M-2L	100	10	140×2	5	0.73	50	150
EBR20L100M	TO-263M-2L	100	20	160×2	10	0.75	20	150
EBR30L100M	TO-263M-2L	100	30	250×2	15	0.75	25	150
EBR40L100M	TO-263M-2L	100	40	270×2	20	0.82	30	150
EBR60L100M	TO-263M-2L	100	60	280×2	30	0.83	30	150

● 低正向肖特基二极管

Part Number	Package	Max.Reverse Voltage	Max.Aver.Rect.C urrent	Peak Fwd.Surge Current	Max.Fwd.Voltage @25°C&Rated Io		Maximum Reverse Current @25°C&Rated VRM	Operating
		VRRM (V)	IF (A)	IFSM (A)	Rated IF (A)	VF (V)	IR (uA)	TJ (°C)
EBR60U100M	TO-263M-2L	100	60	300×2	30	0.77	80	150
EBR20L120M	TO-263M-2L	120	20	180×2	10	0.81	30	150
EBR30L120M	TO-263M-2L	120	30	250×2	15	0.9	20	150
EBR40L120M	TO-263M-2L	120	40	250×2	20	0.96	100	150
EBR60L120M	TO-263M-2L	120	60	240×2	30	0.96	50	150
EBR20L150M	TO-263M-2L	150	20	130×2	10	0.91	10	175
EBR20LH150M	TO-263M-2L	150	20	130×2	10	0.91	10	175
EBR30L150M	TO-263M-2L	150	30	220×2	15	1.05	10	150
EBR30LH150M	TO-263M-2L	150	30	300×2	15	0.9	10	175
EBR40L150M	TO-263M-2L	150	40	300×2	20	1.45	30	150
EBR60L150M	TO-263M-2L	150	60	300×2	30	1.4	20	150
EBR20LH200M	TO-263M-2L	200	20	130×2	10	1.03	10	175
EBR30L200M	TO-263M-2L	200	30	280×2	15	0.9	100	150
EBR30LH200M	TO-263M-2L	200	30	300×2	15	0.93	10	175
EBR40L200M	TO-263M-2L	200	40	350×2	20	0.92	10	150
EBR20LH300M	TO-263M-2L	300	20	100×2	10	1.1	10	175
EBR20L300M	TO-263M-2L	300	20	160×2	10	0.95	10	175
EBR30LH300M	TO-263M-2L	300	30	110×2	15	1.1	10	175

Part Number	Package	Max.Reverse Voltage	Max.Aver.Re ct.Current	Peak Fwd.Surge Current	Max.Fwd.Voltage @25°C&Rated I _o		Maximum Reverse Current@25°C& Rated VRM	Maximum	Typical Thermal	Operating
		VRRM(V)	IF(A)	IFSM(A)	Rated IF(A)	VF(V)	IR(uA)	Trr (ns)	(°C/W)	TJ(°C)
SF1002M	TO-263M-2L	200	10	80×2	5	0.95	10	25	2	175
SF1602M	TO-263M-2L	200	16	80×2	8	0.975	10	25	2	175
SFT2002M	TO-263M-2L	200	20	160×2	10	1.15	10	35	2	175
SF4002M	TO-263M-2L	200	40	200×2	20	1.05	10	30	2	175
SF1003M	TO-263M-2L	300	10	130×2	5	1.15	10	35	2	175
SF1603M	TO-263M-2L	300	16	130×2	8	1.3	10	35	2	175
SFD2003M	TO-263M-2L	300	20	150×2	10	1.3	10	30	2	175
SF3003M	TO-263M-2L	300	30	290×2	15	1.3	10	50	2	175
SF4003M	TO-263M-2L	300	40	310×2	20	1.3	10	50	2	175
SF1604M	TO-263M-2L	400	16	80×2	8	1.3	10	30	2	175
SF2004M	TO-263M-2L	400	20	100×2	10	1.3	10	30	2	175
SFD2004M	TO-263M-2L	400	20	160×2	10	1.4	10	35	2	175
SF3004M	TO-263M-2L	400	30	200×2	15	1.5	10	35	2	175
SFD3004M	TO-263M-2L	400	30	215×2	15	1.5	10	35	2	175
SF4004M	TO-263M-2L	400	40	150×2	20	1.6	10	35	2	175
SF1006M	TO-263M-2L	600	10	50×2	5	1.6	10	35	2	175
SF2006M	TO-263M-2L	600	20	80×2	10	1.6	10	35	2	175

产品目录

● 快恢复二极管

Part Number	Package	Max.Reverse Voltage	Max.Aver.R ect.Current	Peak Fwd.Surge Current	Max.Fwd.Voltage @25°C&Rated Io		Maximum Reverse Current@25 °C&Rated VRM	Maximum	Typical Thermal	Operating
		VRRM(V)	IF(A)	IFSM(A)	Rated IF(A)	VF(V)	IR(uA)	Trr (ns)	(°C/W)	TJ(°C)
SFD2006M	TO-263M-2L	600	20	100×2	10	1.65	10	35	2	175
SF3006M	TO-263M-2L	600	30	180×2	15	1.7	10	35	2	175
SFD3006M	TO-263M-2L	600	30	150×2	15	1.55	10	40	2	175
SF812AM	TO-263M-2L	1200	8	100	8	2.35	10	55	2	175
SF1012AM	TO-263M-2L	1200	10	100	10	2.4	10	55	2	175
SF1512AM	TO-263M-2L	1200	15	100	15	2.7	10	55	2	175
SF2012M	TO-263M-2L	1200	20	100×2	10	2.4	10	55	2	175
SF3012M	TO-263M-2L	1200	30	200×2	15	2.4	10	60	2	175

● 超快恢复二极管

Part Number	Package	Max.Reverse Voltage	Max.Aver.Re ct.Current	Peak Fwd.Surge Current	Max.Fwd.Voltage @25°C&Rated Io		Maximum Reverse Current@25°C &Rated VRM	Maximum	Operatin g
		VRRM(V)	IF(A)	IFSM(A)	Rated IF(A)	VF(V)	IR(uA)	Trr (ns)	TJ(°C)
SFT20H02M	TO-263M-2L	200	20	120×2	10	1.35	10	25	175
SFT30H02M	TO-263M-2L	200	30	270×2	15	1.16	10	25	175
SF40H02M	TO-263M-2L	200	40	300×2	20	1.15	10	30	175
SF20H03M	TO-263M-2L	300	20	60×2	10	2.2	10	25	175
SFD20H03M	TO-263M-2L	300	20	150×2	10	2	10	25	175
SF20H06M	TO-263M-2L	600	20	80×2	10	2.8	10	25	175
SFD20H06M	TO-263M-2L	600	20	110×2	10	2.3	10	25	175
SF30H06M	TO-263M-2L	600	30	150×2	15	2.3	10	30	175
SF30H06AM	TO-263M-2L	600	30	300	30	2.3	10	40	175

● 整流二极管

Part Number	Package	Max.Reverse Voltage	Max.Aver.Rec t.Current	Peak Fwd.Surge Current	Max.Fwd.Voltage @25°C&Rated I _o		Maximum Reverse Current@25°C& Rated VRM	Maximum	Typical Thermal	Operating
		VRRM(V)	IF(A)	IFSM(A)	Rated IF(A)	VF(V)	IR(uA)	Trr (ns)	(°C/W)	TJ(°C)
MPD1006NM	TO-263M-2L	600	10	280	10	1.05	10	/	2	175
MPD1006DM	TO-263M-2L	600	10	280	10	1.05	10	/	2	175
MP1506AM	TO-263M-2L	600	15	280	15	1.08	10	/	2	175
MP2006AM	TO-263M-2L	600	20	280	20	1.1	10	/	2	175
MP20L06AM	TO-263M-2L	600	20	300	20	1.1	10	/	2	175
MP2506AM	TO-263M-2L	600	25	300	25	1.15	10	/	2	175
MP6006M	TO-263M-2L	600	60	300×2	30	1.2	10	/	2	175
MP3012AM	TO-263M-2L	1200	30	300	30	1.1	10	/	2	175

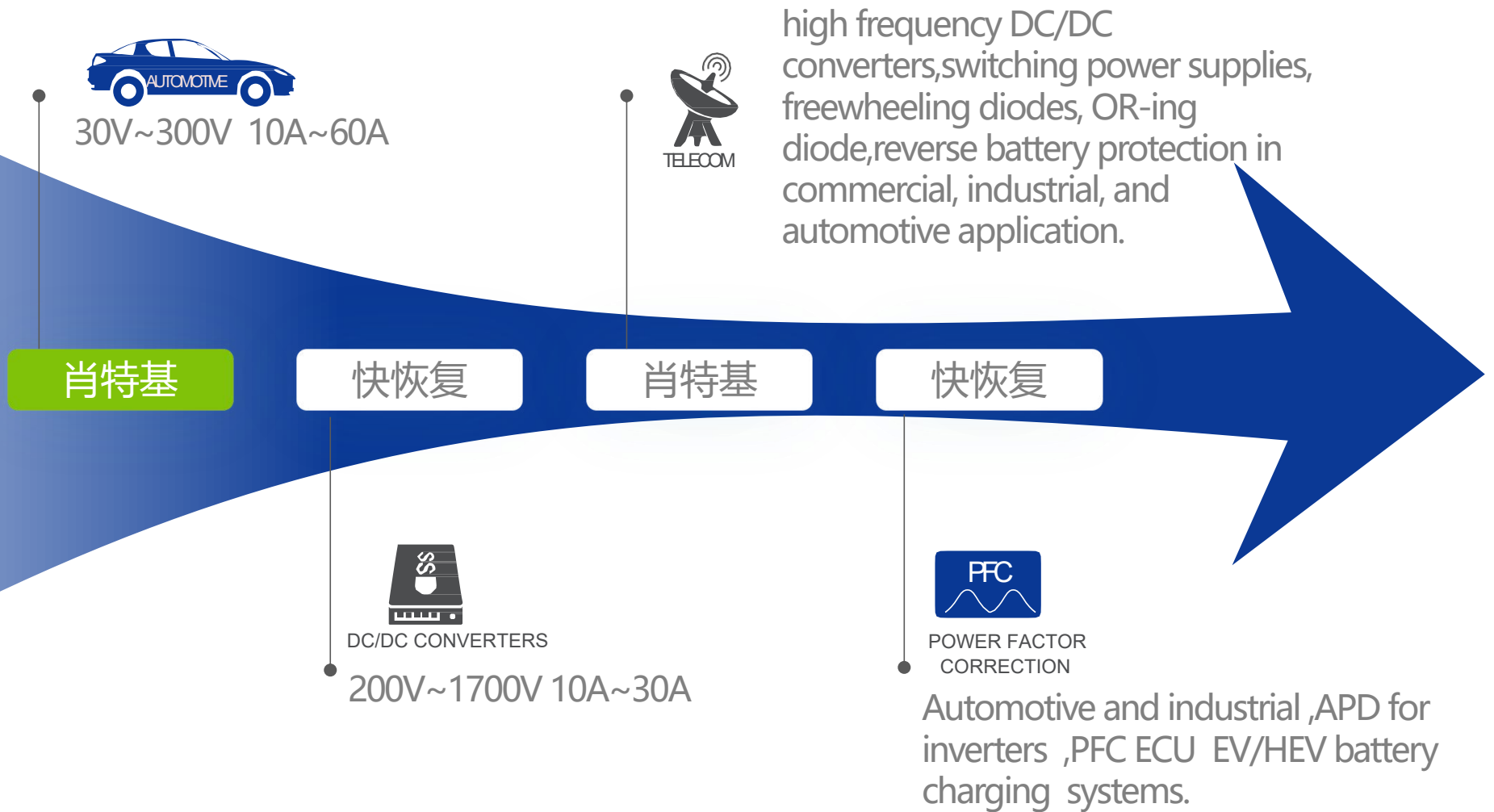
● SIC二极管

Part Number	Package	Max.Reverse Voltage	Max.Aver.Rect.Current	Peak Fwd.Surge Current	Max.Fwd.Voltage @25°C&Rated I _o		Max. Reverse Current@25°C&Rated VRM
		VRRM(V)	IF(A)	IFSM(A)	Rated IF(A)	VF(V)	IR(μA)
ECR465DM	TO-263M-2L	650	4	32	4	1.5	50
ECR465NM	TO-263M-2L	650	4	32	4	1.5	50
ECR665AM	TO-263M-2L	650	6	40	6	1.5	50
ECR665NM	TO-263M-2L	650	6	40	6	1.5	50
ECR665DM	TO-263M-2L	650	6	40	6	1.5	50
ECR865AM	TO-263M-2L	650	8	70	8	1.5	50
ECR1065AM	TO-263M-2L	650	10	80	10	1.5	50
ECR1665AM	TO-263M-2L	650	16	128	16	1.6	100
ECR2065AM	TO-263M-2L	650	20	160	20	1.5	100
ECR3065AM	TO-263M-2L	650	30	240	30	1.6	100
ECR2090AM	TO-263M-2L	900	20	125	20	1.6	200
ECR5120AM	TO-263M-2L	1200	5	50	5	1.8	50
ECR6120AM	TO-263M-2L	1200	6	40	6	1.7	60
ECR7120AM	TO-263M-2L	1200	7	45	7	1.7	120
ECR8120AM	TO-263M-2L	1200	8	52	8	1.7	100
ECR10120AM	TO-263M-2L	1200	10	90	10	1.8	100
ECR15120AM	TO-263M-2L	1200	15	102	15	1.7	100
ECR20120AM	TO-263M-2L	1200	20	180	20	1.8	100
ECR30120AM	TO-263M-2L	1200	30	185	30	1.7	150

● SGT MOS

Part Number	Package	Polarity	Vds	ID	VGS(th)		RDS(ON)@ VGS = 10V		Qg	Ciss
			Max	Max	Min	Max	Typ	Max	Typ	Typ
			(V)	(A)	(V)	(V)	(mΩ)	(mΩ)	(nC)	(pF)
HXMS100N20HMA	TO-263M-2L	N	100	274	2	4	1.9	2.3	140	9660
HXMS100N30HMA	TO-263M-2L	N	100	186	2	4	3	3.6	63	4406
HXMS100N30HMC	TO-263M-2L	N	100	173	2	4	3.6	4.3	33	2212
HXMS150N40HMA	TO-263M-2L	N	150	176	2.5	4.5	4	4.8	91	6238
HXMS150N90HMA	TO-263M-2L	N	150	99	2.5	4.5	8.1	9.3	36	2330
HXMS200N230HMA	TO-263M-2L	N	200	61	2.5	4.5	18.7	23	35	2363

主要应用



THANK YOU