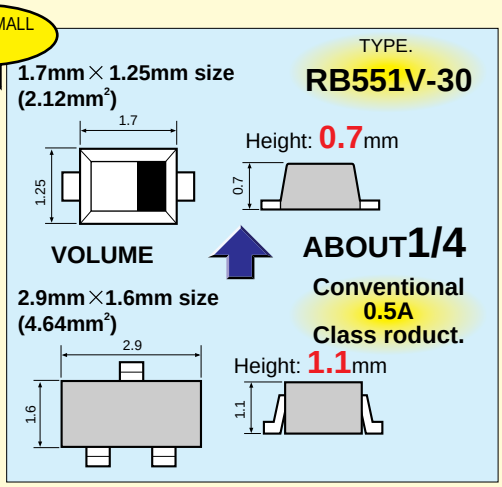
Low VF series small Schottky barrier diodes

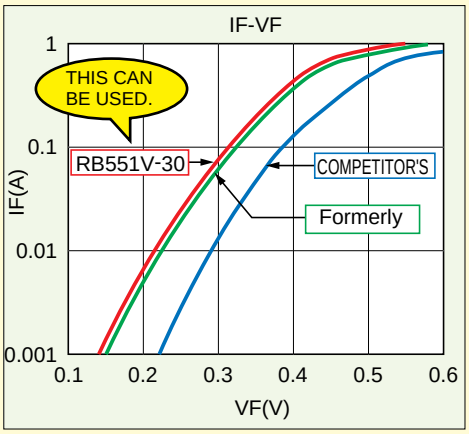
The best new products will join ROHM's "Super Low VF Series"

☆Rohm is leading the indusry by making the smallest 0.5A/30V diodes. These are most suitable for small and light applications.

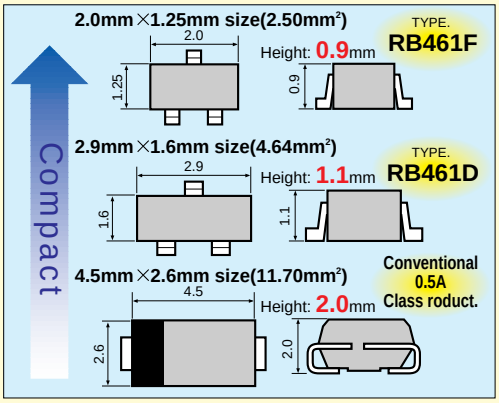
■PRODUCT FEATURE
1. SUPER LOW VF 0.5A AND 0.39V
2. SMALL PACKAGE UMD2(SOD323)
3. IO=0.5A



TYPE.Typ.(Taping)	Package	Io/VRM	VF(at IF)
RB551V-30(TE-17)	UMD2 (SOD323)	0.5A/30V	0.42V typ (0.5A)

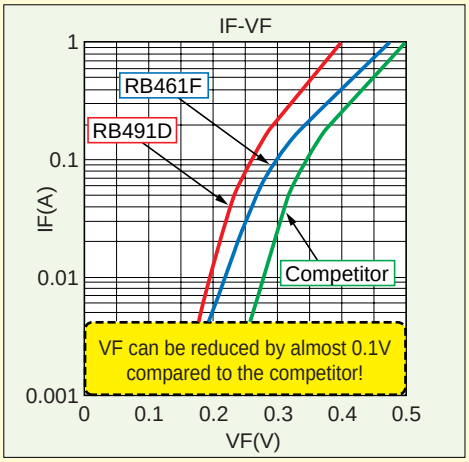


☆Ultra Low VF-Reduction of batter consumption in portable products.
☆Compact and light-SOT323: 0.7A/SC59: 1.0A
☆?High Power-0.7 to 1A in these small packages.

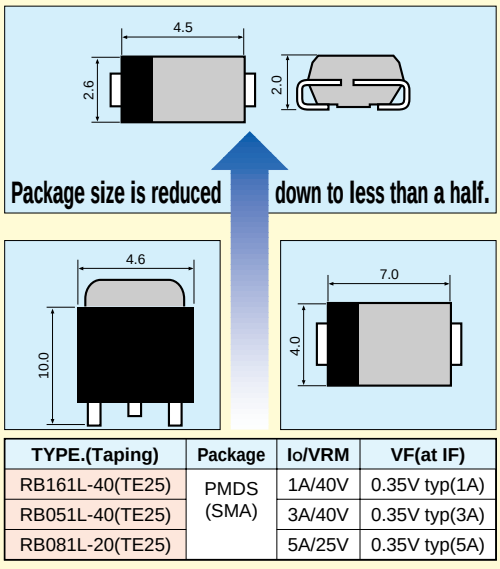


TYPE.(Taping)	Package	Io/VRM	VF(at IF)
RB461F(T106)	UMD3 (SOT323)	0.7A/25V	0.43V typ (0.7A)
RB491D(T146)	SMD3 (SC59)	1.0A/25V	0.40V typ (1.0A)

■Applicatio n Example
PC, PDA, Cellular, Phone, PHS

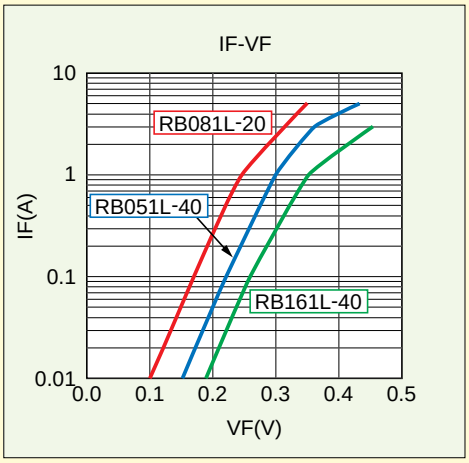


☆ROHM developed a 1～5A Schottky battier diode
in an ultra small package. (Actual size) Ideal for miniturizing as well as saving energy



TYPE.(Taping)	Package	Io/VRM	VF(at IF)
RB161L-40(TE25)	PMDS (SMA)	1A/40V	0.35V typ(1A)
RB051L-40(TE25)		3A/40V	0.35V typ(3A)
RB081L-20(TE25)		5A/25V	0.35V typ(5A)

■Applicatio n Example
Portable PC, Battery, Charger, Small, power, Supply



Schottky barrier diode (Silicon Epitaxial Planer)

RB551V-30

Ultra Low VF

APPLICATION
High speed switching

FEATURE
- Small mold type (UMD2)
- Low VF
- High reliability

Mass per piece
3mg/pcs

ABSOLUTE MAXIMUM RATING(Ta=25°C)

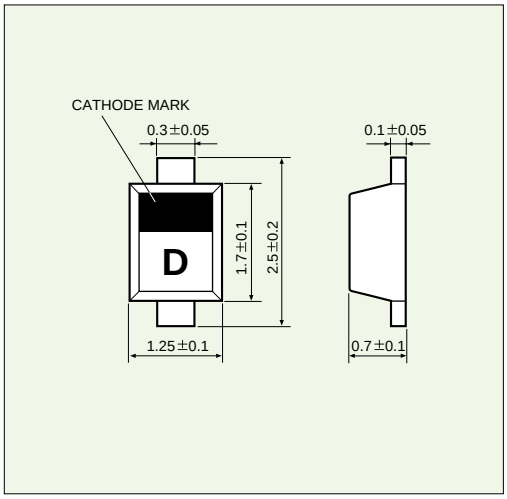
Characteristic	Symbol	Limits
Reverse voltage(repetitive peak)	VRM	30V
Reverse voltage(DC)	VR	20V
Forward current(DC)	Io	0.5A
Forward current surge peak(60Hz·1∞)	IFSM	2A
Junction temperature	Tj	125°C
Storage temperature	Tstg	−40～125°C

ELECTRICAL CHARACTERISTC(Ta=25°C)

Characteristic	Symbol	Test condition	Standard
Forward voltage	VF1	IF=100mA	0.36V Max.
	VF2	IF=500mA	0.47V Max.
Reverse current	IR	VR=20V	100μA Max.

*Please pay attention to static electricity when handring.

DIMENSION(UNIT:mm)



Schottky barrier diode (Silicon Epitaxial Planer)

RB461F

Ultra Low VF

APPLICATION
General rectification

FEATURE
- Small mold type (UMD3)
- High reliability

Mass per piece
6mg/pcs

ABSOLUTE MAXIMUM RATING(Ta=25°C)

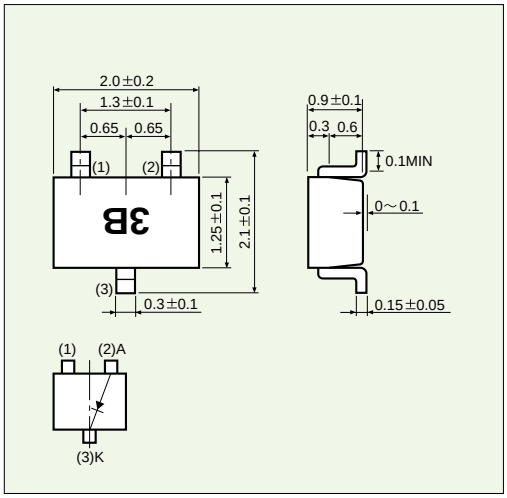
Characteristic	Symbol	Limits
Reverse voltage(repetitive peak)	VRM	25V
Reverse voltage(DC)	VR	20V
Forward current(DC)	IF	0.7A
Forward current surge peak(60Hz·1∞)	IFSM	3A
Junction temperature	Tj	125°C
Storage temperature	Tstg	−40～125°C

ELECTRICAL CHARACTERISTC(Ta=25°C)

Characteristic	Symbol	Test condition	Standard
Forward voltage	VF	IF=700mA	0.49V Max.
Reverse current	IR	VR=20V	200μA Max.

*Please pay attention to static electricity when handring.

DIMENSION(UNIT:mm)



Schottky barrier diode (Silicon Epitaxial Planer)

RB491D

Ultra Low VF

APPLICATION
General rectification

FEATURE
- Small mold type (SMD3)
- High reliability

Mass per piece
13mg/pcs

ABSOLUTE MAXIMUM RATING(Ta=25°C)

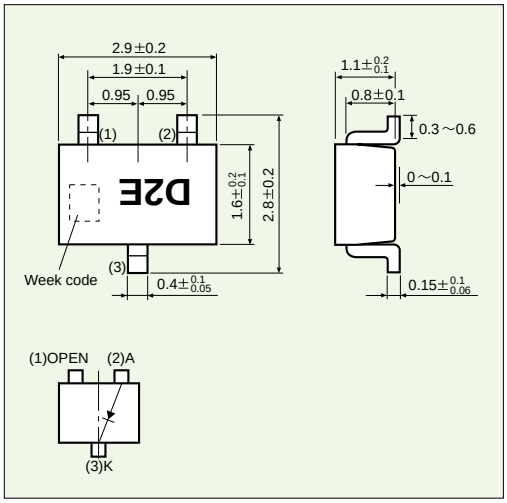
Characteristic	Symbol	Limits
Reverse voltage(repetitive peak)	VRM	25V
Reverse voltage(DC)	VR	20V
Forward current(DC)	IF	1.0A
Forward current surge peak(60Hz·1∞)	IFSM	3A
Junction temperature	Tj	125°C
Storage temperature	Tstg	−40～125°C

ELECTRICAL CHARACTERISTC(Ta=25°C)

Characteristic	Symbol	Test condition	Standard
Forward voltage	VF	IF=1.0A	0.45V Max.
Reverse current	IR	VR=20V	200μA Max.

*Please pay attention to static electricity when handring.

DIMENSION(UNIT:mm)



Schottky barrier diode (Silicon Epitaxial Planer)

RB161L-40

APPLICATION
General rectification

FEATURE
- Small power mold type (PMDS)
- High reliability
- Low VF

Mass per piece
69mg/pcs

Ultra Low VF

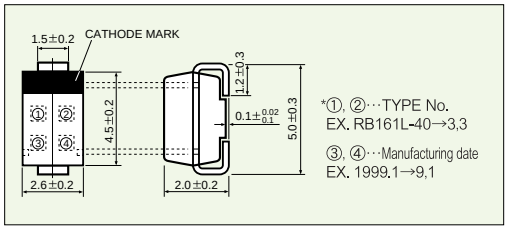
ABSOLUTE MAXIMUM RATING(Ta=25°C)

Characteristic	Symbol	Limits
Reverse voltage(repetitive peak)	VRM	40V
Reverse voltage(DC)	VR	20V
Forward current(DC)	Io	1A
Forward current surge peak(60Hz·1∞)	IFSM	70A
Junction temperature	Tj	125°C
Operation temperature	Topr	Refer to NOTE 1
Storage temperature	Tstg	−40～125°C

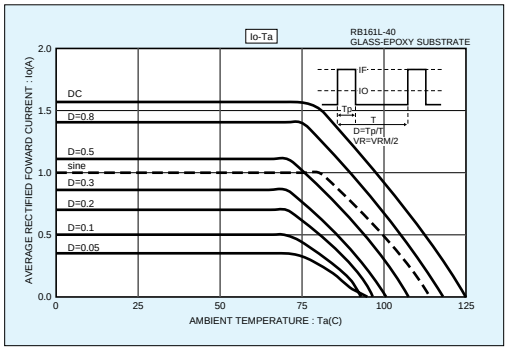
ELECTRICAL CHARACTERISTC(Ta=25°C)

Characteristic	Symbol	Test condition	Standard
Forward voltage	VF	IF=1A	0.40V Max.
Reverse current	IR	VR=20V	1.0mA Max.

DIMENSION(UNIT:mm)



NOTE.1 Derating Curve Io-Ta



Schottky barrier diode (Silicon Epitaxial Planer)

RB051L-40

APPLICATION
General rectification

FEATURE
- Small power mold type (PMDS)
- High reliability
- Low VF

Mass per piece
69mg/pcs

Ultra Low VF

ABSOLUTE MAXIMUM RATING(Ta=25°C)

Characteristic	Symbol	Limits
Reverse voltage(repetitive peak)	VRM	40V
Reverse voltage(DC)	VR	20V
Average rectified forward current*1	Io	3.0A
Forward current(DC)	IF	3.0A
Forward current surge peak(60Hz·1∞)	IFSM	70A
Operation temperature	Topr	Refer to NOTE 1,2
Storage temperature	Tstg	−40～125°C

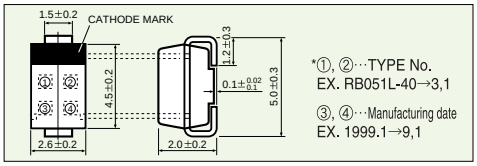
*1 60Hz sine wave. Almina substrate at the time of assembly. Tl=90°C Max. 60Hz·1∞

ELECTRICAL CHARACTERISTC(Ta=25°C)

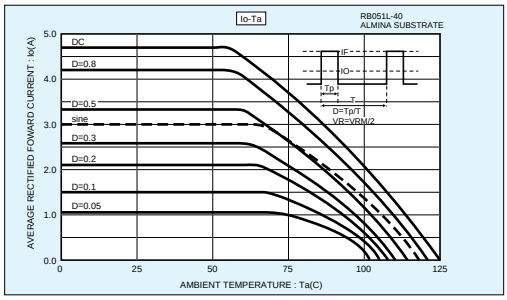
Characteristic	Symbol	Test condition	Standard
Forward voltage	VF1	IF=1.0A	0.35V Max.
	VF2	IF=3.0A	0.45V Max.
Reverse current	IR1	VR=20V	1.0mA Max.
	IR2	VR=15V	150μA Max.

*Please pay attention to static electricity when handring.

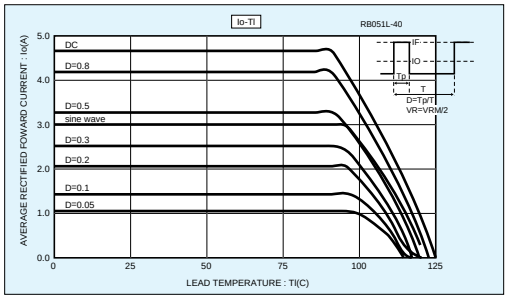
DIMENSION(UNIT:mm)



NOTE.1 Derating Curve Io-Ta



NOTE.2 Derating Curve Io-Ta



Schottky barrier diode (Silicon Epitaxial Planer)

RB081L-20

APPLICATION
General rectification

FEATURE
- Small power mold type (PMDS)
- High reliability
- Low VF

Mass per piece
69mg/pcs

Ultra Low VF

ABSOLUTE MAXIMUM RATING(Ta=25°C)

Characteristic	Symbol	Limits
Reverse voltage(repetitive peak)	VRM	25V
Reverse voltage(DC)	VR	20V
Average rectified forward current *1	Io	5.0A
Forward current surge peak(60Hz·1∞)	IFSM	70A
Junction temperature	Tj	125°C
Operation temperature	Topr	Refer to NOTE 1,2
Storage temperature	Tstg	−40～125°C

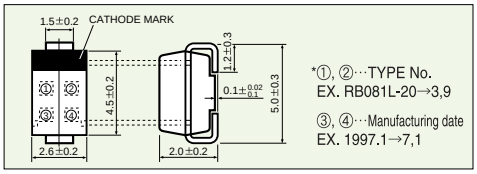
*1 60Hz sine wave. Almina substrate at the time of assembly. Tc max=90°C

ELECTRICAL CHARACTERISTC(Ta=25°C)

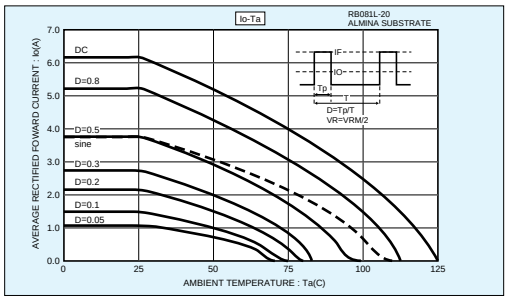
Characteristic	Symbol	Test condition	Standard
Forward voltage	VF	IF=5A	0.45V Max.
Reverse current	IR	VR=20V	0.7mA Max.

*Please pay attention to static electricity when handring.

DIMENSION(UNIT:mm)



NOTE.1 Derating Curve Io-Ta



NOTE.2 Derating Curve Io-Ta