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Small signal diodes

●Switching diodes

ROHM has an overwhelming production capability of high reliable switching diodes in the industry. The superior anti-surge characteristics of the UMD2 package in spite of the small size is noteworthy. A wide variety of diode arrays (contains multiple diodes in a device) and packages are available.

High-speed switching diodes [surface mounting type]

Part No.		Absolute maximum ratings *1 (Ta=25°C)		Electrical characteristics *1 (Ta=25°C)				Package	Circuit
		V _{RM} (V)	I _O (mA)	V _F Max. (V)	I _F (mA)	I _R Max. (μA)	V _R (V)		
Model name	Packaging specifications								
1SS400	TE61	90	100	1.2	100	0.1	80	EMD2	Single
DAN222	TL	80	100	1.2	100	0.1	70	EMD3	2(common cathode)
DAP222	TL	80	100	1.2	100	0.1	70		2(common anode)
DA221	TL	20	100	1.0	10	0.1	15		2(series)
DA121	TL	80	100	1.2	100	0.1	70		Single
1SS355	TE-17	90	100	1.2	100	0.1	80	UMD2	Single
DAN202U	T106	80	100	1.2	100	0.1	70	UMD3	2(common cathode)
DAP202U	T106	80	100	1.2	100	0.1	70		2(common anode)
DA204U	T106	20	100	1.0	10	0.1	15		2(series)
DA114	T106	80	100	1.2	100	0.1	70		Single
DA227	TL	80	100	1.2	100	0.1	70	UMD4	2(parallel)
UMN1N	TR	80	25	0.9	5	0.1	70	UMD5	4(common cathode)
UMP1N	TR	80	25	0.9	5	0.1	70		4(common anode)
UMN11N	TN	80	100	1.2	100	0.1	70	UMD6	2(common cathode)
UMP11N	TN	80	100	1.2	100	0.1	70		2(common anode)
* BAV70	T116	75	–	1.25	150	2.5	70	SSD3	2(common cathode)
* BAW56	T116	85	–	1.25	150	1.0	75		2(common anode)
* BAV99	T116	85	–	1.25	150	1.0	75		2(series)
<i>New</i> * BAV99U	T106	80	100	1.2	100	0.2	70	UMD3	2(series)
* BAS16	T116	80	–	1.25	150	1.0	75	SSD3	Single
DAN202K	T146	80	100	1.2	100	0.1	70	SMD3	2(common cathode)
DAP202K	T146	80	100	1.2	100	0.1	70		2(common anode)
DAN217	T146	80	100	1.2	100	0.1	70		2(series)
<i>New</i> DAN217U	T106	80	100	1.2	100	0.2	70	UMD3	2(series)
DA204K	T146	20	100	1.0	10	0.1	15	SMD3	2(series)
DAN212K	T146	80	100	1.2	100	0.1	70		Single
FMN1	T148	80	25	0.9	5	0.1	70	SMD5	4(common cathode)
FMP1	T148	80	25	0.9	5	0.1	70		4(common anode)
IMN10	T108	80	100	1.2	100	0.1	70	SMD6	3(parallel)
IMN11	T110	80	100	1.2	100	0.1	70		4(common cathode)
IMP11	T110	80	100	1.2	100	0.1	70		4(common anode)
RLS-73	TE-11	90	130	1.2	100	0.5	80	LLDS	Single
* RLS4148	TE-11	100	150	1.0	10	5	75		Single
* RLS4150	TE-11	50	200	1.0	200	0.1	50		Single
* RLS4448	TE-11	100	150	1.0	100	5	75		Single

* : Available only outside of Japan. *1: The values shown are per device.

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Diodes

High-speed switching diodes [lead type]

The following are the list of switching diodes which ROHM leads the worldwide production quantity. ROHM is supplying the diodes with high quality and high quantity to the electronics industries.

Part No.		Absolute maximum ratings (Ta=25°C)		Electrical characteristics (Ta=25°C)				Package	Circuit
Model name	Packaging specifications	V _{RM} (V)	I _O (mA)	V _F Max. (V)		I _R Max. (μA)			
				I _F (mA)		V _R (V)			
1SS133	T-77	90	130	1.2	100	0.5	80	MSD	Single
*1N4148	T-77	100	150	1.0	10	5	75		Single
*1N4150	T-77	50	200	1.0	200	0.1	50	GSD	Single
*1N4448 (1N914B)	T-77	100	150	1.0	100	5	75		Single

Note) *Available only outside of Japan. T-72 is also available.

Low-leakage switching diodes [surface mounting type]

Part No.		Absolute maximum ratings (Ta=25°C)		Electrical characteristics (Ta=25°C)				Package	Circuit
Model name	Packaging specifications	V _{RM} (V)	I _O (mA)	V _F Max. (V)		I _R Max. (μA)			
				I _F (mA)		V _R (V)			
1SS380	TE-17	40	100	1.2	100	0.01	20	UMD2	Single
RLS139	TE-11	90	130	1.2	100	0.02	30	LLDS	Single

High-voltage switching diodes [surface mounting type]

Part No.		Absolute maximum ratings (Ta=25°C)		Electrical characteristics (Ta=25°C)				Package	Circuit
Model name	Packaging specifications	V _{RM} (V)	I _O (mA)	V _F Max. (V)		I _R Max. (μA)			
				I _F (mA)		V _R (V)			
1SS376	TE-17	300	100	1.2	100	0.2	250	UMD2	Single
RLS245	TE-11	250	200	1.5	200	10	220	LLDS	Single

High-voltage switching diodes [lead type]

Part No.		Absolute maximum ratings (Ta=25°C)		Electrical characteristics (Ta=25°C)				Package	Circuit
Model name	Packaging specifications	V _{RM} (V)	I _O (mA)	V _F Max. (V)		I _R Max. (μA)			
				I _F (mA)		V _R (V)			
1SS244	TE-77	250	200	1.5	200	10	220	MSD	Single

Note) T-72 packaging specifications are also available.

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Diodes

●High frequency diodes

ROHM's high frequency diodes are perfect for the tuner and cellular phone market which require miniaturized size. ROHM also offers the pin diodes in the Giga Hertz range.

Band switching diodes [surface mounting type]

Part No.		Absolute maximum ratings *1 (Ta=25°C)		Electrical characteristics *1 (Ta=25°C)						Package	Circuit
Model name	Packaging specifications	V _{RM} (V)	I _F (mA)	C _T Max.			r _F Max.				
				(pF)	V _R (V)	f(MHz)	(Ω)	I _F (mA)	f(MHz)		
1SS390	TE61	35	100	1.2	6	1	0.9	2	100	EMD2	Single
1SS356	TW11	35	100	1.2	6	1	0.9	2	100	UMD2	Single
DAN235E	TL	35	–	1.2	6	1	0.9	2	100	EMD3	2(common cathode)
DAN235U	T106	35	–	1.2	6	1	0.9	2	100	UMD3	2(common cathode)
DAP236U	T106	35	–	1.2	6	1	0.9	2	100		2(common anode)
DAP235K	T146	35	–	1.2	6	1	0.9	2	100	SMD3	2(common cathode)
DAP236K	T146	35	–	1.2	6	1	0.9	2	100		2(common anode)

Note) *1: The values shown are per device.

Pin diodes [surface mounting type]

Part No.		Absolute maximum ratings (Ta=25°C)		Electrical characteristics (Ta=25°C)						Package	Circuit
Model name	Packaging specifications	V _{RM} (V)	I _F (mA)	C _T Max.			r _F Max.				
				(pF)	V _R (V)	f(MHz)	(Ω)	I _F (mA)	f(MHz)		
RN731V	TE-17	50	50	0.4	35	1	7	10	100	UMD2	Single
RN739F	T106	50	50	0.4	35	1	7	10	100	UMD3	2(series)
RN739D	T146	50	50	0.4	35	1	7	10	100	SMD3	2(series)

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Diodes

●Schottky barrier diodes ($I_o = 0.5A$ or less)

There is a wide selection of the products to fit the application. ROHM's schottky barrier diodes are available in an ultra-low V_F model, a low I_R model, and a low V_F and low I_R model, helping to keep sets compact.

Small signals [surface mounting type]

Part No.		Absolute maximum ratings ($T_a=25^\circ C$)		Electrical characteristics ($T_a=25^\circ C$)				Package	Circuit
		V_{RM} (V)	I_o (mA)	V_F Max. (V)	I_F (mA)	I_R Max. (μA)			
Model name	Packaging specifications								
RB521S-30	TE61	30	200	0.50	200	30	10	EMD2	Single
RB520S-30	TE61	30	200	0.60	200	1	10		Single
<i>New</i> RB751S-40	TE61	40	30	0.37	1	0.5	30		Single
RB501V-40	TE-17	45	100	0.55	100	30	10	UMD2	Single
RB500V-40	TE-17	45	100	0.45	10	1	10		Single
RB751V-40	TE-17	40	30	0.37	1	0.5	30		Single
RB451F	T106	40	100	0.55	100	30	10	UMD3	Single
RB450F	T106	45	100	0.45	10	1	10		Single
<i>New</i> RB715W	TL	40	30	0.37	1	1	10	EMD3	Common cathode
RB715F	T106	40	30	0.37	1	1	10	UMD3	Common cathode
RB717F	T106	40	30	0.37	1	1	10		Common anode
RB706F-40	T106	45	30	0.37	1	1	10		2(series)
RB480K	TL	45	100	0.60	100	1	10	UMD4	2(parallel)
<i>New</i> RB481K	TL	30	200	0.50	200	30	10		2(parallel)
RB425D	T146	40	100	0.55	100	30	10	SMD3	Common cathode
RB421D	T146	40	100	0.55	100	30	10		Single
RB420D	T146	40	100	0.45	10	1	10		Single
RB495D	T146	40	400	0.50	200	70	25		Common cathode
RB705D	T146	40	30	0.37	1	1	10		Common cathode
RB706D-40	T146	45	30	0.37	1	1	10		2(series)
RB471E	T148	40	100	0.55	100	30	10		SMD5
RB731U	T108	40	30	0.37	1	1	10	SMD6	3(parallel)
RB495D	T146	40	*400	0.50	200	70	25	SMD3	Common cathode

*Value is for sum of two elements.

Small signals [leaded type]

These come in a 5mm pitch DO-34 package which can be mounted, and are available in a low V_F model (RB441Q-40) and a low V_F , low I_R model (RB721Q-40). Both models are guaranteed to withstand up to 40V.

Part No.		Absolute maximum ratings ($T_a=25^\circ C$)		Electrical characteristics ($T_a=25^\circ C$)				Package	Circuit
		V_{RM} (V)	I_o (mA)	V_F Max. (V)	I_F (mA)	I_R Max. (μA)			
Model name	Packaging specifications								
RB441Q-40	T-77	40	100	0.55	100	100	40	MSD	Single
RB721Q-40	T-77	40	30	0.37	1	0.5	25		Single

Note) T-72 packaging specifications are also available.

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Diodes

Rectifier diodes

●Rectifier diodes (PN junction type)

ROHM's rectifier diodes have been used widely in consumer and industrial applications alike. The 1SR156-400, which guarantees 400V without losing any of its high speed, and the 1SR159-200, with its world-class speed and low V_F , have been added to our product lineup.

General purpose rectifier diodes [surface mounting type]

Part No.		Absolute maximum ratings (Ta=25°C)		Electrical characteristics (Ta=25°C)				Package	Circuit
Model name	Packaging specifications	V_{RM} (V)	I_o (A)	V_F Max. (V) I_F (mA)		I_R Max. (μ A) V_R (V)			
1SR154-400	TE25	400	1	1.1	1	10	400	PMDS	Single
1SR154-600	TE25	600	1	1.1	1	10	600		Single
RLR4004	TE-21	400	0.8	1.0	0.8	10	400	LLDL	Single

General purpose rectifier diodes [lead type]

Two models are available, one with a DO-41 glass package, and a round molded model which supports a 5mm pitch. ROHM's rectifying diodes offer high reverse surge withstand capability, and are widely used in vehicle and industrial machinery applications.

Part No.		Absolute maximum ratings (Ta=25°C)		Electrical characteristics (Ta=25°C)				Package	Circuit
Model name	Packaging specifications	V_{RM} (V)	I_o (A)	V_F Max. (V) I_F (A)		I_R Max. (μ A) V_R (V)			
1SR139-400	T-32 *1	400	1	1.1	1	10	400	MSR	Single
1SR139-600	T-32 *1	600	1	1.1	1	10	600		Single
1SR35-400A	T-82 *2	400	1 *	1.1	1	10	400	GSR	Single
*1N4004A	T-82 *2	400	1 *	1.1	1	10	400		Single

Note) *indicates a value guaranteed at Ta=50°C

* Available only outside of Japan.

*1, also available in the T-31 model. *2, also available in the T-81 model.

High-speed rectification diodes [surface mounting type]

Part No.		Absolute maximum ratings (Ta=25°C)		Electrical characteristics (Ta=25°C)						Package	Circuit	
Model name	Packaging specifications	V_{RM} (V)	I_o (A)	V_F Max. (V) I_F (A)		I_R Max. (μ A) V_R (V)		trr Max. I_F (mA) t_f (MHz)				
1SR156-400	TE25	400	1	1.3	0.8	10	400	400	10	10	PMDS	Single
1SR159-200	TE25	200	1	0.98	1	10	200	50	100	100		Single
<small>New</small> 1SR159-400	TE25	400	1	1.2	1	10	400	25	500	1000		Single

High-speed rectification diodes [lead type]

Part No.		Absolute maximum ratings (Ta=25°C)		Electrical characteristics (Ta=25°C)						Package	Circuit	
Model name	Packaging specifications	V_{RM} (V)	I_o (A)	V_F Max. (V) I_F (A)		I_R Max. (μ A) V_R (V)		trr Max. I_F (mA) t_f (MHz)				
1SR153-400	T-32 *1	400	1	1.3	0.8	10	400	400	10	10	MSR	Single
1SR124-400A	T-82 *2	400	1	1.3	1	10	400	400	10	10	GSR	Single

*1, also available in the T-31 model. *2, also available in the T-81 model.

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Diodes

●Schottky barrier diodes ($I_o=0.5A$ or more)

There are ideal for personal computers, cellular phones, and other types of portable electronic equipment. In addition to the highly popular RB160L-40, 3A/40V products are available in PMDS packages. Furthermore, ultra-low V_f technology has made it possible to introduce products for which 5A is guaranteed in PMDS packages.

Rectifiers [surface mounting type]

Part No.		Absolute maximum ratings ($T_a=25^\circ C$)		Electrical characteristics ($T_a=25^\circ C$)				Package	Circuit
		V_{RM} (V)	I_o (A)	V_f Max. (V)		I_R Max. (mA)			
Model name	Packaging specifications			I_f (A)	V_R (V)				
<i>New</i> RB551V-30	TE-17	30	0.5	0.36	0.1	0.1	20	UMD2	Single
RB461F	T106	25	0.7	0.49	0.7	0.2	20	UMD3	Single
RB411D	TE146	40	0.5	0.50	0.5	0.03	10	SMD3	Single
RB400D	TE146	40	0.5	0.55	0.5	0.05	30		Single
RB491D	TE146	25	1.0	0.45	1.0	0.2	20		Single
<i>New</i> RB160L-60	TE25	60	1.0	0.58	1.0	1.0	60	PMDS	Single
RB160L-40	TE25	40	1.0	0.55	1.0	1.0	40		Single
RB161L-40	TE25	40	1.0	0.40	1.0	1.0	20		Single
RB060L-40	TE25	40	2.0	0.50	2.0	1.0	40		Single
<i>New</i> RB063L-30	TE25	30	2.0	0.395	2.0	0.2	30		Single
RB050L-40	TE25	40	3.0	0.55	3.0	1.0	40		Single
RB051L-40	TE25	40	3.0	0.45	3.0	1.0	20		Single
<i>New</i> RB053L-30	TE25	30	3.0	0.42	3.0	0.2	30		Single
RB081L-20	TE25	25	5.0	0.45	5.0	0.7	20		Single
<i>New</i> RB083L-20	TE25	25	5.0	0.39	3.0	0.5	20		Single

Diodes

Zener diodes

With a switching diode production line that boasts the world's highest production volume, ROHM contributes an overwhelming supply capability to world markets. The MTZ series guarantees Zener voltage at $I_z=5\text{mA}$, and can be easily assembled in sets designed to save power.

Zener diodes [surface mounting type]

Part No.		Pd (mW)	Vz (V)	Package	Circuit
Model name	Packaging specifications				
<i>New</i> EDZ series	TE61	100	4.7~6.8	EMD2	Single
UDZS series	TE-17	200	5.1~10	UMD2	Single
UDZ series	TE-17	200	2.0~36		Single
RLZ series	TE-11	500	2.0~56	LLDS	Single
PTZ series	TE25	1000	3.6~43	PMDS	Single

Zener diodes [leaded type]

Part No.		Pd (mW)	Vz (V)	Package	Circuit
Model name	Packaging specifications				
MTZ J series	T-77 *	500	2.0~56	DO-34	Single

Available in T-72 package also.

Special Zener diodes [surface mounting type]

Part No.		Pd (mW)	Vz (V)	Package	Circuit
Model name	Packaging specifications				
<i>New</i> EMZ6.8N	TL	150	6.47~7.14	EMD3	Common anode
<i>New</i> FTZ5.6E	T148	200	5.31~5.92	SMD5	4(common anode)
FTZ6.8E	T148	200	6.47~7.14	SMD5	4(common anode)
<i>New</i> STZ5.6N	T146	200	5.31~5.92	SMD3	Common anode
STZ6.2N	T146	200	5.81~6.4		Common anode
STZ6.8N	T146	200	6.47~7.14		Common anode
STZ6.8T	T146	200	6.47~7.14		Common cathode
UMZ12N	T106	200	11.0~13.0	UMD3	Common anode
<i>New</i> UMZ6.8EN	TR	200	6.47~7.14	UMD5	4(common anode)
<i>New</i> UMZ6.8N	T106	200	6.47~7.14	UMD3	Common anode
UMZ8.2N	T106	200	7.76~8.64		Common anode
UMZ8.2T	T106	200	7.76~8.64	UMD2	Common cathode