

**Comchip**  
SMD Diode Specialist



*Automotive Diode*

**Comchip Technology**

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# About Comchip

**Comchip**  
SMD Diode Specialist



Comchip Technology is a discrete semiconductor solution provider specializing in diodes. Our headquarters in Taiwan includes production facilities, warehouse, engineering, and QC department with testing capabilities. Sales offices are located in Taiwan and USA.

# About Automotive Product

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SMD Diode Specialist




AEC  
Q101



With innovative research and patented manufacturing capabilities, Comchip offers automotive products including Schottky, TVS, Zener, ESD protection, switching diodes, ultra fast recovery rectifiers etc. Comchip products cover a vast array of applications in automotive. To ensure superior quality and reliability, Comchip's in-house labs and production facilities are aligned with current automotive industry requirements in accordance with industry standards including AEC-Q101, TS16949 and ISO14001.

# About Quality

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Quality is a priority in Comchip. Our Quality Management Systems are designed to ensure all final products meet performance requirements and are reliable over their lifetimes. The Comchip Quality Policy is our basis of commitment to provide our customers with world-class products.

# Vast Array of Automotive Applications

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# Schottky

Guard ring technology reduces reverse leakage current and increases ESD capability. Gradient epi layer structure reduces forward voltage drop and high forward surge current.

Automotive Application:

Automotive Networking, Body Control Module, Chassis Control Unit, Exterior Light, Infotainment, Interior Light, Seat Control Module



## Schottky Barrier Rectifier

Part No	VRRM	VF	IF	IFSM	IR	Package
	V	V	A	A	mA	
ACDBM140	40	0.5	1	30	0.5	SOD-123
ACDBM1100	100	0.85	1	30	0.5	SOD-123
ACDBM1200	200	0.92	1	30	0.5	SOD-123
ACDBM240	40	0.5	2	50	0.5	SOD-123
ACDBM2100	100	0.85	2	50	0.5	SOD-123
ACDBM2200	200	0.92	2	50	0.5	SOD-123
ACDBA140	40	0.5	1	30	0.5	SMA
ACDBA160	60	0.7	1	30	0.5	SMA
ACDBA1100	100	0.81	1	30	0.5	SMA
ACDBA240	40	0.5	2	50	0.5	SMA
ACDBA260	60	0.7	2	50	0.5	SMA
ACDBA2100	100	0.81	2	50	0.5	SMA
ACDBA340	40	0.5	3	70	0.5	SMA
ACDBA360	60	0.7	3	70	0.5	SMA
ACDBA3100	100	0.81	3	70	0.5	SMA
ACDBD1040	40	0.55	10	150	0.5	D2PAK
ACDBD1060	60	0.75	10	150	0.5	D2PAK
ACDBD10100	100	0.85	10	150	0.5	D2PAK
ACDBD10150	150	1	10	150	0.5	D2PAK
ACDBD10200	200	1	10	150	0.5	D2PAK

# Schottky

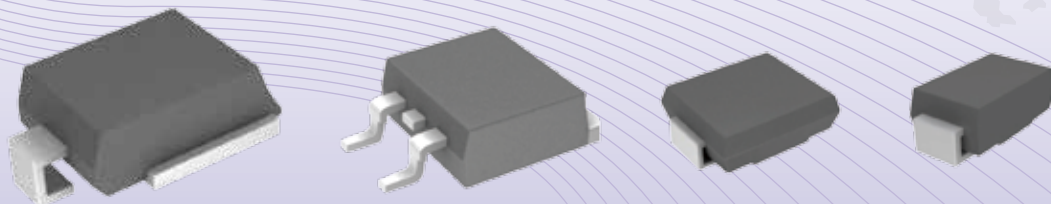
Special metal barrier construction facilitates low forward voltage(VF) and low leakage current(IR)

Automotive Application:

Automotive Networking, Body Control Module, Chassis Control Unit, Exterior Light, Infotainment, Interior Light, Seat Control Module

## Low Vf Schottky Barrier Rectifier

Part No	VRRM	VF	IF	IFSM	IR	Package
	V	V	A	A	mA	
ACDBUC140LC	40	0.6	1	5	0.03	0603C/SOD-523F
ACDBMT220L	20	0.38	2	50	1	SOD-123H
ACDBMT230L	30	0.4	2	50	1	SOD-123H
ACDBMT240L	40	0.4	2	50	1	SOD-123H
ACDBA140L	40	0.4	1	30	1	SMA
ACDBA140LL	40	0.35	1	50	1	SMA
ACDBA240L	40	0.4	2	50	1	SMA
ACDBA240LL	40	0.35	2	70	1	SMA
ACDBB340LR	40	0.45	3	125	0.5	SMB
ACDBB3100LR	100	0.75	3	125	0.5	SMB
ACDBB3200LR	200	0.85	3	125	0.5	SMB



# Fast Recovery

Glass passivation wafer technology provides excellent reverse leakage current. Platinum diffusion technology creates recombination center for soft recovery characteristic.

Automotive Application:

Body Control Module, Exterior Light, Infotainment, Interior Light, Seat Control Module

## Super Fast Recovery Rectifiers

Part No	VRRM	VF	IF	IFSM	IR	Trr	Package
	V	V	A	A	uA	ns	
ACSFM103	200	0.95	1	25	5	35	Mini SMA / SOD-123
ACSFM104	400	1.25	1	25	5	35	Mini SMA / SOD-123
ACSFM105	600	1.7	1	25	5	35	Mini SMA / SOD-123
ACSFA102	100	0.95	1	30	5	35	SMA
ACSFA103	200	0.95	1	30	5	35	SMA
ACSFA104	400	1.25	1	30	5	35	SMA
ACSFA105	600	1.5	1	30	5	50	SMA

## Fast Recovery Rectifiers

Part No	VRRM	VF	IF	IFSM	IR	Trr	Package
	V	V	A	A	uA	ns	
ACURA103	200	1	1	30	5	50	SMA
ACURA104	400	1.3	1	30	5	50	SMA
ACURA107	1000	1.7	1	30	5	75	SMA
ACURB203	200	1	2	50	5	50	SMB
ACURB204	400	1.3	2	50	5	50	SMB
ACURB207	1000	1.7	2	50	5	75	SMB



# General Purpose

Glass passivation wafer technology provides excellent reverse leakage current.

Automotive Application:

Automotive Networking, Body Control Module, Chassis Control Unit, Exterior Light, Infotainment, Interior Light, Seat Control Module



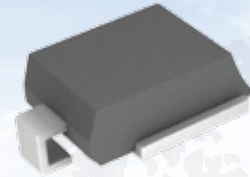
Part No	VRRM	VF	IF	IFSM	IR	Package
	V	V	A	A	uA	
ACGRKM4003	200	1.1	1	30	5	KM/SOD-123F
ACGRKM4005	600	1.1	1	30	5	KM/SOD-123F
ACGRKM4006	800	1.1	1	30	5	KM/SOD-123F
ACGRKM4007	1000	1.1	1	30	5	KM/SOD-123F
ACGRA4003	200	1.1	1	30	5	SMA
ACGRA4005	600	1.1	1	30	5	SMA
ACGRA4006	800	1.1	1	30	5	SMA
ACGRA4007	1000	1.1	1	30	5	SMA
ACGRB203	200	1.1	2	30	5	SMB
ACGRB205	600	1.1	2	30	5	SMB
ACGRB206	800	1.1	2	30	5	SMB
ACGRB207	1000	1.1	2	30	5	SMB
ACGRC303	200	1.1	3	100	5	SMC
ACGRC304	400	1.1	3	100	5	SMC
ACGRC306	800	1.1	3	100	5	SMC
ACGRC307	1000	1.1	3	100	5	SMC

# TVS *(Transient Voltage Suppressor)*

Excellent clamping capability was created by highly concentrated doping wafer technology. Glass passivation technology ensures high temperature reverse characteristics stability.

Automotive Application:

Automotive Networking, Body Control Module, Chassis Control Unit, Exterior Light, Infotainment



## **TVS *(Transient Voltage Suppressor)***

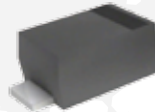
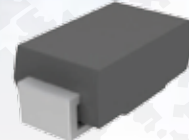
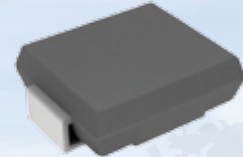
Part No	VRRM		IFSM	PPP	Package
	V				
ATV02W Series	5	190	20	200	SOD-123
ATV04A Series	5	440	40	400	SMA
ATV06B Series	5	440	100	600	SMB
ATV15C Series	5	440	200	1500	SMC
ATV30C Series	5	440	300	3000	SMC
ATV50C Series	11	440	300	5000	SMC
ATV50D2 Series	14	43	300	5000	D2PAK
ATV66SM Series	14	43	700	6600	DO-218AB

# Zener

Wide range breakdown voltage from 2.4V to 200V with 5% tolerance. Low zener impedance at low voltage parts. Clip bonding technology with better thermal capability.

Automotive Application:

Body Control Module, Chassis Control Unit, Exterior Light, Interior Light, Seat Control Module



## High Power Zener

Part No	VZ		PD mW	Package
	V			
ACZRM52xxB series	2.4	56	500	SOD-123
ACZRA47xx series	3.3	100	1000	SMA
ACZRA59xxB series	6.2	200	1500	SMA
ACZRC53xxB series	6.0	200	5000	SMC

# ESD Protection Diodes

Innovation of ultra low capacitance and footprint on ESD for high speed data transfer application in handheld devices.



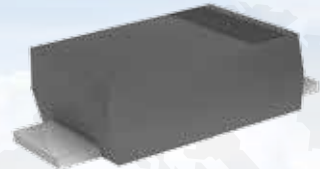
Automotive Application:

Automotive Networking, Body Control Module, Infotainment, Seat Control Module

Part No	VR	IPP	VC	ESD	IR	CJ	Package
	V	A	V	KV (Air/Contact)	uA	pF	
ACPDZ5V0H	5.0	5.0	10	25/25	0.10	10.00	0201/DFN0603
ACPDQT5V0SP	5.0	1.0	12.9	15/10	1.00	0.90	0402/SOD-882
ACPDQ5V0USP	5.0	1.0	9.8	15/10	1.00	0.90	0402/SOD-923F
ACPDQC5V0CSP	5.0	3.0	21	15/8	0.10	0.60	0402C/SOD-923F
ACPDQC5V0ESPC	5.0	4.0	25	25/25	0.05	0.35	0402C/SOD-923F
ACPDUC24VE	24.0	3.0	46	30/30	0.10	20.00	0603C/SOD-523F
ACPDH5V0P	5.0	3.0	13	12/12	1.00	3.00	SOD-523
ACPDV3V3SP	3.3	8.0	13.9	15/8	40.00	0.40	SOD-323
ACPDV5V0SP	5.0	8.0	18.3	15/8	5.00	0.40	SOD-323
ACPDV8V0SP	8.0	8.0	18.5	15/8	2.00	0.40	SOD-323
ACPDV12V0SP	12.0	6.0	28.6	15/8	1.00	0.40	SOD-323
ACPDV15V0SP	15.0	5.0	31.8	15/8	1.00	0.40	SOD-323
ACPDV24V0SP	24.0	3.0	56	15/8	1.00	0.40	SOD-323
ACPDT-12VEU	12.0	5.0	22	30/30	0.10	60.00	SOT-23
ACPDT-5V0	5.0	5.0	15	16/8	2.00	20.00	SOT-23
ACPDT-12V	12.0	1.0	25	16/8	2.00	12.00	SOT-23
ACPDT-24V	24.0	1.0	47	16/8	2.00	10.00	SOT-23

# Small Signal Diodes

Fully automated production line to ensure best quality and low manufacturing cost. Small foot print and low profile parts manufactured with DFN technology.



Automotive Application:  
Automotive Networking, Body Control Module, Chassis Control Unit, Exterior Light, Infotainment, Interior Light, Seat Control Module

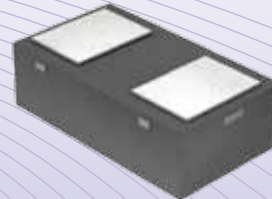
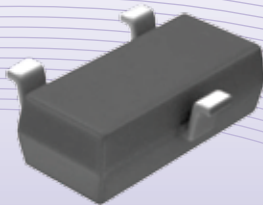
## *Small Signal Zener*

Part No	VZ		PD mW	Package
	V			
ACZRT55Cxx series	2.4	75	350	SOT-23
ACZRV52xxB series	2.7	30	200	SOD-323
ACZRW52xxB series	2.7	30	350	SOD-123

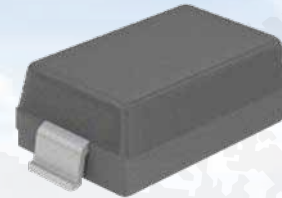
# Small Signal Diodes

## Small Signal Schottky Barrier Diode

Part No	VRRM	VF	IF	IFSM	IR	Package
	V	V	mA	A	uA	
ACDBQC0240LR	40	0.58	200	3.0	5	0402C/SOD-923F
ACDBQC0530L	30	0.45	500	3.0	2	0402C/SOD-923F
ACDBUC0230	35	0.50	200	3.0	30	0603C/SOD-523F
ARB521S-30	30	0.50	200	1.0	30	SOD-523
ARB751V-40	40	0.37	30	0.2	0.5	SOD-323
ACDBV3-54(S/C/A)	30	1.00	200	0.6	2	SOT-323
ACDBT-70(S/C/A)	70	1.00	70	0.1	0.1	SOT-23
ACDBT-54(S/C/A)	30	1.00	200	0.6	2	SOT-23
ACDBW01540RF	40	0.90	15	2.0	0.2	SOD-123
ACDBW01560RF	60	1.00	15	2.0	0.2	SOD-123
ACDBW0520L	20	0.385	500	5.5	250	SOD-123
ACDBW0530L	30	0.43	500	5.5	130	SOD-123
ACDBW0540L	40	0.62	500	5.5	20	SOD-123



# Small Signal Diodes



## Switching Diodes

Part No	VRRM	VF	IF	IFSM	IR	Trr	Package
	V	V	A	A	mA	ns	
ACDSUC101A	90	1	0.1	1	0.05		0603C/SOD-523F
ACDSV3-99	75	1.25	0.3	2	2.5	4	SOT-323
ACDSV6-16	75	1.25	0.15	2	1	4	SOT-363
ACDSV6-4148	75	1.25	0.15	2	1	4	SOT-363
ACDSV-19	100	1.25	0.2	2.5	0.1	50	SOD-323
ACDSV-20	150	1.25	0.2	2.5	0.1	50	SOD-323
ACDSV-21	200	1.25	0.2	2.5	0.1	50	SOD-323
ACDSV3-16	75	1.25	0.3	2	2.5	4	SOT-323
ACDSV3-56	75	1.25	0.3	2	2.5	4	SOT-323
ACDSV3-70	75	1.25	0.3	2	2.5	4	SOT-323
ACDST-19	100	1.25	0.2		0.1	50	SOT-23
ACDST-20	150	1.25	0.2		0.1	50	SOT-23
ACDSW19	100	1.25	0.2	2.5	0.1	50	SOD-123
ACDSW20	150	1.25	0.2	2.5	0.1	50	SOD-123
ACDSW21	200	1.25	0.2	2.5	0.1	50	SOD-123
ACDSW4148	100	1.25	0.15	2	1	4	SOD-123

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