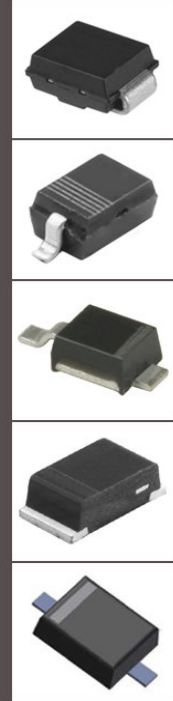


SMD-codes

DATABOOK

SMD-codes.
2-pin cases active SMD
semiconductor components
marking codes.

- 62.000 semiconductor components SMD-codes:
- Diodes, Thyristors, Transient voltage suppressors
- Case pin assignment
- Pinout
- Marking style
- Additional SMD info
- Case drawings
- Manufacturers



2024-2025 EDITION



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ELECTRONICS COMPONENTS

Eugeniu Turuta Martin Turuta

SMD-codes.

**2-pin cases active SMD semiconductor components
marking codes.**

DATABOOK

Chisinau, Toronto, 2024-2025
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Introduction

At earlier eighties began a trend to replace a traditional through-hole technique with the surface mounted technology (SMT) using surface mounted devices (SMD). The SMT, although intended in principle for automatic manufacturing only expand more and more, even into a hobby world. This trend will continue, because many new components are available in SMD versions only. The SMT technique opens advantages and new applications through miniaturising of the components and increasing of reliability. The industry standard unfortunately allows that most of the SMD components does not have a clear description. Since a tiny size of the components, they are labelled with one, two or more character or graphic SMD code. Thus it is necessary to take into account that the colour and (or) placing of alphanumeric or graphic symbols are also important. Therefore a sure identification of the components is impossible without appropriate technical documentation. Moreover the polarity and pin - outs of different components could be not identified without data sheets.

Identifying the manufacturers type number of an SMD device from the package code can be a difficult task. Unfortunately, each device code is not necessarily unique.

For various manufacturers it is possible to place different devices in the same case with the same SMD-code. For example, with a **6H** SMD-code in a SOT-23 case might be either a npn-transistor **BC818** (CDIL) or a capacitance-diode **FMMV2104** (Zetex) or a n-channel JFET transistor **MMBF5486** (Motorola) or a pnp-digital transistor **MUN2131** (Motorola) or a pnp-digital transistor **UN2117** (Panasonic) or a CMOS-integrated circuit- voltage detector with reset output **R3131N36EA** (Ricoh). Even the same manufacturer may use the same code for different devices.

To identify a particular SMD device, is necessary to identify the manufacturer, package type and note the SMD code printed on the device.

The identification of the manufacturer is possible only if on the case are printed the manufacturer's logos, but it not always happens. Besides, sometimes, it is possible to determine the manufacturer with indirect tags. Many recent ON Semiconductor devices have a small superscript letter after the device code, such as **SA^c** (this smaller letter is merely a month of manufacture code). Infineon devices usually have a lower case '**s**' (**ATs**, **LOs**). NXP (Philips) devices usually have a lower case '**p**' (**AHp**, **Z1p**, **pB0**) or '**-**' (**DQ-**, **-ZS**) for the devices made in Hong Kong, '**t**' (**tT9**, **Y7t**) for the devices made in Malaysia, "**W**" (**WT9**, **Y7W**) for the devices made in China. In section 19 are submitted the logos of the SMD devices manufacturers.

The package type is another problem for the identification of SMD devices. The different manufacturers can designate identical cases concerning by the various standards (or concerning by the internal system). Besides, the various cases can have an identical kind (form) and differ only by sizes. This distinction of sizes so it is not enough, that can be is measured only by special measuring devices.

Compliance with the name and type of cases from different manufacturers is solved by applying in the column "Case" an equivalent type name for equivalent cases.

In addition to SMD-code, upper case may be put padding alpha-numeric information (usually by another font or size of characters, also may be by other arrangement). Relationship position of the SMD-code and padding information have defined as style and show in the column "Style"

In the following tables sections the SMD semiconductor components - irrelevant as to whether it is dealing with transistors, diodes, integrated circuits etc. are placed in separate tables according to numbers of terminals and (or) type of cases and are listed in alpha-numeric order by SMD-codes.

Column 1 ("SMD-Code")

Column 2 ("Type")

The type designations correspond to those of the respective manufacturer documentations.

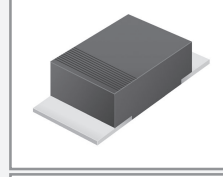
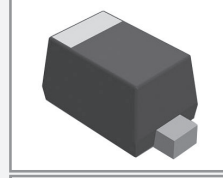
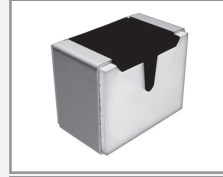
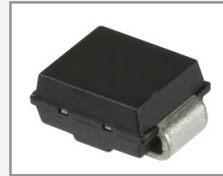
Column 3 ("Function")

Short definition of the semiconductor component.

Used abbreviations:

BM-IC	Battery Management integrated circuit	LDR-IC	LED driver integrated circuit
BR	Bridge Rectifier	Lin-IC	Linear integrated circuit
C-diode	Capacitance diode (varactor, varicap)	LVR-IC	Linear voltage regulator integrated circuit
CMOS-Log	CMOS logic integrated circuit	LVR/Vdet-IC	Linear voltage regulator/Voltage detector combined integrated circuit
Comp-IC	Voltage comparator integrated circuit	MMIC	Monolithic Microwave Integrated Circuit
DC/DC-IC	DC/DC voltage converter integrated circuit	-MOSFET	Metal-Oxide-Semiconductor FET
ESDP-diode	ElectroStatic Discharge Protection diode	-MESFET	MEtal-Semiconductor FET
ESD-Prot	ElectroStatic Discharge Protection thyristor	n-	n-channel junction transistor
-FET	Field Effect Transistor	n/p-	n-channel and p-channel transistors area
HEMT	High electron mobility transistors	Op-IC	Operational amplifier integrated circuit
H-IC	Hall-effect sensor integrated circuit	p-	p-channel junction transistor
HSPS-IC	High-side power switch integrated circuit	PDS-IC	Power distribution switch integrated circuit
IGBT	Insulated Gate Bipolar Transistor	PHEMT	Pseudomorphic high electron mobility transistors
IGBT+Di	Insulated Gate Bipolar Transistor with antiparallel diode	PIN-diode	Diode with a wide, undoped intrinsic semiconductor region
		PSW-IC	Power Switch IC
		Si-diode	Silicon diode
		SiGe-diode	Silicon/Germanium diode
		Si-npn	Silicon npn transistor
		Si-n/p	Silicon npn and pnp transistors area
		Si-npn-Darl	Silicon npn Darlington transistor

SECTION 1
2-pin case SMD semiconductor components



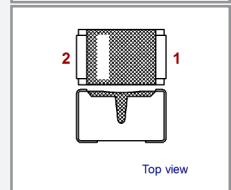
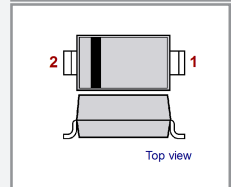
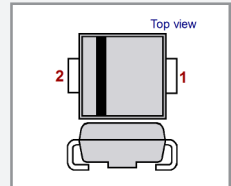
SMD code	Type	Function	Case	Style	Short description	Atr	A.d.	Pin	Mnf
*	1SS400G	Si-diode	SOD-723	1a	Sw, 80V, 100mA, Vf<1.2V(100mA), <4ns	-	-	7d	Zbs
.0	BZX584C5V6-V-G	Z-diode	SOD-523	1a	5.2..6.0V, Izt=5mA, Zzt=40Ω, 200mW	A17	-	6d	Vs
.1	BZX584C16-V-G	Z-diode	SOD-523	1a	15.3..17.1V, Izt=5mA, Zzt=40Ω, 200mW	A56	-	6d	Vs
.1	BZX584C22-V-G	Z-diode	SOD-523	1a	20.8..23.3V, Izt=5mA, Zzt=55Ω, 200mW	A58	-	6d	Vs
.1	BZX584C5V1-V-G	Z-diode	SOD-523	1a	4.8..5.4V, Izt=5mA, Zzt=60Ω, 200mW	A17	-	6d	Vs
.1	BZX584C6V2-V-G	Z-diode	SOD-523	1a	5.8..6.6V, Izt=5mA, Zzt=10Ω, 200mW	A57	-	6d	Vs
.2	BZX584C18-V-G	Z-diode	SOD-523	1a	16.8..19.1V, Izt=5mA, Zzt=45Ω, 200mW	A56	-	6d	Vs
.2	BZX584C2V4-V-G	Z-diode	SOD-523	1a	2.2..2.6V, Izt=5mA, Zzt=100Ω, 200mW	A17	-	6d	Vs
.2	BZX584C6V8-V-G	Z-diode	SOD-523	1a	6.4..7.2V, Izt=5mA, Zzt=15Ω, 200mW	A57	-	6d	Vs
.3	BZX584C2V7-V-G	Z-diode	SOD-523	1a	2.5..2.9V, Izt=5mA, Zzt=100Ω, 200mW	A17	-	6d	Vs
.3	BZX584C7V5-V-G	Z-diode	SOD-523	1a	7.0..7.9V, Izt=5mA, Zzt=15Ω, 200mW	A57	-	6d	Vs
.4	BZX584C15-V-G	Z-diode	SOD-523	1a	14.3..15.8V, Izt=5mA, Zzt=30Ω, 200mW	A57	-	6d	Vs
.4	BZX584C20-V-G	Z-diode	SOD-523	1a	18.8..21.2V, Izt=5mA, Zzt=55Ω, 200mW	A56	-	6d	Vs
.4	BZX584C3V0-V-G	Z-diode	SOD-523	1a	2.8..3.2V, Izt=5mA, Zzt=100Ω, 200mW	A17	-	6d	Vs
.5	BZX584C13-V-G	Z-diode	SOD-523	1a	12.4..14.1V, Izt=5mA, Zzt=30Ω, 200mW	A57	-	6d	Vs
.5	BZX584C24-V-G	Z-diode	SOD-523	1a	22.8..25.6V, Izt=5mA, Zzt=70Ω, 200mW	A56	-	6d	Vs
.5	BZX584C3V3-V-G	Z-diode	SOD-523	1a	3.1..3.5V, Izt=5mA, Zzt=95Ω, 200mW	A17	-	6d	Vs
.6	BZX584C3V6-V-G	Z-diode	SOD-523	1a	3.4..3.8V, Izt=5mA, Zzt=90Ω, 200mW	A17	-	6d	Vs
.7	BZX584C12-V-G	Z-diode	SOD-523	1a	11.4..12.7V, Izt=5mA, Zzt=25Ω, 200mW	A57	-	6d	Vs
.7	BZX584C27-V-G	Z-diode	SOD-523	1a	25.1..28.9V, Izt=2mA, Zzt=80Ω, 200mW	A56	-	6d	Vs
.7	BZX584C3V9-V-G	Z-diode	SOD-523	1a	3.7..4.1V, Izt=5mA, Zzt=90Ω, 200mW	A17	-	6d	Vs
.8	BZX584C4V3-V-G	Z-diode	SOD-523	1a	4.0..4.6V, Izt=5mA, Zzt=90Ω, 200mW	A17	-	6d	Vs
.9	BZX584C33-V-G	Z-diode	SOD-523	1a	31..35V, Izt=2mA, Zzt=80Ω, 200mW	A56	-	6d	Vs
.9	BZX584C4V7-V-G	Z-diode	SOD-523	1a	4.4..5.0V, Izt=5mA, Zzt=80Ω, 200mW	A17	-	6d	Vs
.C3	CZRW5223B-HF	Z-diode	SOD-123	1a	2.57..2.84V, Zzt=30Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.C5	CZRW5225B-HF	Z-diode	SOD-123	1a	2.85..3.15V, Zzt=30Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.E1	CZRW5231B-HF	Z-diode	SOD-123	1a	4.85..5.36V, Zzt=17Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.E2	CZRW5232B-HF	Z-diode	SOD-123	1a	5.32..5.88V, Zzt=11Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.E3	CZRW5233B-HF	Z-diode	SOD-123	1a	5.70..6.30V, Zzt=7Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.E4	CZRW5234B-HF	Z-diode	SOD-123	1a	5.89..6.51V, Zzt=7Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.E5	CZRW5235B-HF	Z-diode	SOD-123	1a	6.46..7.14V, Zzt=5Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.F1	CZRW5236B-HF	Z-diode	SOD-123	1a	7.13..7.88V, Zzt=6Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.F2	CZRW5237B-HF	Z-diode	SOD-123	1a	7.79..8.61V, Zzt=8Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.F3	CZRW5238B-HF	Z-diode	SOD-123	1a	8.27..9.14V, Zzt=8Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.F4	CZRW5239B-HF	Z-diode	SOD-123	1a	8.65..9.56V, Zzt=10Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.F5	CZRW5240B-HF	Z-diode	SOD-123	1a	9.50..10.50V, Zzt=17Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.G1	CZRW5226B-HF	Z-diode	SOD-123	1a	3.14..3.47V, Zzt=28Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.G2	CZRW5227B-HF	Z-diode	SOD-123	1a	3.42..3.78V, Zzt=24Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.G3	CZRW5228B-HF	Z-diode	SOD-123	1a	3.71..4.10V, Zzt=23Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.G4	CZRW5229B-HF	Z-diode	SOD-123	1a	4.09..4.52V, Zzt=22Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.G5	CZRW5230B-HF	Z-diode	SOD-123	1a	4.47..4.94V, Zzt=19Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.H1	CZRW5241B-HF	Z-diode	SOD-123	1a	10.45..11.55V, Zzt=22Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.H2	CZRW5242B-HF	Z-diode	SOD-123	1a	11.40..12.60V, Zzt=30Ω, Izt=20mA, 350mW	A18	-	5d	Cmc
.H3	CZRW5243B-HF	Z-diode	SOD-123	1a	12.35..13.65V, Zzt=13Ω, Izt=9.5mA, 350mW	A18	-	5d	Cmc
.H4	CZRW5244B-HF	Z-diode	SOD-123	1a	13.30..14.70V, Zzt=15Ω, Izt=9.0mA, 350mW	A18	-	5d	Cmc
.H5	CZRW5245B-HF	Z-diode	SOD-123	1a	14.25..15.75V, Zzt=16Ω, Izt=8.5mA, 350mW	A18	-	5d	Cmc
.J1	CZRW5246B-HF	Z-diode	SOD-123	1a	15.20..16.80V, Zzt=17Ω, Izt=7.8mA, 350mW	A18	-	5d	Cmc
.J2	CZRW5247B-HF	Z-diode	SOD-123	1a	16.15..17.85V, Zzt=19Ω, Izt=7.4mA, 350mW	A18	-	5d	Cmc
.J3	CZRW5248B-HF	Z-diode	SOD-123	1a	17.10..18.90V, Zzt=21Ω, Izt=7.0mA, 350mW	A18	-	5d	Cmc
.J5	CZRW5250B-HF	Z-diode	SOD-123	1a	19.0..21.0V, Zzt=25Ω, Izt=6.2mA, 350mW	A18	-	5d	Cmc
.K	BZX584C30-V-G	Z-diode	SOD-523	1a	28..32V, Izt=2mA, Zzt=80Ω, 200mW	A17	-	6d	Vs
.K1	CZRW5251B-HF	Z-diode	SOD-123	1a	20.90..23.10V, Zzt=29Ω, Izt=5.6mA, 350mW	A18	-	5d	Cmc
.K2	CZRW5252B-HF	Z-diode	SOD-123	1a	22.80..25.20V, Zzt=33Ω, Izt=5.2mA, 350mW	A18	-	5d	Cmc
.K4	CZRW5254B-HF	Z-diode	SOD-123	1a	25.65..28.35V, Zzt=41Ω, Izt=5mA, 350mW	A18	-	5d	Cmc
.K5	CZRW5255B-HF	Z-diode	SOD-123	1a	26.60..29.40V, Zzt=44Ω, Izt=4.5mA, 350mW	A18	-	5d	Cmc
.L	BZX584C47-V-G	Z-diode	SOD-523	1a	44..50V, Izt=2mA, Zzt=170Ω, 200mW	A17	-	6d	Vs
.M	BZX584C51-V-G	Z-diode	SOD-523	1a	48..54V, Izt=2mA, Zzt=180Ω, 200mW	A17	-	6d	Vs
.M1	CZRW5256B-HF	Z-diode	SOD-123	1a	28.50..31.50V, Zzt=49Ω, Izt=4.2mA, 350mW	A18	-	5d	Cmc
.P	BZX584C11-V-G	Z-diode	SOD-523	1a	10.4..11.6V, Izt=5mA, Zzt=20Ω, 200mW	A57	-	6d	Vs
.P	BZX584C36-V-G	Z-diode	SOD-523	1a	34..38V, Izt=2mA, Zzt=90Ω, 200mW	A56	-	6d	Vs
.R	BZX584C10-V-G	Z-diode	SOD-523	1a	9.4..10.6V, Izt=5mA, Zzt=20Ω, 200mW	A57	-	6d	Vs
.R	BZX584C39-V-G	Z-diode	SOD-523	1a	37..41V, Izt=2mA, Zzt=130Ω, 200mW	A56	-	6d	Vs
.S	BZX584C9V1-V-G	Z-diode	SOD-523	1a	8.5..9.6V, Izt=5mA, Zzt=15Ω, 200mW	A57	-	6d	Vs
.T	BZX584C8V2-V-G	Z-diode	SOD-523	1a	7.7..8.7V, Izt=5mA, Zzt=15Ω, 200mW	A58	-	6d	Vs
.U	BZX584C43-V-G	Z-diode	SOD-523	1a	40..46V, Izt=2mA, Zzt=150Ω, 200mW	A58	-	6d	Vs
.Z	MM3Z51VB	Z-diode	SOD-323FL	1a	49.98..52.02V, Zzt=169Ω, Izt=2mA, 200mW	-	-	7d	F
+5	BZX584B3V9	Z-diode	SOD-523FL	1a	3.82..3.98V, Izt=5mA, Zzt=90Ω, 200mW	-	-	7d	Tak
+5	MM5Z3V9B	Z-diode	SOD-523FL	1a	3.82..3.98V, Izt=5mA, Zzt=90Ω, 200mW	-	-	7d	Tak
<5	BZX584B75V	Z-diode	SOD-523FL	1a	73.50..76.50V, Izt=2mA, Zzt=255Ω, 200mW	-	-	7d	Tak
<5	MM5Z75VB	Z-diode	SOD-523FL	1a	73.50..76.50V, Izt=2mA, Zzt=255Ω, 200mW	-	-	7d	Tak

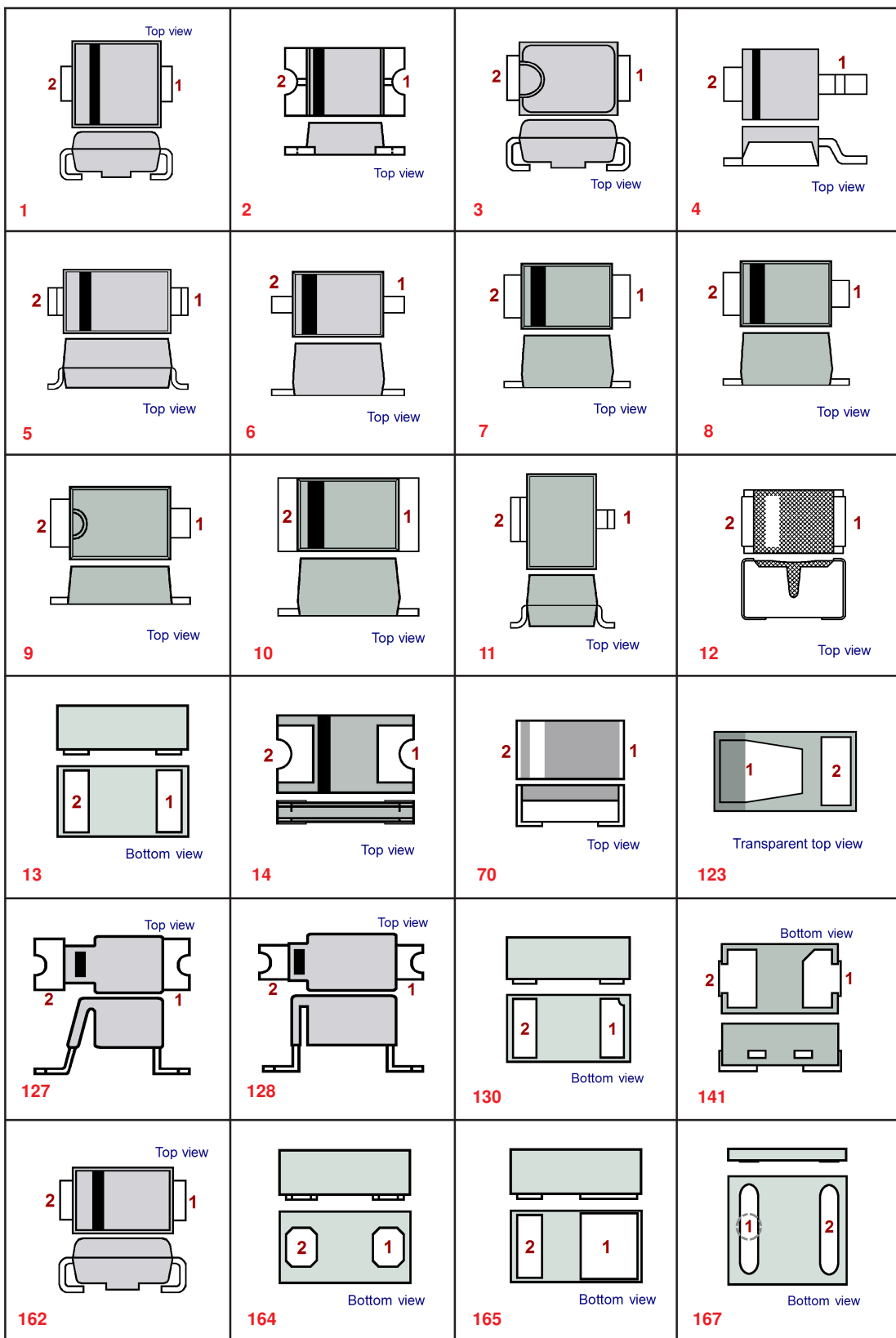


SMD code	Type	Function	Case	Style	Short description	Atr	A.d.	Pin	Mnf
ZZ	CD1005-Z39	Z-diode	1005	2b	37.05..40.95V, 5mA, Zzt=90Ω, 200mW	-	-	70d	Brn
ZZ	CZRER52C39	Z-diode	SOD-723F	2b	37.05..40.95V, lzt=5mA, Zzt=90Ω, 150mW	-	-	70d	Cmc
ZZ	CZRERT52C39	Z-diode	SOD-723F	2b	37.05..40.95V, lzt=5mA, Zzt=90Ω, 150mW	-	-	70d	Cmc
ZZ	CZRF52C39	Z-diode	1005	2b	37.05..40.95V, lzt=5mA, Zzt=90Ω, 200mW	-	-	70d	Cmc
ZZ	CZRRFR52C39	Z-diode	1005	2b	37.05..40.95V, lzt=5mA, Zzt=90Ω, 200mW	-	-	70d	Cmc
ZZ	CZRQR52C39	Z-diode	0402	2b	37.05..40.95V, lzt=5mA, Zzt=90Ω, 125mW	-	-	70d	Cmc
ZZ	CZRUR52C39	Z-diode	0603	2b	37.05..40.95V, lzt=5mA, Zzt=90Ω, 150mW	-	-	70d	Cmc
ZZ	EC76SMAJ100CA	TVS	DO-214AC	1wd	Vbr=111..123V, Vrwm=100V, lpp=1.9A, 400W(1ms), Bidir.	A69	38	162ba	Ecm
ZZ	P4SMAJ100CA	TVS	DO-214AC	1j	Vrwm=100V, Vbr=111..123V, lpp=2.5A, 400W(1ms), Bidir.	-	-	162ba	Lsr
ZZ	PMF100CA	TVS	SOD-123FL	1j	Vbr=111..123V, Vrwm=100V, lpp=1.23A, 200W(1ms), Bidir.	-	-	7ba	Shp
ZZ	SMAJ100CA	TVS	DO-214AC	1wa	Vrwm=100.0V, Vbr=111.0..123.0V, lpp=2.47A, 400W(1ms), Bidir.	A08f	-	162ba	Soc
ZZ	SMAJ100CA	TVS	DO-214AC	1wa	Vrwm=100.0V, Vbr=111.0..123.0V, lpp=2.47A, 400W(1ms), Bidir.	A08m	-	162ba	Mco
ZZ	SMAJ100CA	TVS	DO-214AC	1me	Vrwm=100.0V, Vbr=111.0..123.0V, lpp=2.47A, 400W(1ms), Bidir.	A06n	28	162ba	Ynt
ZZ	SMAJ100CA	TVS	DO-214AC	1kb	Vrwm=100V, Vbr=111..123V, 1.9A, 400W(1ms), Bidir.	A71	38	162ba	Vs
ZZ	SMAS100CA	TVS	SMA-S	1wb	Vrwm=100V, Vbr=111..123V, lpp=2.5A, 400W(1ms), Bidir.	A07d	-	7ba	Frm
ZZ	ST02-30G1	TVS	G1F	1km	Vbr=28.0..32.0V, Vrm=24V, lpp=5A, 200W(1ms)	-	-	177d	Shi
ZZ	TSZL52C39	Z-diode	1005	2b	37.05..40.95V, lzt=5mA, Zzt=90Ω, 200mW	-	-	70d	Tsc
ZZ	TSZU52C39	Z-diode	0603	2b	37.05..40.95V, lzt=5mA, Zzt=90Ω, 150mW	-	-	70d	Tsc
ZZ	TV04A101JB-G	TVS	DO-214AC	2o	Vrwm=100.0V, Vbr=111.0..123.0V, lpp=2.47A, 400W(1ms), Bidir.	A07a	42	162ba	Cmc
ZZJ	SMFZ4.3V	Z-diode	SMF	1c	4.3..4.8V, lzt=40mA, 1W	-	-	7d	Kec
ZZK	SMFZ4.7V	Z-diode	SMF	1c	4.7..5.2V, lzt=40mA, 1W	-	-	7d	Kec
ZZL	SMFZ5.1V	Z-diode	SMF	1c	5.1..5.7V, lzt=40mA, 1W	-	-	7d	Kec
ZZM	SMFZ5.6V	Z-diode	SMF	1c	5.6..6.3V, lzt=40mA, 1W	-	-	7d	Kec
ZZN	SMFZ6.2V	Z-diode	SMF	1c	6.2..7.0V, lzt=40mA, 1W	-	-	7d	Kec
ZZP	SMFZ6.8V	Z-diode	SMF	1c	6.8..7.7V, lzt=40mA, 1W	-	-	7d	Kec
ZZQ	SMFZ7.5V	Z-diode	SMF	1c	7.5..8.4V, lzt=40mA, 1W	-	-	7d	Kec
ZZR	SMFZ8.2V	Z-diode	SMF	1c	8.2..9.3V, lzt=40mA, 1W	-	-	7d	Kec
ZZS	SMFZ9.1V	Z-diode	SMF	1c	9.1..10.2V, lzt=40mA, 1W	-	-	7d	Kec




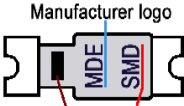

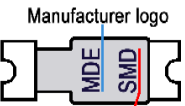


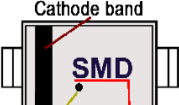



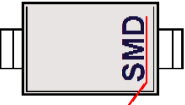


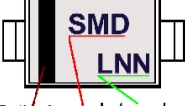

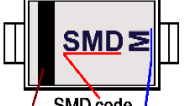
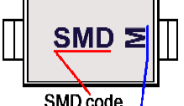
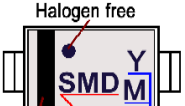
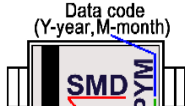


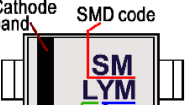
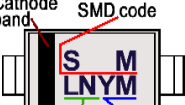
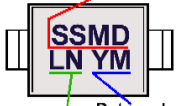
SECTION 2
Conventional case drawings. Pin assignment





























SECTION 3
2-pin cases SMD-code marking style



<p>1a</p>  <p>SMD code Cathode band</p>	<p>1ab</p>  <p>Manufacturer logo MDE SMD SMD code Cathode band</p>	<p>1ac</p>  <p>SMD code Cathode</p>	<p>1ad</p>  <p>Manufacturer logo MDE SMD SMD code</p>
<p>1ae</p>  <p>Additional ranking (X, Y or Z) SMD code Decimal point Cathode band</p>	<p>1ag</p>  <p>SMD code</p>	<p>1ah</p>  <p>Cathode band Green package SMD code</p>	<p>1b</p>  <p>SMD code Cathode band</p>
<p>1ba</p>  <p>SMD code Cathode band</p>	<p>1bb</p>  <p>SMD code Cathode band</p>	<p>1bc</p>  <p>SMD code</p>	<p>1bd</p>  <p>SMD code Cathode band (colored)</p>
<p>1c</p>  <p>Cathode band SMD code Lot number</p>	<p>1ca</p>  <p>Cathode band SMD code Lot number</p>	<p>1d</p>  <p>SMD code Cathode band Data code (Y-year, M-month)</p>	<p>1da</p>  <p>Cathode band SMD code Data code (M-month)</p>
<p>1db</p>  <p>SMD code Data code (M-month)</p>	<p>1dc</p>  <p>Halogen free SMD code Cathode band Data code (Y-year, M-month)</p>	<p>1dd</p>  <p>Data code (Y-year, M-month) SMD code Cathode band Manufacturing code</p>	<p>1e</p>  <p>SMD code</p>
<p>1f</p>  <p>Cathode band SMD code Assembly location Wafer lot Data code (Y-year, W-week)</p>	<p>1fa</p>  <p>Cathode band SMD code Lot number Data code (Y-year, M-month)</p>	<p>1fb</p>  <p>Cathode band SMD code Lot number Data code (Y-year, M-month)</p>	<p>1fc</p>  <p>SMD code Lot number Data code (Y-year, M-month)</p>

SECTION 4
2-pin cases SMD-code attribute



<p style="text-align: center; color: red;">A02a</p> 	<p style="text-align: center; color: red;">A02b</p> 	<p style="text-align: center; color: red;">A02c</p> 	<p style="text-align: center; color: red;">A02d</p> 
<p style="text-align: center; color: red;">A02e</p> 	<p style="text-align: center; color: red;">A02f</p> 	<p style="text-align: center; color: red;">A02g</p> 	<p style="text-align: center; color: red;">A02h</p> 
<p style="text-align: center; color: red;">A02i</p> 	<p style="text-align: center; color: red;">A02j</p> 	<p style="text-align: center; color: red;">A02k</p> 	<p style="text-align: center; color: red;">A02m</p> 
<p style="text-align: center; color: red;">A02n</p> 	<p style="text-align: center; color: red;">A03a</p> 	<p style="text-align: center; color: red;">A03b</p> 	<p style="text-align: center; color: red;">A03c</p> 
<p style="text-align: center; color: red;">A03d</p> 	<p style="text-align: center; color: red;">A03e</p> 	<p style="text-align: center; color: red;">A03f</p> 	<p style="text-align: center; color: red;">A03g</p> 
<p style="text-align: center; color: red;">A04a</p> 	<p style="text-align: center; color: red;">A04b</p> 	<p style="text-align: center; color: red;">A04c</p> 	<p style="text-align: center; color: red;">A04d</p> 

SECTION 5

Additional production data info


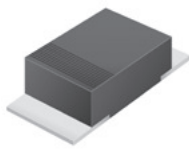



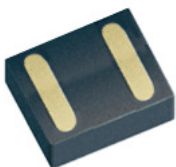
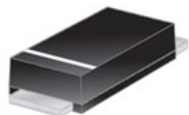
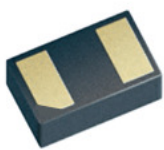





Besides irregular marking code, the manufacturers can place additional information such as **internal production lot number, traceability code, data of production, assembly location** etc. The additional info is an arbitral position and arbitral content (depending of the manufacturer) and can be alphanumeric symbol (symbols) or graphic symbol. Below we present some additional info.

- 01** Year: A-2010, B-2011, C-2012, D-2013, E-2014, F-2015, H-2016, J-2017, K-2018, L-2019, M-2020, N-2021, P-2022, R-2023, S-2024, T..X- 2025..2029, Week: 01, 02..53.
- 02** Year: J..N- 1998..2002, P- 2003, R..Z- 2004..2012, A,B,C,D,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S- 2013..2031, Month: 1- Jan, 2- Feb, 3- Mar, 4- Apr, 5- May, 6- Jun, 7- Jul, 8- Aug, 9- Sep, O- Oct, N- Nov, D- Dec.
- 03** Year: 0- 2020, 1- 2021, 2- 2022,..8- 2028, 9- 2029, Week: 01..53
- 04** Year: 0- 2020, 1- 2021, 2- 2022,..8- 2028, 9- 2029, Month: A- Jan, B- Feb, C- Mar, D- Apr, E- May, F- Jun, G- Jul, H- Aug, I- Sep, J- Oct, K- Nov, L- Dec.
- 05** Lot number: 01..09, 0A..0Z, 11..9Z, A1..A9, AA..Z9, ZA..ZZ repeated (G, I, J, O, Q, W excepted). No character inversion used.
- 06** Lot number: L=A..Z repeated (I, O, X excepted), N=1..9 repeated
- 07** Lot number: 0..9, A..Z repeated (G, I, J, O, Q, W excepted).
- 08** Year: Last decimal digit of the year - representet by specific line, Month: 1-Jan, 2-Feb, 3-Mar, 4-Apr, 5-May, 6-Jun, 7-Jul, 8-Aug, 9-Sep, O-Oct, N-Nov, D-Dec.
- 09** Lot number: 0..9, A..Z repeated (G, I, J, O, Q, W excluded). No character inversion used.
- 10** Lot number: 0..9, A..Z reverse character, 0..9, A..Z repeated (G, I, J, O, Q, W excepted).
- 11** Year: W-2009, X-2010, Y-2011, Z-2012, A-2013, B-2014, C-2015, D-2016, Month: 1-Jan, 2-Feb, 3-Mar, 4-Apr, 5-May, 6-Jun, 7-Jul, 8-Aug, 9-Sep, O-Oct, N-Nov, D-Dec.
- 12** Lot number: 01..09, 10, 11..99, 0A..0Z, 1A..1Z repeated (G, I, J, O, Q, W excluded).
- 13** Lot number: 01..09, 0A..0Z, 11..9Z, A1..A9, AA..Z9, B1..ZZ in order (G, I, J, O, Q, W excluded).
- 14** Year: 1- 2021, 2- 2022..0- 2030.., Week: A..Z: 1..26 week, a..z: 27..52 week
- 15** Lot number: repeated 0..9, A..Z or inverted 0..9, A..Z (G, I, J, O, Q, W excluded).
- 16** Year: Last decimal digit of the year - representet by specific line, Month: A- Jan, B- Feb, C- Mar, D- Apr, E- May, F- Jun, G- Jul, H- Aug, I- Sep, J- Oct, K- Nov, L- Dec.
- 17** A- assembly location, Y- year, W- work week
- 18** SMD-symbol subscript bar- 2012 prod. year, 2-SMD-symbol superscript bar- 2013 prod. year, f: week (A..Z- 1..26 week, a..z- 27..52 week)
- 19** Year/Month: Black j..z: Jan.1988..May.1989, Brown a..z: Jun.1989..Jul.1990, Red a..z:Aug.1991..Oct..1993, Blue a..z:Oct.1993..Nov.1995, Green a..m: Dec.1995..Dec. 1996
- 20** Lot number: L=1..0, A..Z repeated (I, O, X excepted)
- 21** Date code orientation and/or position may vary depending upon manufacturing location.
- 22** Lot number: L=A..Z (I, O, X excepted)
- 23** Lot number: L 0..9 repeated, N=A..Z repeated (I, O, X excepted)
- 24** 2-SMD-symbol subscript bar- 2012 prod. year, 2-SMD-symbol superscript bar- 2013 prod. year, 3-SMD-symbol subscript bar- 2014 prod. year, 3-SMD-symbol superscript bar- 2015 prod. year, W: week (A..Z- 1..26 week, a..z- 27..52 week)
- 25** Year: last digit of the year (ex: 14 for 2024, 15 for 2025, 16 for 2026..), Week: 01, 02..53
- 26** W: week - A..Z - 1..26 week, a..z - 27..52 week.
- 27** Year: A=2020, 1=2021, 2=2022..5=2025..9=2029.
- 28** Year: A-2010, B-2011, C-2012, D-2013, E-2014, F-2015, H-2016, J-2017, K-2018, L-2019, M-2020, N-2021, P-2022, R-2023, S-2024, T..X- 2025..2029, Month: A-Jan, B-Feb, C-Mar, D-Apr, E-May, F-Jun, G-Jul, H-Aug, I-Sept, J-Oct, K-Nov, L-Dec, Week: 01, 02..53
- 29** 3-SMD-symbol subscript bar- 2006 prod. year, 3-SMD-symbol superscript bar- 2007 prod. year, 4-SMD-symbol subscript bar- 2008 prod. year, Week: A..Z - 1..26 week, a..z - 27..52 week.
- 30** Year: 0-2020, 1-2021, 2-2022, 3-2023..9-2029, Month: 1- Jan, 2- Feb, 3- Mar, 4- Apr, 5- May, 6- Jun, 7- Jul, 8- Aug, 9- Sep, O- Oct, N- Nov, D- Dec.
- 31** Month: 1- Jan, 2- Feb, 3- Mar, 4- Apr, 5- May, 6- Jun, 7- Jul, 8- Aug, 9- Sep, O- Oct, N- Nov, D- Dec.
- 32** Year: W-2008, X-2009, A-2010, B-2011, C-2012, E-2013, F-2014, G-2015, H-2016, I-2017, K-2018, Month: 1-Jan, 2-Feb, 3-Mar, 4-Apr, 5-May, 6-Jun, 7-Jul, 8-Aug, 9-Sep, O-Oct, N-Nov, D-Dec.
- 33** Year: W-2009, X-2010, Y-2011, Z-2012, A-2013, B-2014, C-2015, D-2016, E-2017, F-2018, G-2019, H-2020, Month: 1 or E-Jan, 2 or F-Feb, 3 or H-Mar, 4 or J-Apr, 5 or K-May, 6 or L-Jun, 7 or N-Jul, 8 or P-Aug, 9 or U-Sep, T or X-Oct, V or Y-Nov, C or Z-Dec.
- 34** Year: Y-2010, B-2011, C-2012, E-2013, F-2014, G-2015, H-2016, L-2017, K-2018, Month: 1- Jan, 2- Feb, 3- Mar, 4- Apr, 5- May, 6- Jun, 7- Jul, 8- Aug, 9- Sep, O- Oct, N- Nov, D- Dec.
- 35** YMLN- Y- Year (last number of a year), M- Month: 1-Jan, 2-Feb, 3-Mar, 4-Apr, 5-May, 6-Jun, 7-Jul, 8-Aug, 9-Sept, A-Oct, B-Nov, C-Dec, LN- internal lot number
- 36** Work week: 01, 02..52
- 38** Year: 0-2020, 1-2021, 2-2022, 3-2023..9-2029, Month: 1- Jan, 2- Feb, 3- Mar, 4- Apr, 5- May, 6- Jun, 7- Jul, 8- Aug, 9- Sep, A- Oct, B- Nov, C- Dec.

SECTION 6
Case drawings



 <p>0201 0805 1206</p>	 <p>0402 1005 0603 SOD-723F</p>	 <p>1-1E1A 1-1F1A</p>	 <p>1-1G1A</p>
 <p>1-1G1S</p>	 <p>1-1K1A 1-1L1A</p>	 <p>1408 A3PS-C</p>	 <p>1607</p>
 <p>1F1A</p>	 <p>2F</p>	 <p>3-4D1A DO-214AA DO-214AB SOD-106</p>	 <p>403 403B-01 403-01 403C 403A 403D 403A-03 403D-2</p>
 <p>A-SMA</p>	 <p>CE</p>	 <p>CST2</p>	 <p>DCSP1006010-N1 uDFN-2L X1DFN1006-2</p>
 <p>DCSP1616010-N1</p>	 <p>D-FLAT SMV</p>	 <p>DFN0603 TSLP2-1</p>	 <p>DFN1006-2 GMD2 TSLP-2</p>
 <p>DFN1006 DFN1610-2 DFNWB0.6x0.3</p>	 <p>DFN1006DN</p>	 <p>DO-214AC DO-214BA</p>	 <p>DO-215AA DO-215AB</p>



SECTION 7
Manufacturers name, logo and web page URL





Aat- Advanced Analog Technology
<http://www.aatech.com.tw/index.aspx>



Abl- ABLIC Inc.
<https://www.ablicinc.com/en/semicon/>



Ad- Analog Devices
<http://www.analog.com>



Adt- ADDtek
<http://www.addmtek.com/Index.htm>



Afs- Analog Future Chip Co., Ltd.
<http://www.afsemi.com/>



Agi- Agilent Technologies
www.semiconductor.agilent.com



Aic- Analog Integrations Corporation
<http://www.analog.com.tw>



Ali- Alliance Semiconductor
<http://www.alsc.com>



All- Allegro MicroSystems Inc.
<http://www.allegromicro.com>



Alt- Aolittel Technology Co., Ltd
<http://www.aolittel.com>



Ame- AME, Inc.
www.ame.com.tw



Ams- AMOS Technology Limited
<http://www.amos-tech.com>



Amz- Amazing Microelectronic
<http://www.amazingIC.com>



Ana- Anachip Corp.
www.anachip.com.tw



Anb- Anbon Semiconductor Co., Ltd.
<http://www.anbonsemi.com>



Anp- Anpec Electronics Corp.
www.anpec.com.tw



Ans- AnaSem Inc.
<http://www.anasem.net/>



Ant- Advanced Analogic Technologies, Inc.
<http://www.analogictech.com>



Anv- Anova Technologies Co. Ltd
<http://anova-semi.com/>



Anw- Anwell Semiconductor Corp.
<http://www.ansc.com.tw/>



Aom- Alpha & Omega Semiconductor
<http://www.aosmd.com/>



Yea- Yeashin.Technology Co., Ltd
<http://www.yeashin.com/>



Yen- Yenyo Technology Co., Ltd.
<http://www.yenyo.com.tw/>



Ynt- Yint Electronics Co., Ltd.
<http://www.yint.com.cn>



Zbo- Zibo Micro Commercial Components Corp.
<http://www.zbmcc.com/en/>



Zbs- Zhide Electronics Co., Ltd
<http://www.senocn.com/>



Zhd- Zibo Seno Electronic Engineering Co., Ltd.
<http://www.cz-zhide.com/>



Zlg- Zilog, Inc.
<http://www.zilog.com/>



Zow- Zowie Technology Corporation
<http://www.zowie.com.tw/>



Zx- Zetex plc.
<http://www.zetex.com>



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