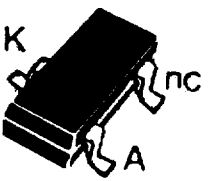
ZENER DIODES



SOT 23
(Plastic)

DESCRIPTION

350mW voltage regulator diodes designed for hybrid microcircuits and providing low dynamic resistance at low current.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_{tot}	Power Dissipation*	T_{amb} = 25°C	350	mW
I_{ZM}	Continuous Reverse Current	T_{amb} = 25°C	See page 2	mA
T_{stg} T_j	Storage and Junction Temperature Range		– 65 to 175	°C

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th\ (j-a)}$	Junction–ambient**	625	°C/W
$R_{th\ (j-SR)}$	Junction to Substrate*	425	°C/W

* Substrate mounted on infinite heatsink.
** Mounted on ceramic substrate : 7 x 5 x 0.5mm.

ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C)

Type (1)	Marking	V_{ZT} min (V)	V_{ZT} max (V)	r_{ZT} @ I_{ZT} max (Ω)	I_{ZT} (mA)	r_{ZK} @ I_{ZK} max (Ω)	I_{ZK} (mA)	αV_Z typ (%/°C)	I_R @ V_R max (μA)	V_R (V)	I_{ZM} (mA)
BZX 84 C 2V4	W 3	2.28	2.56	85	5	600	1	− 0.06	50	1	60
BZX 84 C 2V7	W 4	2.5	2.9	85	5	600	1	− 0.06	10	1	54
BZX 84 C 3V0	W 5	2.8	3.2	85	5	600	1	− 0.06	4	1	50
P BZX 84 C 3V3	W 6	3.1	3.5	85	5	600	1	− 0.06	2	1	47
P BZX 84 C 3V6	W 7	3.4	3.8	85	5	600	1	− 0.06	2	1	45
P BZX 84 C 3V9	W 8	3.7	4.1	85	5	600	1	− 0.06	2	1	43
P BZX 84 C 4V3	W 9	4.0	4.6	80	5	600	1	− 0.05	1	1	40
P BZX 84 C 4V7	Z 1	4.4	5.0	80	5	500	1	− 0.03	3	2	38
P BZX 84 C 5V1	Z 2	4.8	5.4	60	5	480	1	+ 0.02	2	2	35
P BZX 84 C 5V6	Z 3	5.2	6.0	40	5	400	1	+ 0.03	1	2	32
P BZX 84 C 6V2	Z 4	5.8	6.6	10	5	150	1	+ 0.04	3	4	28
P BZX 84 C 6V8	Z 5	6.4	7.2	15	5	80	1	+ 0.05	2	4	25
P BZX 84 C 7V5	Z 6	7.0	7.9	15	5	80	1	+ 0.05	1	5	23
P BZX 84 C 8V2	Z 7	7.7	8.7	15	5	80	1	+ 0.06	0.7	5	21
P BZX 84 C 9V1	Z 8	8.5	9.6	15	5	100	1	+ 0.06	0.5	6	18
BZX 84 C 10	Z 9	9.4	10.6	20	5	150	1	+ 0.07	0.2	7	16
BZX 84 C 11	Y 1	10.4	11.6	20	5	150	1	+ 0.07	0.1	8	15
P BZX 84 C 12	Y 2	11.4	12.1	25	5	150	1	+ 0.07	0.1	8	13
BZX 84 C 13	Y 3	12.4	14.1	30	5	170	1	+ 0.08	0.1	8	12
P BZX 84 C 15	Y 4	13.8	15.6	30	5	200	1	+ 0.08	0.05	$0.7V_{ZT}$	11
BZX 84 C 16	Y 5	15.3	17.1	40	5	200	1	+ 0.08	0.05	$0.7V_{ZT}$	10
BZX 84 C 18	Y 6	16.8	19.1	45	5	225	1	+ 0.08	0.05	$0.7V_{ZT}$	9.2
BZX 84 C 20	Y 7	18.8	21.2	55	5	225	1	+ 0.08	0.05	$0.7V_{ZT}$	8.3
BZX 84 C 22	Y 8	20.8	23.3	55	5	250	1	+ 0.09	0.05	$0.7V_{ZT}$	7.6
BZX 84 C 24	Y 9	22.8	25.6	70	5	250	1	+ 0.09	0.05	$0.7V_{ZT}$	7.0
BZX 84 C 27	Y 10	25.1	28.9	80	2	300	0.5	+ 0.09	0.05	$0.7V_{ZT}$	6.2
BZX 84 C 30	Y 11	28.0	32.0	80	2	300	0.5	+ 0.09	0.05	$0.7V_{ZT}$	5.6
BZX 84 C 33	Y 12	31.0	35.0	80	2	325	0.5	+ 0.09	0.05	$0.7V_{ZT}$	5.0
BZX 84 C 36	Y 13	34.0	38.0	90	2	350	0.5	+ 0.09	0.05	$0.7V_{ZT}$	4.6
BZX 84 C 39	Y 14	37.0	41.0	130	2	350	0.5	+ 0.09	0.05	$0.7V_{ZT}$	4.3
BZX 84 C 43	Y 15	40.0	46.0	150	2	375	0.5	+ 0.09	0.05	$0.7V_{ZT}$	3.9
BZX 84 C 47	Y 16	44.0	50.0	170	2	375	0.5	+ 0.09	0.05	$0.7V_{ZT}$	3.6
BZX 84 C 51	Y 17	48.0	54.0	180	2	400	0.5	+ 0.09	0.05	$0.7V_{ZT}$	3.3
BZX 84 C 56	Y 18	52.0	60.0	200	2	425	0.5	+ 0.09	0.05	$0.7V_{ZT}$	3.0
BZX 84 C 62	Y 19	58.0	66.0	215	2	450	0.5	+ 0.09	0.05	$0.7V_{ZT}$	2.7
BZX 84 C 68	Y 20	64.0	72.0	240	2	475	0.5	+ 0.09	0.05	$0.7V_{ZT}$	2.5
BZX 84 C 75	Y 21	70.0	80.0	255	2	500	0.5	+ 0.09	0.05	$0.7V_{ZT}$	2.2

P : Preferred voltages.
Note : 2% Tolerance available on preferred voltages only (with marking defined as per following table).

Part Number	Marking
BZX 84 B 3V3	DW6
BZX 84 B 3V6	DW7
BZX 84 B 3V9	DW8
BZX 84 B 4V3	DW9
BZX 84 B 4V7	DZ1
BZX 84 B 5V1	DZ2
BZX 84 B 5V6	DZ3
BZX 84 B 6V2	DZ4
BZX 84 B 6V8	DZ5
BZX 84 B 7V5	DZ6
BZX 84 B 8V2	DZ7
BZX 84 B 9V1	DZ8
BZX 84 B 12	DY2
BZX 84 B 15	DY4

PACKAGE MECHANICAL DATA

SOT 23 Plastic