Elektronische Bauelemente

BZX784C Series

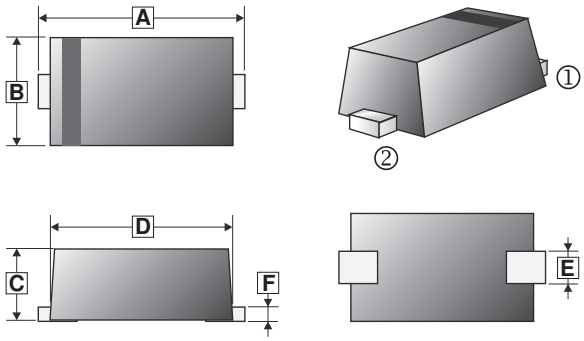
150mW, SOD-723
Surface Mount Zener Diodes

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Planar Die Construction
- 150mW Power Dissipation
- Zener Voltages from 2.4~39V
- Ideally Suited for Automated Assembly Processes
- Surface Device Type Mounting
- High Reliability
- Rectifying Small Power
- Ultra Small Mold Type
- Silicon Epitaxial Planer
- Low Reverse Current and Low Forward Voltage
- Flat Lead SOD-723 Small Outline Plastic Package

SOD-723



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.300	1.500	D	0.800	1.100
B	0.550	0.650	E	0.250	0.350
C	0.515	0.650	F	0.080	0.150

MECHANICAL DATA

- Case: SOD-723,Molded Plastic
- Mounting Position: Any
- Polarity: As Marked



APPLICATIONS

- Cellular Phones/Audio
- Portable Devices
- Digital Cameras
- MP3 Players

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-723	8K	7 inch

ORDER INFORMATION

Part Number	Type
BZX784C Series	Lead (Pb)-free
BZX784C Series-C	Lead (Pb)-free and Halogen-free

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Forward Voltage	V_F	0.9	V
Power Dissipation [1]	P_D	150	mW
Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	833	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	150, -55~150	°C

Note:
1. Valid provided that device terminals are kept at ambient temperature.

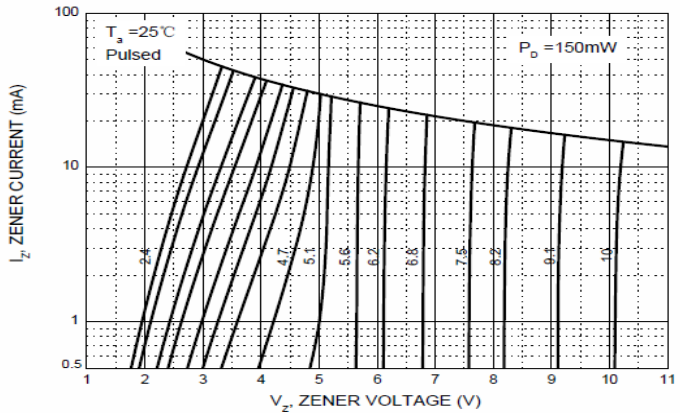
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Part Number	Marking	Zener Voltage Range [1]				Maximum Zener Impedance [2]			Maximum Reverse Current		Typical Temperature Coefficent	
		V_Z@I_{ZT}			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R	V_R	@I_{ZT} mV/°C	
		Min.(V)	Nom.(V)	Max.(V)	mA	Ω	Ω	mA	μA	V	Min.	Max.
BZX784C2V4	Z1	2.2	2.4	2.6	5	100	600	1	50	1	-3.5	0
BZX784C2V7	Z2	2.5	2.7	2.9	5	100	600	1	20	1	-3.5	0
BZX784C3V0	Z3	2.8	3	3.2	5	95	600	1	10	1	-3.5	0
BZX784C3V3	Z4	3.1	3.3	3.5	5	95	600	1	5	1	-3.5	0
BZX784C3V6	Z5	3.4	3.6	3.8	5	90	600	1	5	1	-3.5	0
BZX784C3V9	Z6	3.7	3.9	4.1	5	90	600	1	3	1	-3.5	0
BZX784C4V3	Z7	4	4.3	4.6	5	90	600	1	3	1	-3.5	0
BZX784C4V7	X1	4.4	4.7	5	5	80	500	1	3	2	-3.5	0.2
BZX784C5V1	X2	4.8	5.1	5.4	5	60	480	1	2	2	-2.7	1.2
BZX784C5V6	X3	5.2	5.6	6	5	40	400	1	1	2	-2	2.5
BZX784C6V2	X4	5.8	6.2	6.6	5	10	150	1	3	4	0.4	3.7
BZX784C6V8	X5	6.4	6.8	7.2	5	15	80	1	2	4	1.2	4.5
BZX784C7V5	X6	7	7.5	7.9	5	15	80	1	1	5	2.5	5.3
BZX784C8V2	X7	7.7	8.2	8.7	5	15	80	1	0.7	5	3.2	6.2
BZX784C9V1	X8	8.5	9.1	9.6	5	15	100	1	0.5	6	3.8	7
BZX784C10	X9	9.4	10	10.6	5	20	150	1	0.2	7	4.5	8
BZX784C11	W1	10.4	11	11.6	5	20	150	1	0.1	8	5.4	9
BZX784C12	W2	11.4	12	12.7	5	25	150	1	0.1	8	6	10
BZX784C13	W3	12.4	13	14.1	5	30	170	1	0.1	8	7	11
BZX784C15	W4	13.8	15	15.6	5	30	200	1	0.1	10.5	9.2	13
BZX784C16	W5	15.3	16	17.1	5	40	200	1	0.1	11.2	10.4	14
BZX784C18	W6	16.8	18	19.1	5	45	225	1	0.1	12.6	12.4	16
BZX784C20	W7	18.8	20	21.2	5	55	225	1	0.1	14	14.4	18
BZX784C22	W8	20.8	22	23.3	5	55	250	1	0.1	15.4	16.4	20
BZX784C24	W9	22.8	24	25.6	5	70	250	1	0.1	16.8	18.4	22
BZX784C27	Y1	25.1	27	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3
BZX784C30	Y2	28	30	32	2	80	300	0.5	0.1	21	24.4	29.4
BZX784C33	Y3	31	33	35	2	80	325	0.5	0.1	23.1	27.4	33.4
BZX784C36	Y4	34	36	38	2	90	350	0.5	0.1	25.2	30.4	37.4
BZX784C39	Y5	37	39	41	2	130	350	0.5	0.1	27.3	33.4	41.2

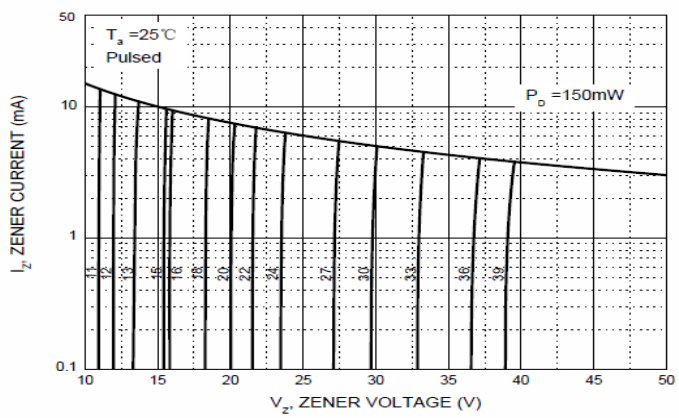
Notes:
1. Tested with pulses, period=5ms, pulse width=300μs.
2. f=1KHz.

CHARACTERISTIC CURVES

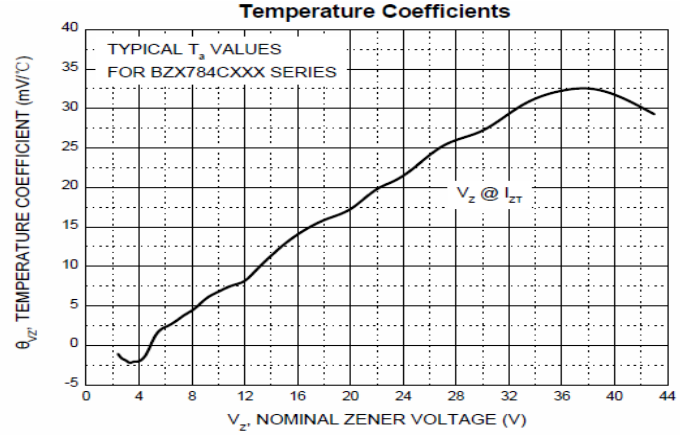
Zener Characteristics (V_Z Up to 10 V)



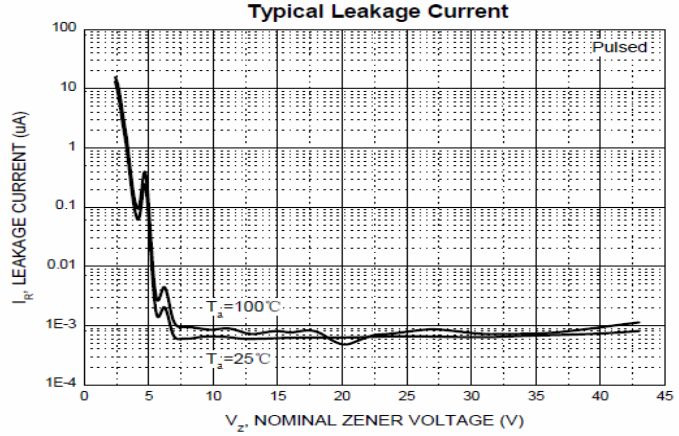
Zener Characteristics (11 V to 39 V)



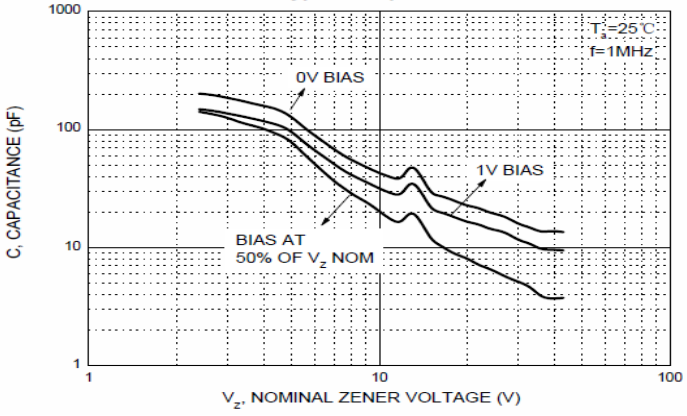
Temperature Coefficients



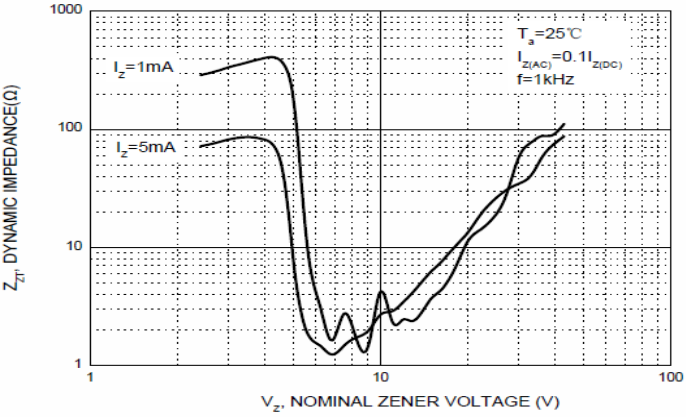
Typical Leakage Current



Typical Capacitance



Effect of Zener Voltage on Zener Impedance



Power Derating Curve

