

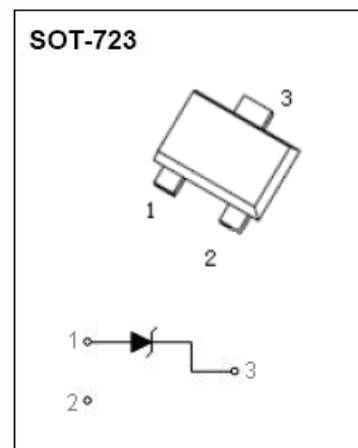


SOT-723 Plastic-Encapsulate Diodes

BZX84C2V4M-BZX84C39M ZENER DIODE

FEATURES

- Planar Die Construction
- 100mW Power Dissipation
- Zener Voltages from 2.4 – 39V



MAXIMUM RATINGS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Forward Voltage @I _F =10mA	V _F	0.9	V
Power Dissipation (Note 1)	P _d	100	mW
Thermal Resistance from Junction to Ambient	R _{θJA}	1250	°C/W
Operation Junction and Storage Temperature Range	T _J , T _{STG}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS

$T_a=25^{\circ}\text{C}$ unless otherwise specified

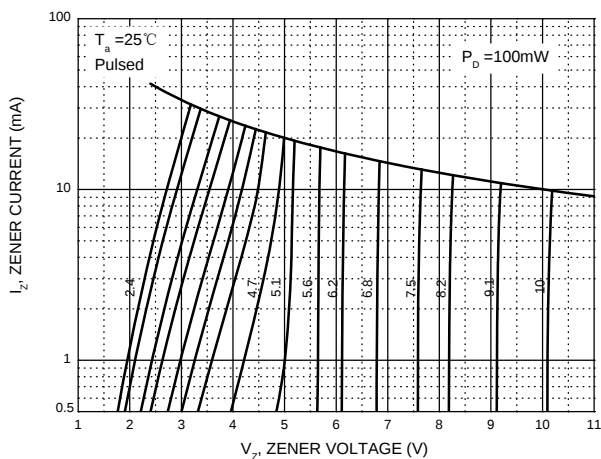
Type Number	Type Code	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current		Typical Temperature Coefficient @ $I_{ZT}=5\text{ mA}$ $\text{mV}/^{\circ}\text{C}$	
		$V_Z@I_{ZT}$			I_{ZT}	$Z_{ZT}@I_{ZT}$	$Z_{ZK}@I_{ZK}$	I_{ZK}	I_R	V_R		
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	μA	V	Min	Max
BZX84C2V4M	RB	2.4	2.2	2.6	5	100	600	1.0	50	1.0	-3.5	0
BZX84C2V7M	RC	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0
BZX84C3V0M	RD	3	2.8	3.2	5	95	600	1.0	20	1.0	-3.5	0
BZX84C3V3M	RE	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0
BZX84C3V6M	RF	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0
BZX84C3V9M	RG	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0
BZX84C4V3M	RH	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0
BZX84C4V7M	R1	4.7	4.4	5.0	5	80	600	1.0	3	2.0	-3.5	0.2
BZX84C5V1M	R2	5.1	4.8	5.4	5	60	500	1.0	2	2.0	-2.7	1.2
BZX84C5V6M	R3	5.6	5.2	6.0	5	40	480	1.0	1	2.0	-2.0	2.5
BZX84C6V2M	R4	6.2	5.8	6.6	5	10	400	1.0	3	4.0	0.4	3.7
BZX84C6V8M	R5	6.8	6.4	7.2	5	15	150	1.0	2	4.0	1.2	4.5
BZX84C7V5M	R6	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3
BZX84C8V2M	R7	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2
BZX84C9V1M	R8	9.1	8.5	9.6	5	15	80	1.0	0.5	6.0	3.8	7.0
BZX84C10M	R9	10	9.4	10.6	5	20	100	1.0	0.2	7.0	4.5	8.0
BZX84C11M	P1	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0
BZX84C12M	P2	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0
BZX84C13M	P3	13	12.4	14.1	5	30	150	1.0	0.1	8.0	7.0	11.0
BZX84C15M	P4	15	13.8	15.6	5	30	170	1.0	0.1	10.5	9.2	13.0
BZX84C16M	P5	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0
BZX84C18M	P6	18	16.8	19.1	5	45	200	1.0	0.1	12.6	12.4	16.0
BZX84C20M	P7	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0
BZX84C22M	P8	22	20.8	23.3	5	55	225	1.0	0.1	15.4	16.4	20.0
BZX84C24M	P9	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0
BZX84C27M	PA	27	25.1	28.9	2	80	250	0.5	0.1	18.9	21.4	25.3
BZX84C30M	PB	30	28	32	2	80	300	0.5	0.1	21.0	24.4	29.4
BZX84C33M	PC	33	31	35	2	80	300	0.5	0.1	23.1	27.4	33.4
BZX84C36M	PD	36	34	38	2	90	325	0.5	0.1	25.2	30.4	37.4
BZX84C39M	PE	39	37	41	2	130	350	0.5	0.1	27.3	33.4	41.2

Notes:

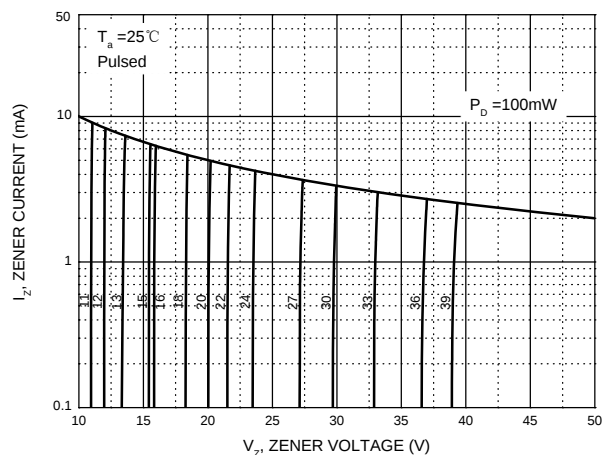
1. Valid provided that device terminals are kept at ambient temperature.
2. Short duration pulse test used to minimize self-heating effect.
3. $f=1\text{kHz}$.

Typical Characteristics

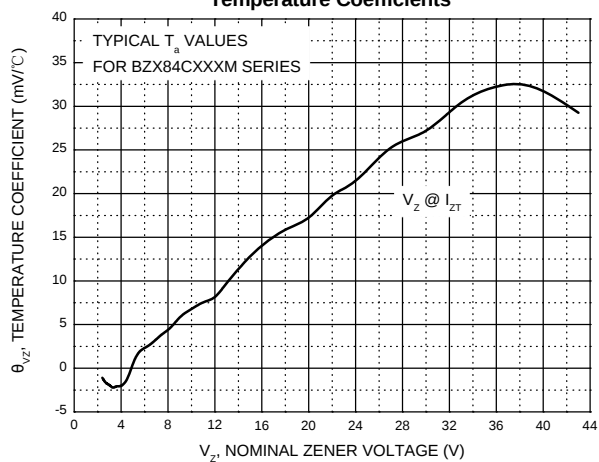
Zener Characteristics (V_z Up to 10 V)



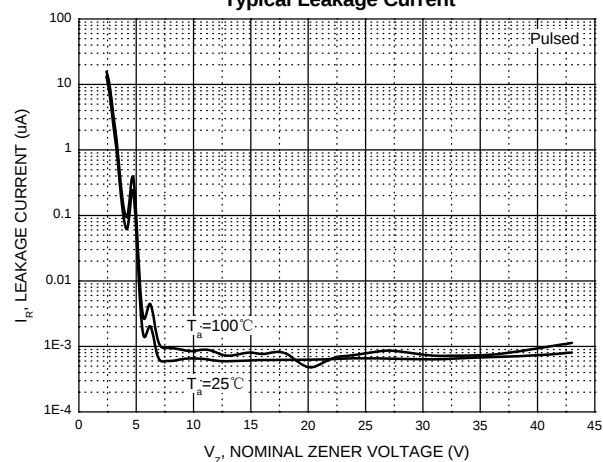
Zener Characteristics (11 V to 39 V)



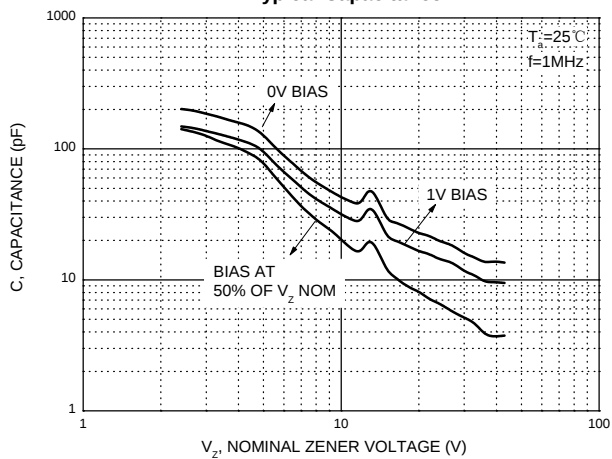
Temperature Coefficients



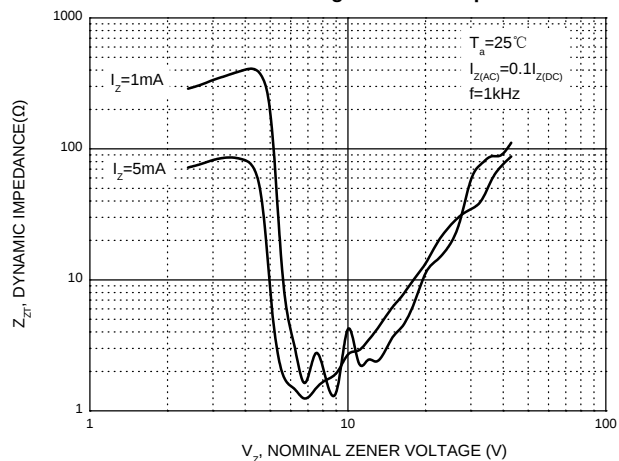
Typical Leakage Current



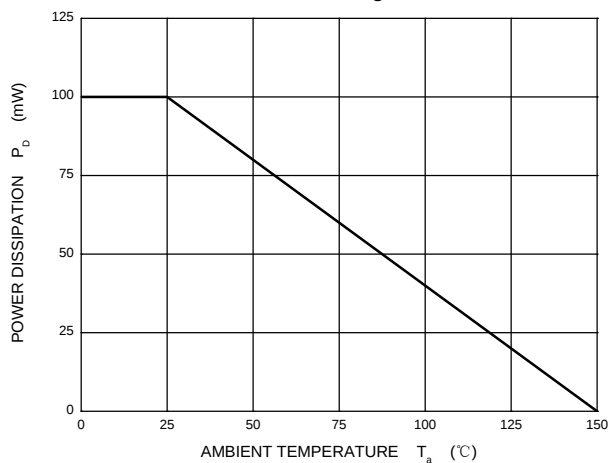
Typical Capacitance



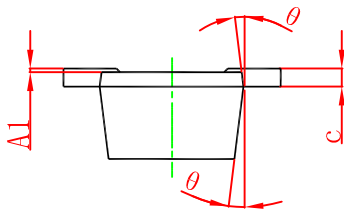
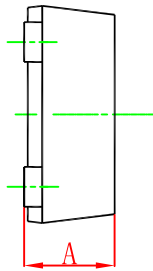
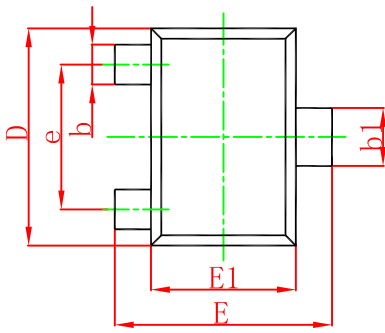
Effect of Zener Voltage on Zener Impedance



Power Derating Curve

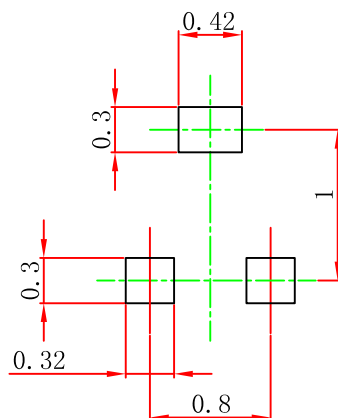


SOT-723 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.430	0.500	0.017	0.020
A1	0.000	0.050	0.000	0.002
b	0.170	0.270	0.007	0.011
b1	0.270	0.370	0.011	0.015
c	0.080	0.150	0.003	0.006
D	1.150	1.250	0.045	0.049
E	1.150	1.250	0.045	0.049
E1	0.750	0.850	0.030	0.033
e	0.800TYP.		0.031TYP.	
θ	7° REF.		7° REF.	

SOT-723 Suggested Pad Layout

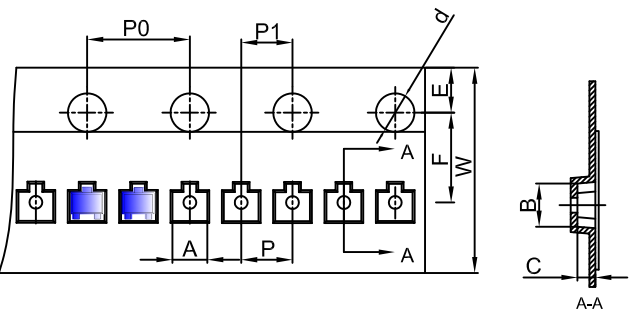


Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

SOT-723 Tape and Reel

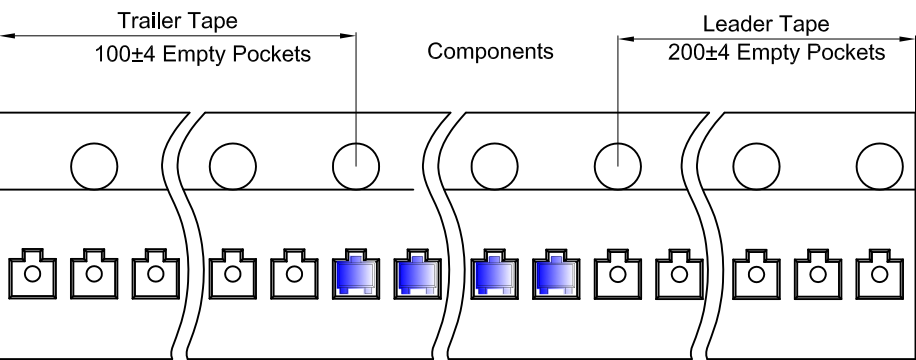
SOT-723 Embossed Carrier Tape



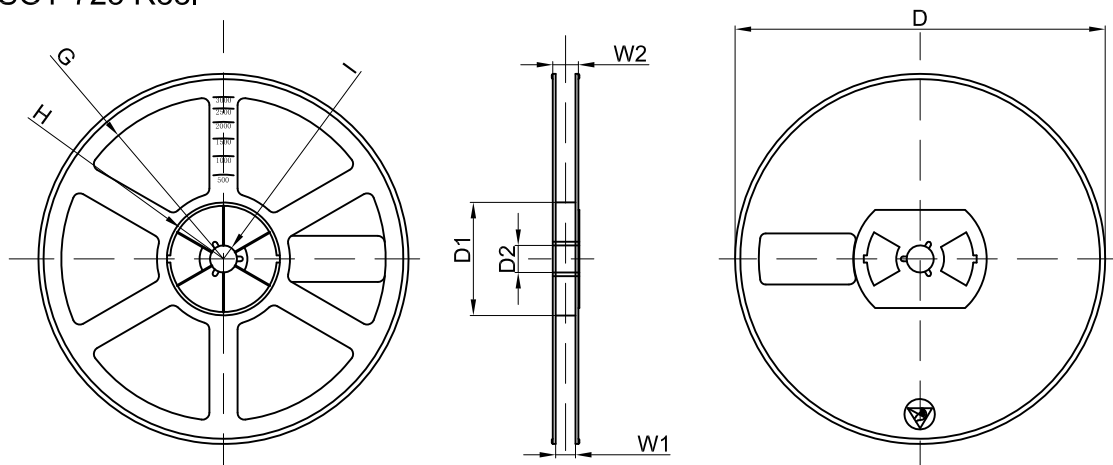
Packaging Description:
SOT-723 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 8,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-723	1.33	1.45	0.61	Ø1.50	1.75	3.50	4.00	2.00	2.00	8.00

SOT-723 Tape Leader and Trailer



SOT-723 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
8000 pcs	7 inch	120,000 pcs	203×203×195	480,000 pcs	438×438×220	