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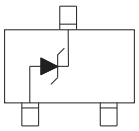
BZX84-W Series



200mW Surface Mount Zener Diodes - 2.4V - 75V

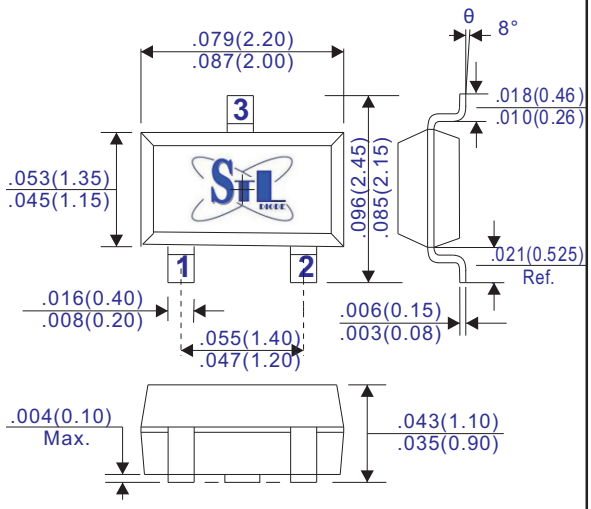
FEATURES

- For use as low voltage stabilizer or voltage reference
- Silicon epitaxial planar chip struction
- ±2% ~ ±5% voltage regulaion tolerance
- Also available in other case styles, DO-35 glass as BZX55 series, SOD-80 as BZV55 series, SOD-123 as BZT52 series, SOD-323 as BZT52-S series, SOD-523 as BZT52-T series, SOT-23 as BZX84 series and SOT-523 as BZX84-T series.
- Small surface mounting type
- Lead-free parts for green partner

MECHANICAL DATA

- Case: SOT-323 molded plastic body
- Terminals: Solderable per MIL-STD-202 Method 208
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: approx. 0.006 grams

SOT-323



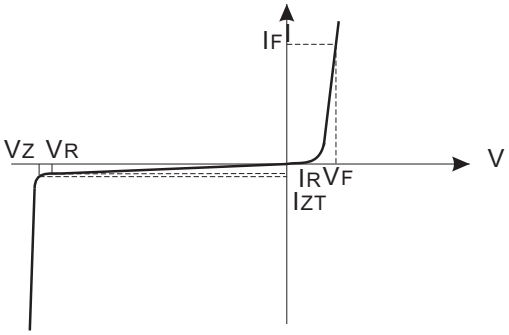
MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

	Symbols	*BZX84-W Series*	Units
Powwer Dissipation at T_A=25°C	P_{TOT}	200	mW
Operationg Junction Temperature Range	T_J	-65 ~ +150	°C
Thermal Resistance, junction to ambient, Note 2	$R_{\theta JA}$	625	K/W
Storage Temperature Range	T_{STG}	-65 ~ +150	°C
Forward Voltage at I_F=10mA	V_F	0.9	Volts

Note 1. Device on fiberglass substrate
2. Valid provided that electrodes are kept at ambient temperature

V_Z: Reverse Zener Voltage @ I_{ZT}
I_{ZT}: Reverse Current
Z_{ZT}: Maximum Zener Impedance @I_{ZT}
I_{ZK}: Reverse Current
Z_{ZK}: Maximum Zener Impedance @I_{ZK}
I_R: Reverse Leakage Current @V_R
V_R: Reverse Voltage
I_F: Forward Current
V_F: Forward Voltage @ I_F



Zener Voltage Regulation

BZX84-W Series

MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

Part No.	Electical Characteristics (Ta=25°C)								Temp. Coefficient at IZT (%/K)	
	Vz(Min) (V)	Vz(Max) (V)	IZT (mA)	ZZT (Ω)	IZK (mA)	ZZK (Ω)	IR(μA) Max.	VR(V)	Min.	Max.
BZX84-C2V4W	2.20	2.60	5.0	100	1.0	600	50	1	-0.08	-0.06
BZX84-C2V7W	2.50	2.90	5.0	100	1.0	500	20	1	-0.09	-0.04
BZX84-C3V0W	2.80	3.20	5.0	95	1.0	500	10	1	-0.09	-0.03
BZX84-C3V3W	3.10	3.50	5.0	95	1.0	500	5	1	-0.08	-0.03
BZX84-C3V6W	3.40	3.80	5.0	90	1.0	500	3	1	-0.08	-0.03
BZX84-C3V9W	3.70	4.10	5.0	90	1.0	500	3	1	-0.07	-0.03
BZX84-C4V3W	4.00	4.60	5.0	90	1.0	500	3	1	-0.06	-0.01
BZX84-C4V7W	4.40	5.00	5.0	80	1.0	500	2	2	-0.05	+0.02
BZX84-C5V1W	4.80	5.40	5.0	60	1.0	480	1	2	-0.03	+0.04
BZX84-C5V6W	5.20	6.00	5.0	40	1.0	400	3	2	-0.02	+0.06
BZX84-C6V2W	5.80	6.60	5.0	10	1.0	200	2	4	-0.01	+0.07
BZX84-C6V8W	6.40	7.20	5.0	15	1.0	150	1	4	+0.02	+0.07
BZX84-C7V5W	7.00	7.90	5.0	15	1.0	50	0.7	5	+0.03	+0.07
BZX84-C8V2W	7.70	8.70	5.0	15	1.0	50	0.5	5	+0.04	+0.07
BZX84-C9V1W	8.50	9.60	5.0	15	1.0	50	0.2	6	+0.05	+0.08
BZX84-C10W	9.40	10.60	5.0	20	1.0	70	0.1	7	+0.05	+0.08
BZX84-C11W	10.40	11.60	5.0	20	1.0	70	0.1	8	+0.05	+0.09
BZX84-C12W	11.40	12.70	5.0	25	1.0	90	0.1	8	+0.06	+0.09
BZX84-C13W	12.40	14.10	5.0	30	1.0	110	0.05	8	+0.07	+0.09
BZX84-C15W	13.80	15.60	5.0	30	1.0	110	0.05	10	+0.07	+0.09
BZX84-C16W	15.30	17.10	5.0	40	1.0	170	0.05	11	+0.08	+0.095
BZX84-C18W	16.80	19.10	5.0	45	1.0	170	0.05	13	+0.08	+0.095
BZX84-C20W	18.80	21.20	5.0	55	1.0	220	0.05	14	+0.08	+0.1
BZX84-C22W	20.80	23.30	5.0	55	1.0	220	0.05	15	+0.08	+0.1
BZX84-C24W	22.80	25.60	5.0	70	1.0	220	0.05	17	+0.08	+0.1
BZX84-C27W	25.10	28.90	5.0	80	1.0	250	0.05	19	+0.08	+0.1
BZX84-C30W	28.00	32.00	5.0	80	1.0	250	0.05	21	+0.08	+0.1
BZX84-C33W	31.00	35.00	5.0	80	1.0	250	0.05	23	+0.08	+0.1
BZX84-C36W	34.00	38.00	5.0	90	1.0	250	0.05	25	+0.08	+0.1
BZX84-C39W	37.00	41.00	5.0	130	1.0	300	0.05	27	+0.1	+0.12
BZX84-C43W	40.00	46.00	5.0	150	1.0	700	0.05	30	+0.1	+0.12
BZX84-C47W	44.00	50.00	5.0	170	1.0	750	0.05	33	+0.1	+0.12
BZX84-C51W	48.00	54.00	5.0	180	1.0	750	0.05	36	+0.1	+0.12
BZX84-C56W	52.00	60.00	2.5	135	1.0	1000	0.05	39	+0.1	+0.1
BZX84-C62W	58.00	66.00	2.5	150	1.0	1000	0.05	43	+0.1	+0.1
BZX84-C68W	64.00	72.00	2.5	200	1.0	1000	0.05	48	+0.1	+0.1
BZX84-C75W	70.00	79.00	2.5	250	1.0	1000	0.05	53	+0.1	+0.1

• The type number listed have zener voltages minimum & maximum limits as shown and have a standard tolerance on the nominal zener voltage 5%

Fig. 1A - Zener Voltage vs Zener Current Curve

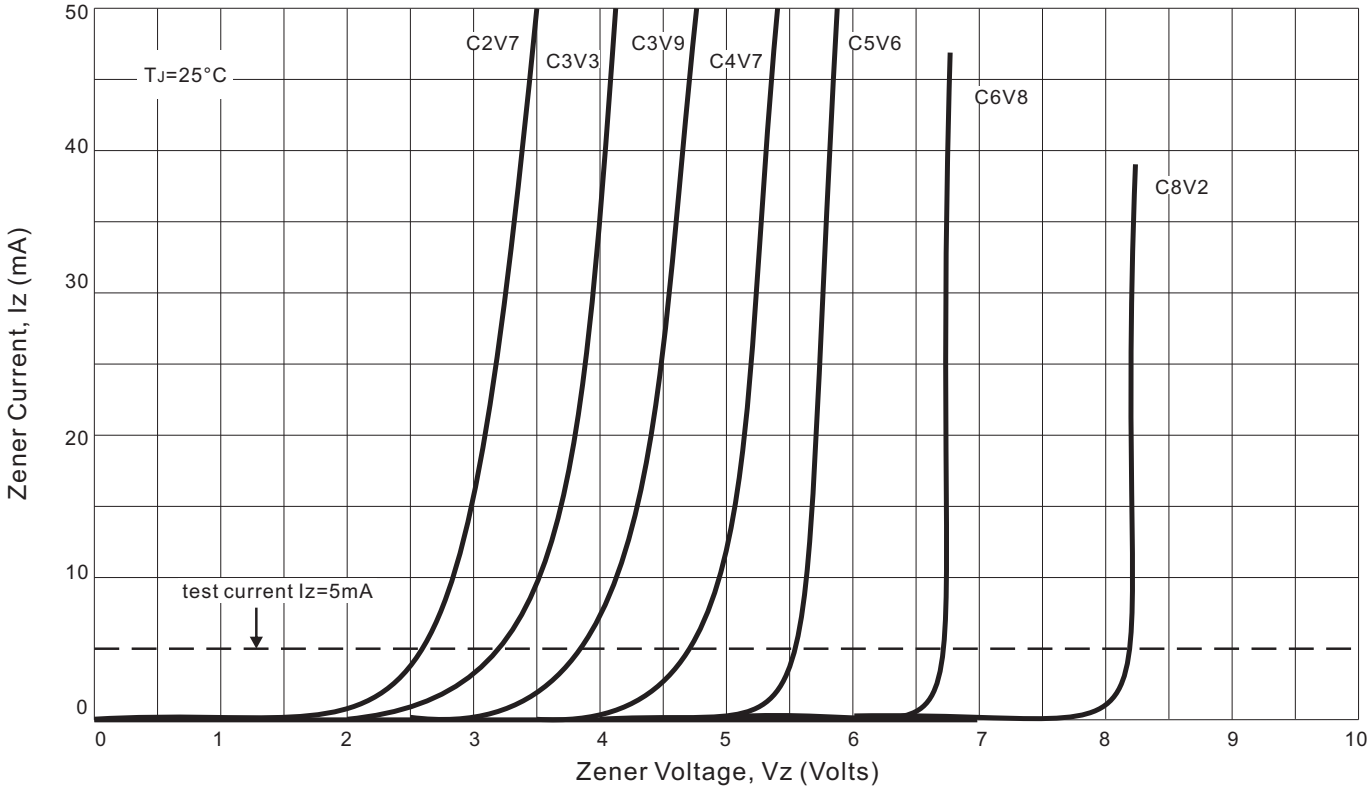


Fig. 1B - Zener Voltage vs Zener Current Curve

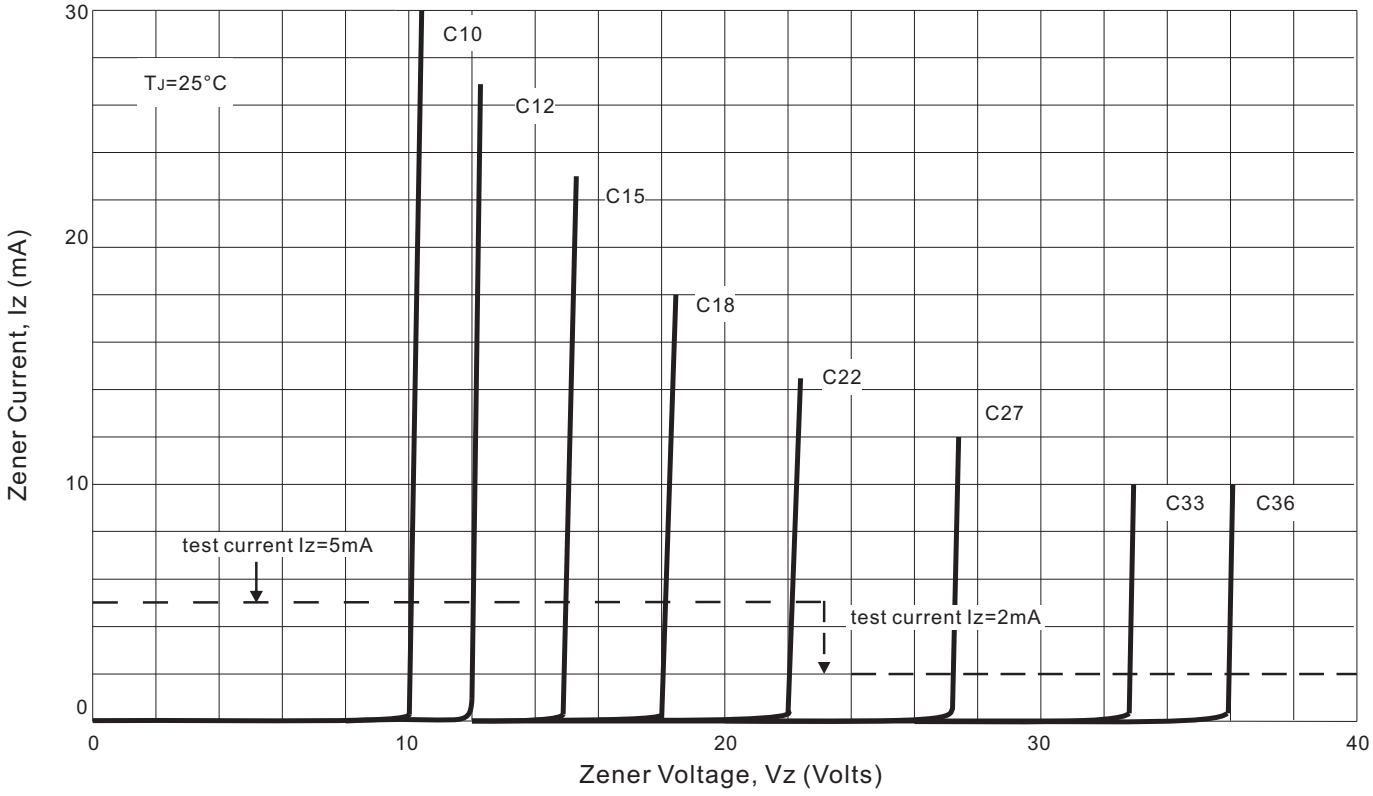
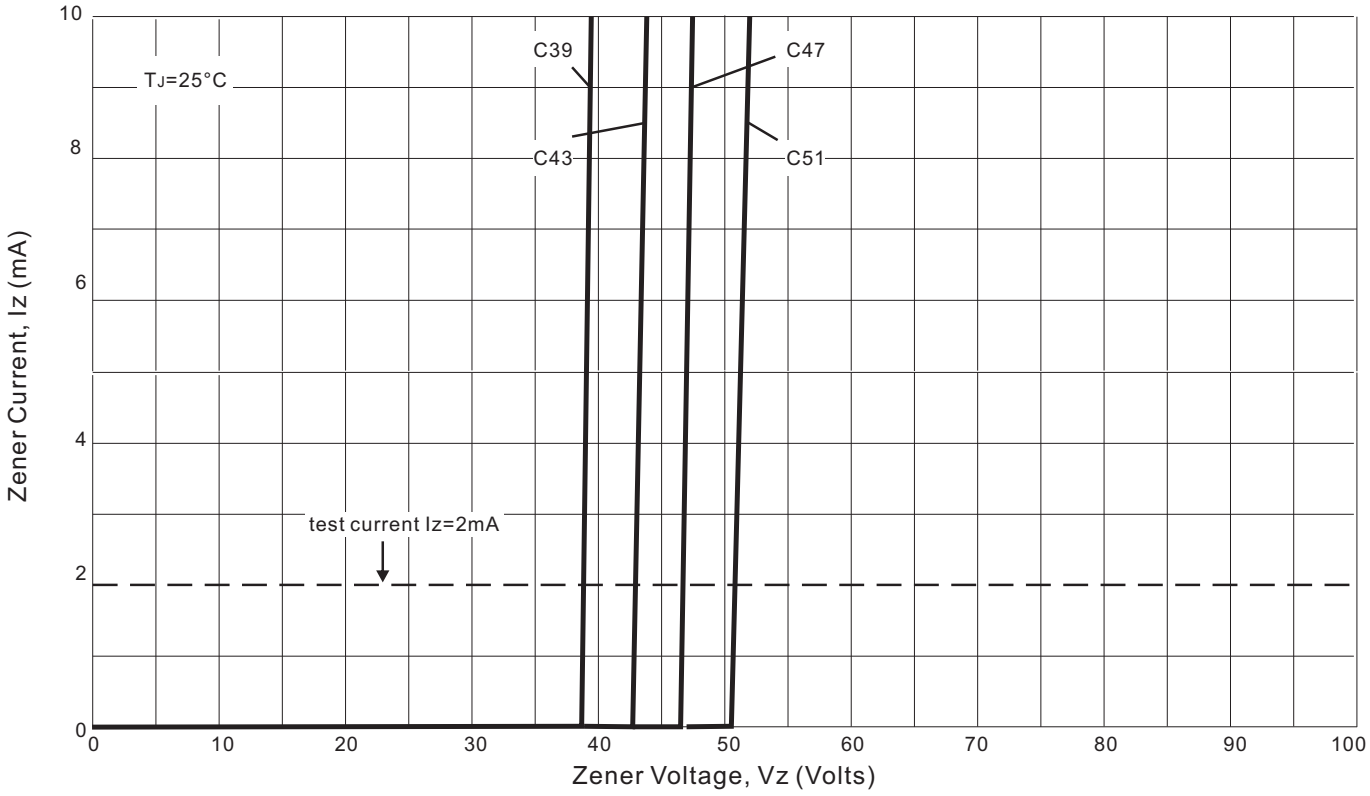
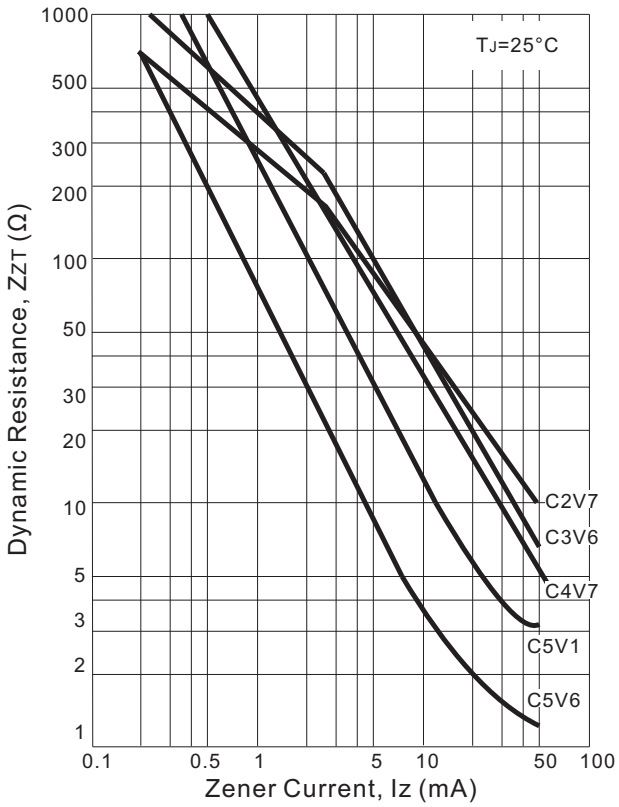


Fig. 1C - Zener Voltage vs Zener Current Curve



Fig, 2A - Dynamic Resistance Curve



Fig, 2B - Dynamic Resistance Curve

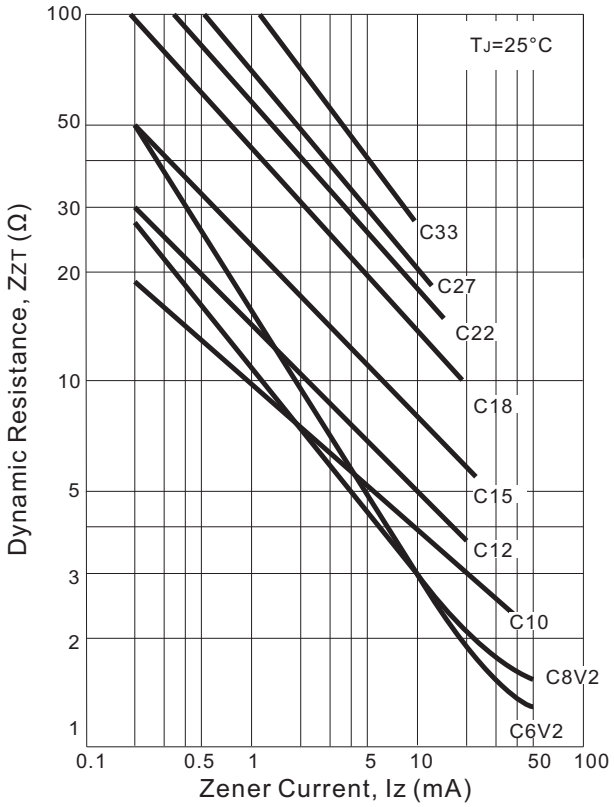


Fig. 3 - Power Dissipation Derating Curve

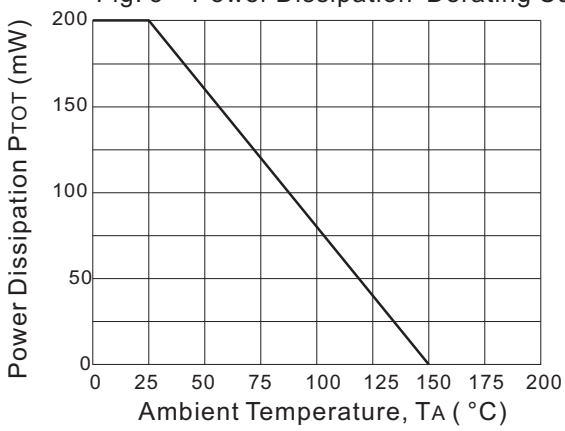


Fig. 4 - Change of Zenner Voltage Curve

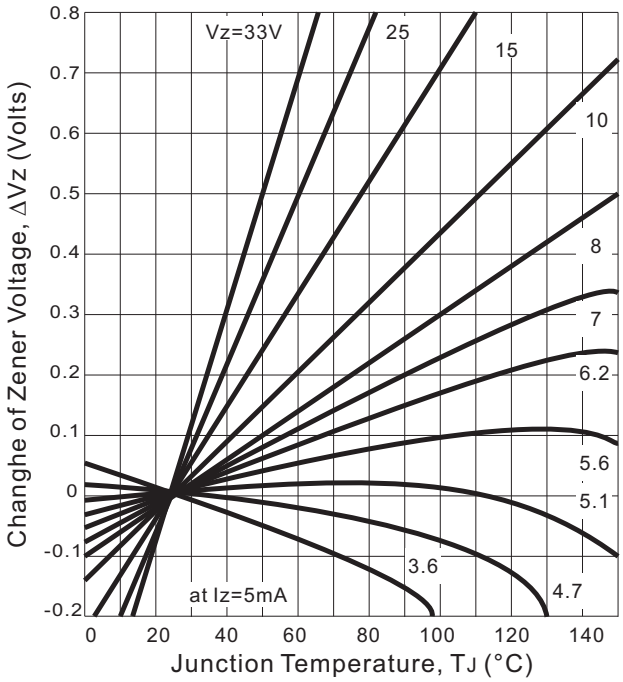


Fig. 5 - Capacitance Curve

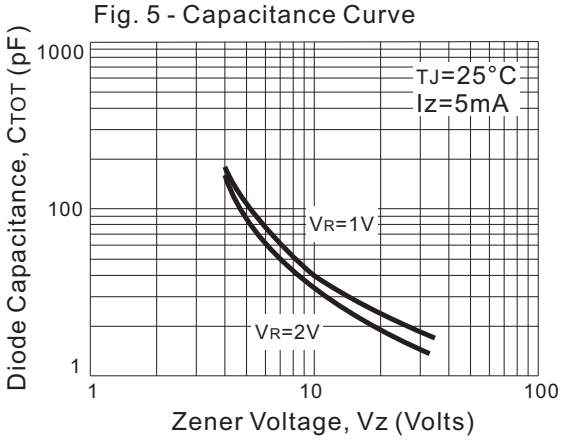


Fig. 6 - Dynamic Resistance Curve

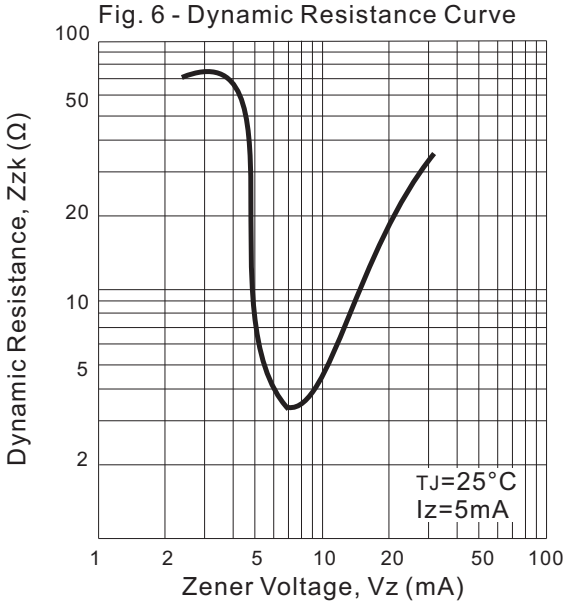


Fig. 7 - Pulse Thermal Resistance curve

Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case