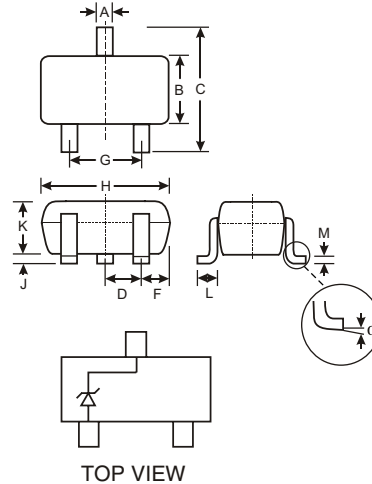


Features

- Very Sharp Breakdown Characteristics
- Very Tight Tolerance on V_Z
- Ideally Suited for Automated Assembly Processes
- Very Low Leakage Current
- Lead Free Device

Mechanical Data

- Case: SOT-323, Plastic
- Plastic Material: UL Flammability Classification Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Finish - Matte Tin Solderable per MIL-STD-202, Method 208 (Note 1)
- Polarity: See Diagram
- Marking: See Below
- Weight: 0.006 grams (approx.)



SOT-323		
Dim	Min	Max
A	0.25	0.40
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	0.0	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.18
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Forward Voltage @ $I_F = 10\text{mA}$	V_F	0.9	V
Power Dissipation (Note 2)	P_d	200	mW
Thermal Resistance, Junction to Ambient Air (Note 2)	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

- Notes:
1. If lead-bearing terminal plating is required, please contact your Diodes Inc. sales representative for availability and minimum order details.
 2. Device mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.

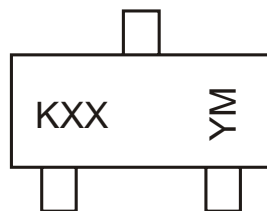
Ordering Information (Note 3)

Device	Packaging	Shipping
(Type Number)-7*	SOT-323	3000/Tape & Reel

* Example: The part number for the 6.2 Volt device would be DDZX6V2BW-7.

Note : 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



KXX = Product Type Marking Code (See Table 1)
 YM = Date Code Marking
 Y = Year ex: P = 2003
 M = Month ex: 9 = September

Date Code Key

Year	2003	2004	2005	2006	2007	2008	2009
Code	P	R	S	T	U	V	W

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Table 1

Type Number	Marking Code	Zener Voltage Range (Notes 4,5)			Maximum Zener Impedance (Note 6)			Maximum Reverse Current (Note 7)	
		V _Z @ I _{ZT}		I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	@ V _R
		Min (V)	Max (V)	mA	Ω		mA	μA	V
DDZX5V1BW	KM	4.94	5.20	20	17	480	1	5	1.5
DDZX5V6BW	KN	5.45	5.73	20	11	400	1	0.5	2.5
DDZX6V2BW	KO	5.96	6.27	20	7	150	1	0.5	4.0
DDZX6V8CW	YP	6.66	7.01	20	5	150	0.5	0.1	5.0
DDZX7V5CW	YQ	7.29	7.67	20	6	120	0.5	0.1	6.0
DDZX8V2CW	YR	8.03	8.45	20	8	120	0.5	0.1	6.5
DDZX9V1CW	YS	8.83	9.30	20	8	120	0.5	0.1	7.0
DDZX10CW	YT	9.70	10.20	20	8	120	0.5	0.1	8.0
DDZX11CW	YU	10.82	11.38	10	10	120	0.5	0.1	8.4
DDZX12CW	YV	11.74	12.35	10	12	110	0.5	0.1	9.1
DDZX13BW	KW	12.55	13.21	10	14	110	0.5	0.1	10.0
DDZX14W	GX	13.44	14.13	10	16	110	0.5	0.05	11.0
DDZX15W	GY	14.80	15.57	10	18	150	0.5	0.05	12.0
DDZX16W	YY	15.69	16.51	10	18	150	0.5	0.05	12.0
DDZX18CW	YZ	17.42	18.33	10	23	150	0.5	0.05	14.0
DDZX20CW	PJ	19.23	20.22	10	28	200	0.5	0.05	15.0
DDZX22DW	2K	21.52	22.63	5	30	200	0.5	0.05	17.0
DDZX24CW	PL	23.12	24.31	5	35	200	0.5	0.05	19.0
DDZX27DW	2M	26.29	27.64	5	45	250	0.5	0.05	21.0
DDZX30DW	2N	29.02	30.51	5	55	250	0.5	0.05	23.0
DDZX33W	RP	32.14	33.79	5	75	250	0.5	0.05	27.0
DDZX36W	ZQ	35.36	37.19	5	85	250	0.5	0.05	30.0
DDZX39FW	5Q	38.14	40.11	5	85	250	0.5	0.05	30.0
DDZX43W	ZR	42.14	43.86	5	90	—	—	0.05	33.0
DDZX47W	ZS	46.06	47.94	5	90	—	—	0.05	36.0

- Notes:
4. The Zener voltage is measured 40ms after power is supplied.
 5. For inquiries on tighter tolerances, or alternate nominal zener voltages, please contact your Diodes Inc. sales representative for availability and minimum order details.
 6. f = 1kHz.
 7. Short duration test pulse used to minimize self-heating effect.

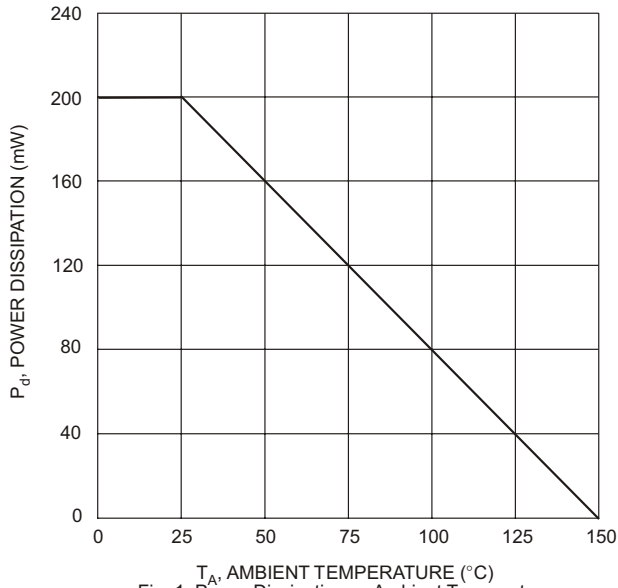


Fig. 1 Power Dissipation vs Ambient Temperature

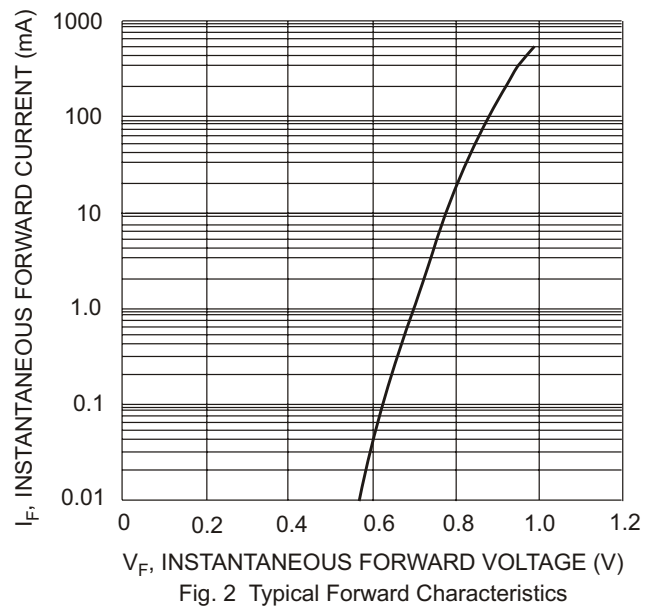


Fig. 2 Typical Forward Characteristics

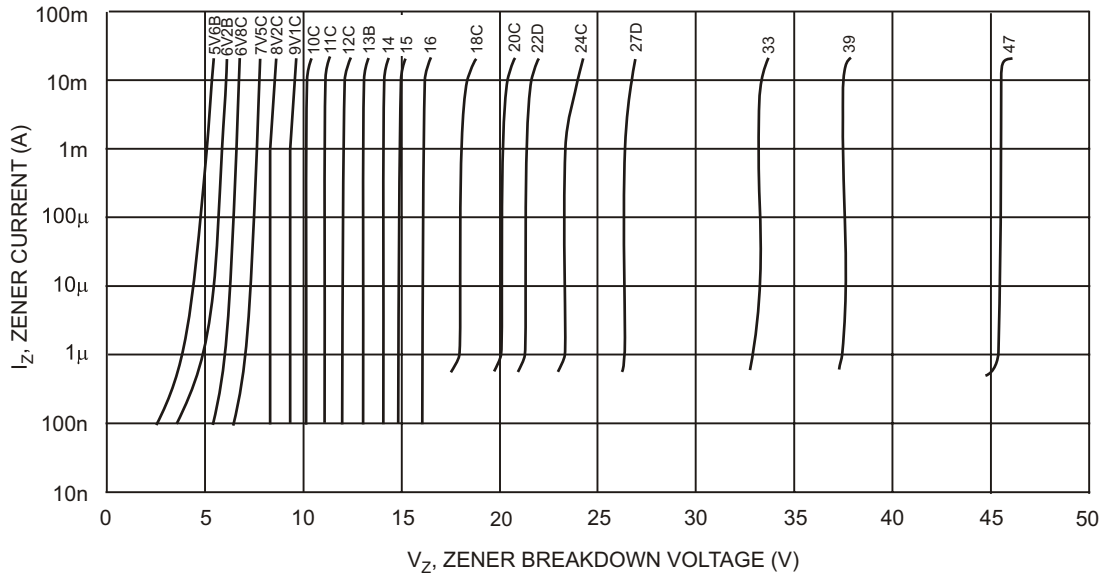


Fig. 3 Typical Reverse Characteristics

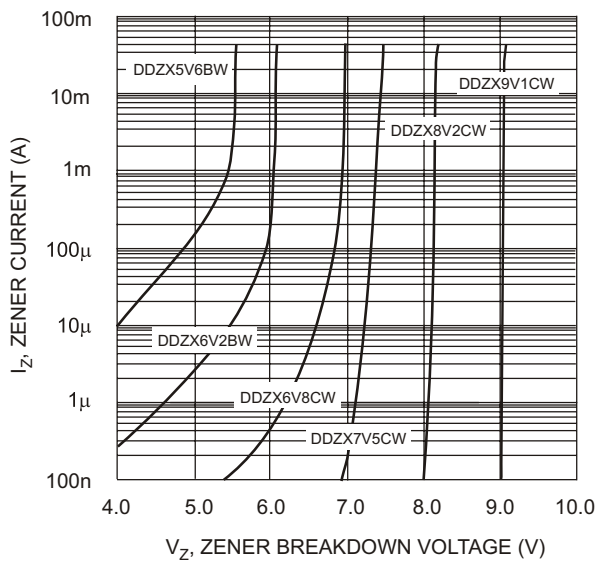


Fig. 4 Typical Reverse Characteristics, DDZX5V6BW - DDZX9V1CW

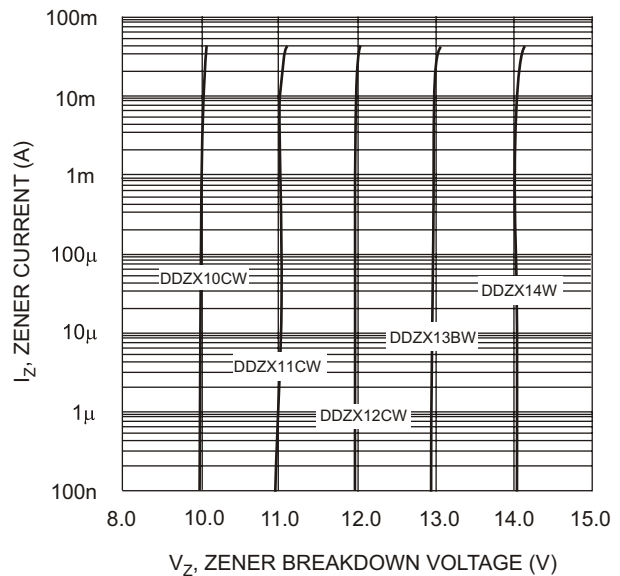


Fig. 5 Typical Reverse Characteristics, DDZX10CW - DDZX14W

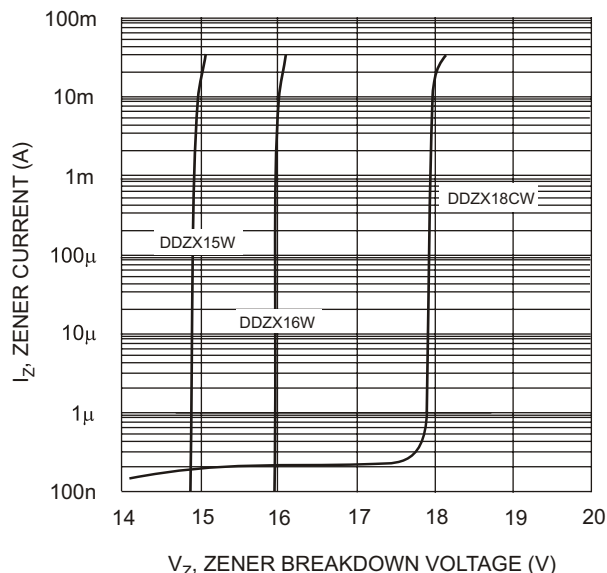


Fig. 6 Typical Reverse Characteristics, DDZX15W - DDZX18CW

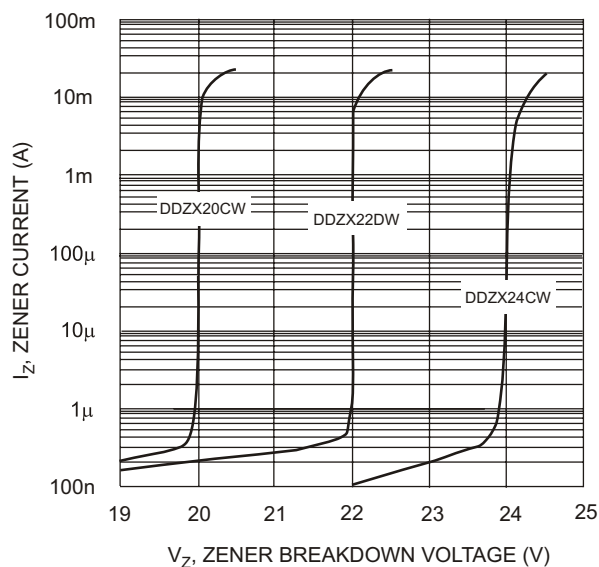


Fig. 7 Typical Reverse Characteristics, DDZX20CW - DDZX24CW

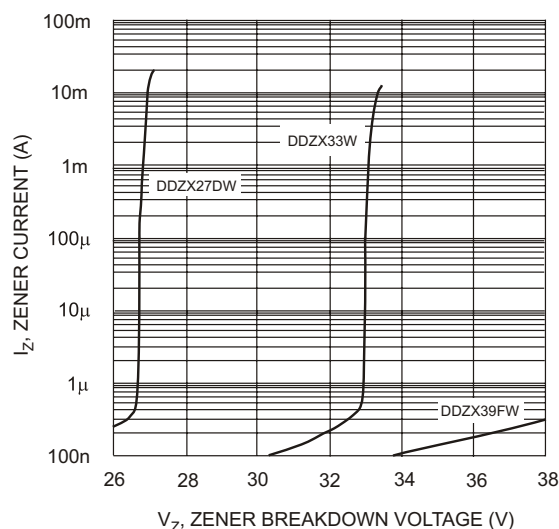


Fig. 8 Typical Reverse Characteristics, DDZX27DW - DDZX39FW

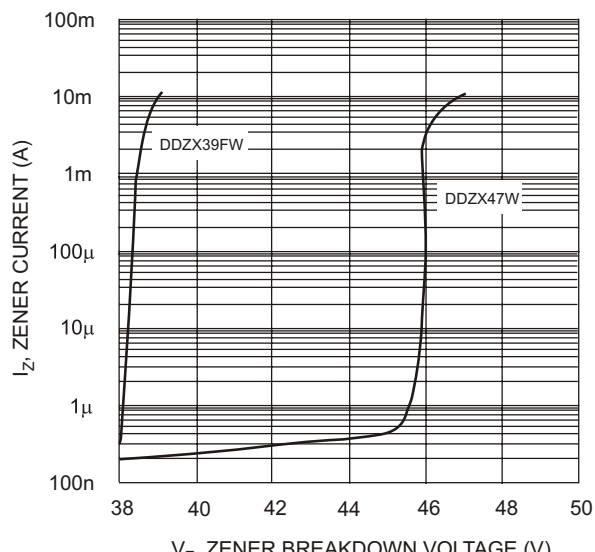


Fig. 9 Typical Reverse Characteristics, DDZX39FW - DDZX47W

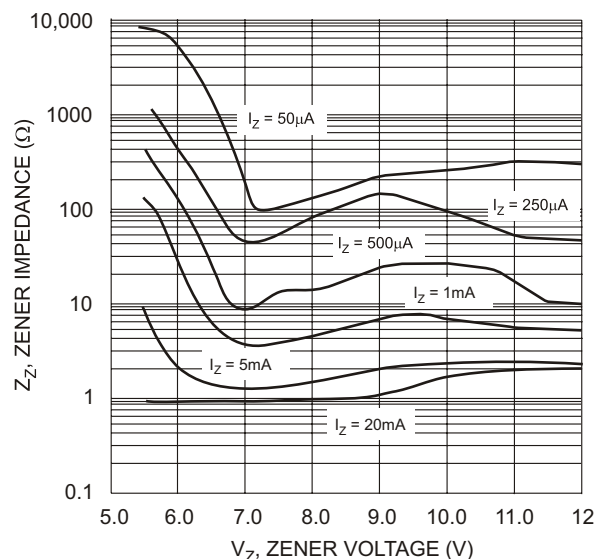


Fig. 10 Typical Zener Impedance Characteristics, DDZX5V6BW - DDZX12CW

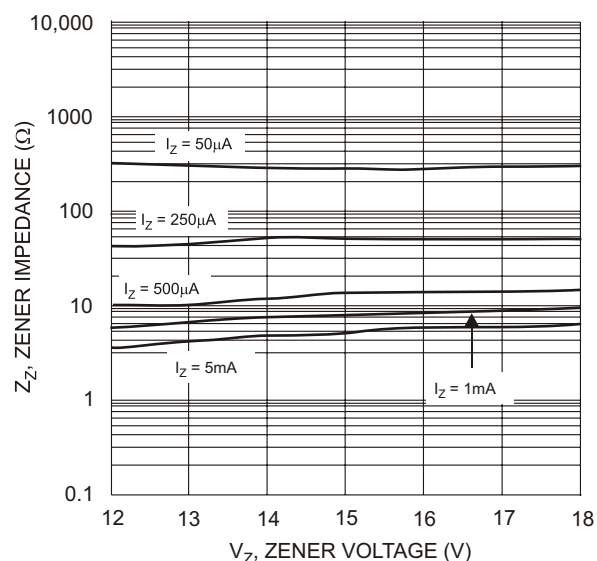


Fig. 11 Typical Zener Impedance Characteristics, DDZX12CW - DDZX18CW

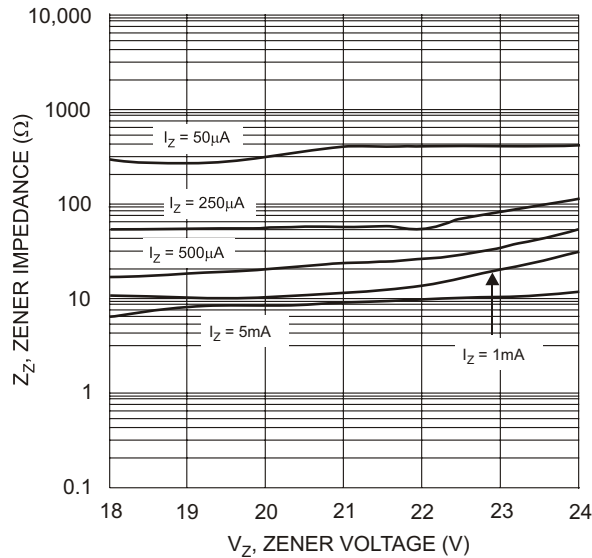


Fig. 12 Typical Zener Impedance Characteristics, DDZX18CW - DDZX24CW

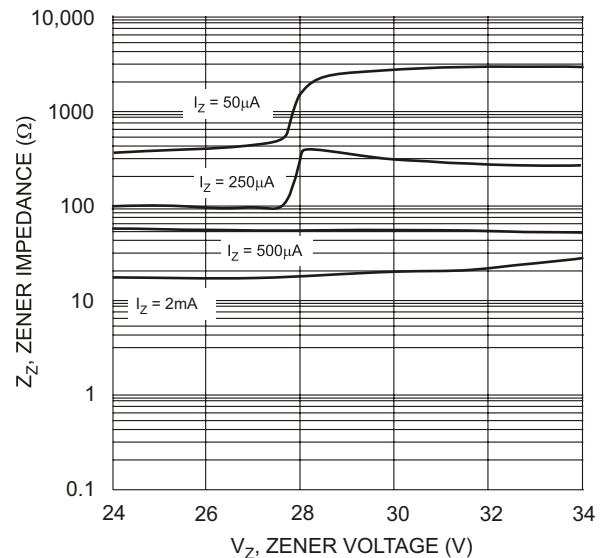


Fig. 13 Typical Zener Impedance Characteristics, DDZX24CW - DDZX33W

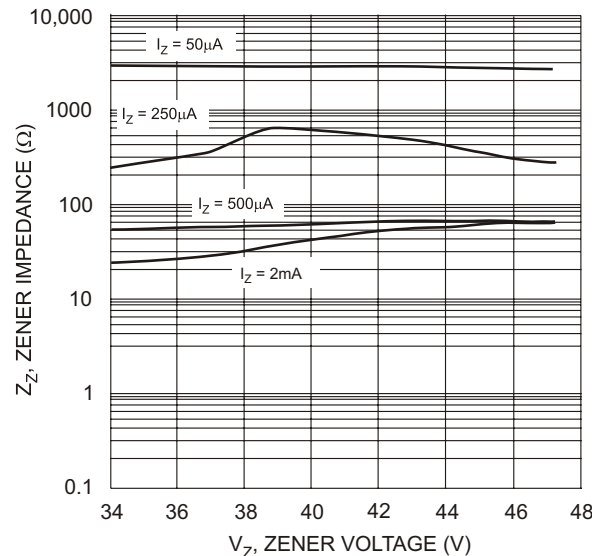


Fig. 14 Typical Zener Impedance Characteristics, DDZX36W - DDZX47W

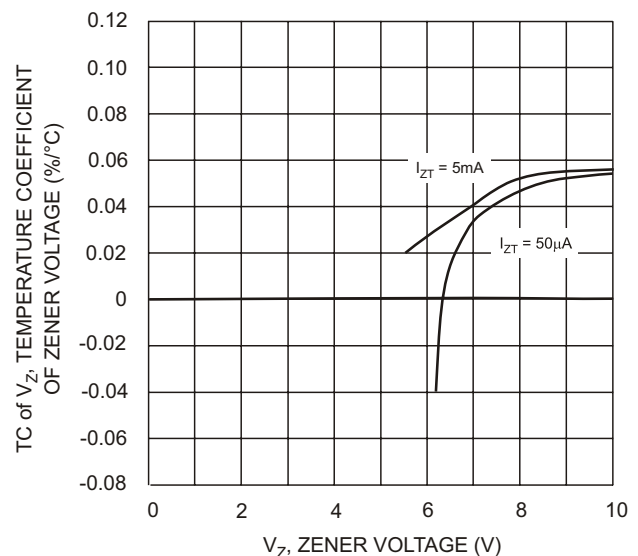


Fig. 15 Typical Temperature Coefficient of Zener Voltage vs. Zener Voltage, DDZX6V2BW - DDZX10CW

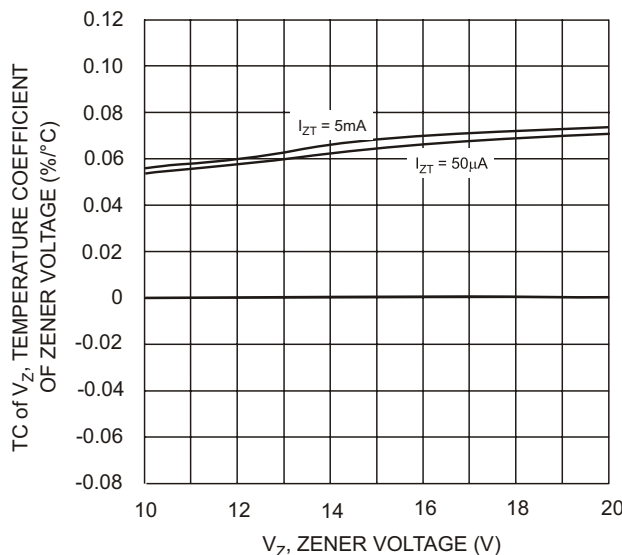


Fig. 16 Typical Temperature Coefficient of Zener Voltage vs. Zener Voltage, DDZX10CW - DDZX20CW

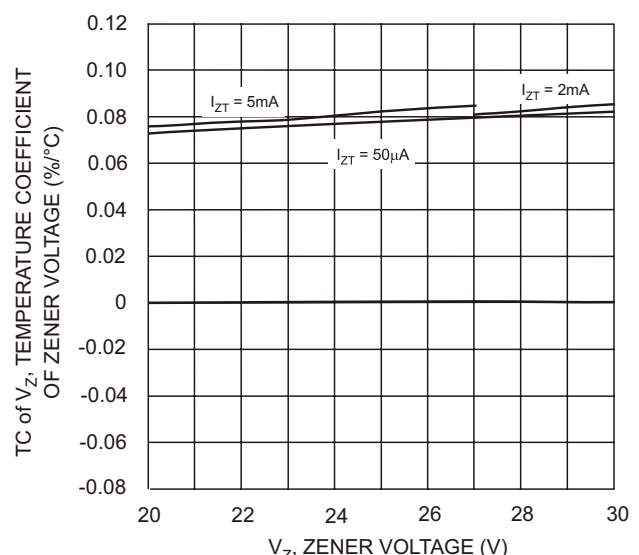


Fig. 17 Typical Temperature Coefficient of Zener Voltage, DDZX20CW - DDZX30DW

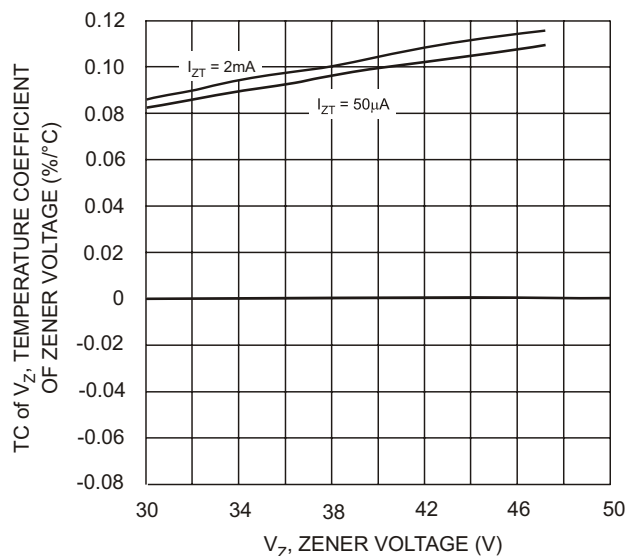


Fig. 18 Typical Temperature Coefficient of Zener Voltage, DDZX30DW - DDZX47W

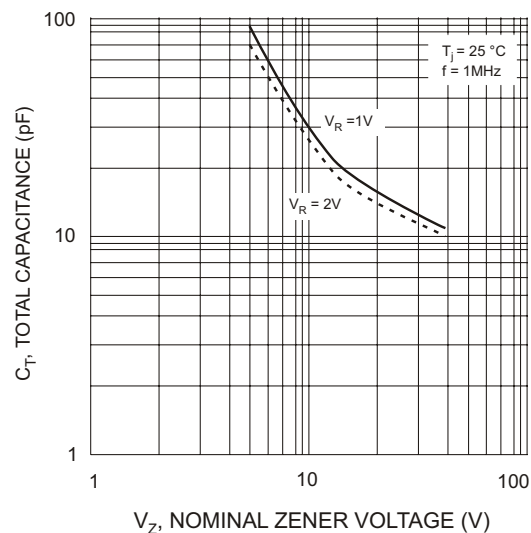


Fig. 19 Total Capacitance vs Nominal Zener Voltage