

Zeners

MMSZ5226B - MMSZ5257B

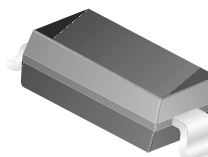
Absolute Maximum Ratings * $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation @25°C	500	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient **	340	°C/W
T_{STG}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	+150	°C

* These ratings are limiting values above which the serviceability of the diode may be impaired.

** FR-4 or FR-5 = 3.5 x 1.5 inches using minimum recommended land pads.

Tolerance = 5%



SOD-123

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Device	Mark	V_Z (V)			Z_Z (Ω) @ I_{ZK} (mA)		Z_{ZK} (Ω) @ I_{ZK} (mA)		I_R (μA) @ V_R (V)	
		Min.	Typ.	Max.						
MMSZ5226B	D1	3.135	3.3	3.465	28	20	1,600	0.25	25	1.0
MMSZ5227B	D2	3.42	3.6	3.78	24	20	1,700	0.25	15	1.0
MMSZ5228B	D3	3.705	3.9	4.095	23	20	1,900	0.25	10	1.0
MMSZ5229B	D4	4.085	4.3	4.515	22	20	1,000	0.25	5.0	1.0
MMSZ5230B	D5	4.465	4.7	4.935	19	20	1,900	0.25	5.0	2.0
MMSZ5231B	E1	4.845	5.1	5.355	17	20	1,600	0.25	5.0	2.0
MMSZ5232B	E2	5.32	5.6	5.88	11	20	1,600	0.25	5.0	3.0
MMSZ5233B	E3	5.7	6	6.3	7.0	20	1,600	0.25	5.0	3.5
MMSZ5234B	E4	5.89	6.2	6.51	7.0	20	1,000	0.25	5.0	4.0
MMSZ5235B	E5	6.46	6.8	7.14	5.0	20	750	0.25	3.0	5.0
MMSZ5236B	F1	7.125	7.5	7.875	6.0	20	500	0.25	3.0	6.0
MMSZ5237B	F2	7.79	8.2	8.61	8.0	20	500	0.25	3.0	6.5
MMSZ5238B	F3	8.265	8.7	9.135	8.0	20	600	0.25	3.0	6.5
MMSZ5239B	F4	8.645	9.1	9.555	10	20	600	0.25	3.0	7.0
MMSZ5240B	F5	9.5	10	10.5	17	20	600	0.25	3.0	8.0
MMSZ5241B	H1	10.45	11	11.55	22	20	600	0.25	2.0	8.4
MMSZ5242B	H2	11.4	12	12.6	30	20	600	0.25	1.0	9.1
MMSZ5243B	H3	12.35	13	13.65	13	9.5	600	0.25	0.5	9.9
MMSZ5244B	H4	13.3	14	14.7	15	9.0	600	0.25	0.1	10
MMSZ5245B	H5	14.25	15	15.75	16	8.5	600	0.25	0.1	11
MMSZ5246B	J1	15.2	16	16.8	17	7.8	600	0.25	0.1	12
MMSZ5247B	J2	16.15	17	17.85	19	7.4	600	0.25	0.1	13
MMSZ5248B	J3	17.1	18	18.9	21	7.0	600	0.25	0.1	14
MMSZ5249B	J4	18.05	19	19.95	23	6.6	600	0.25	0.1	14
MMSZ5250B	J5	19	20	21	25	6.2	600	0.25	0.1	15
MMSZ5251B	K1	20.92	22	23.1	29	5.6	600	0.25	0.1	17
MMSZ5252B	K2	22.8	24	25.2	33	5.2	600	0.25	0.1	18
MMSZ5253B	K3	23.75	25	26.25	35	5.0	600	0.25	0.1	19
MMSZ5254B	K4	25.65	27	28.35	41	4.6	600	0.25	0.1	21
MMSZ5255B	K5	26.6	28	29.4	44	4.5	600	0.25	0.1	21
MMSZ5256B	M1	28.5	30	31.5	49	4.2	600	0.25	0.1	23
MMSZ5257B	M2	31.35	33	34.65	58	3.8	700	0.25	0.1	25

V_F Forward Voltage = 0.9V Maximum @ $I_F = 10\text{mA}$ for all MMSZ5200 series

Typical Characteristics

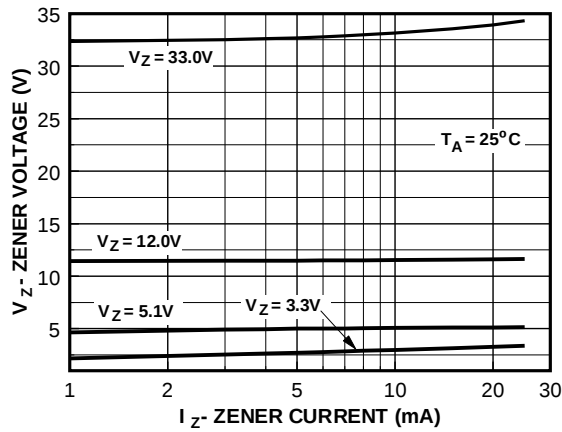


Figure 1. Zener Current vs. Zener Voltage

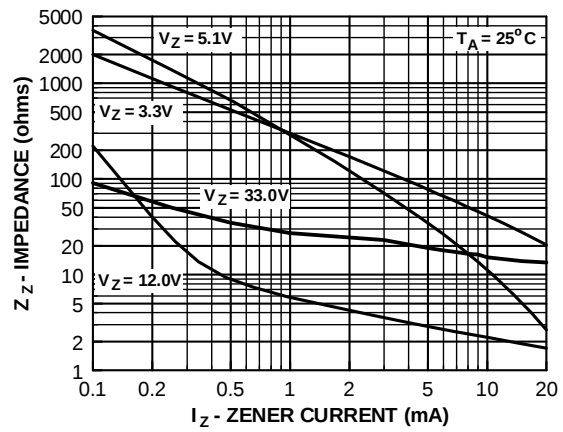


Figure 2. Zener Current vs. Zener Impedance

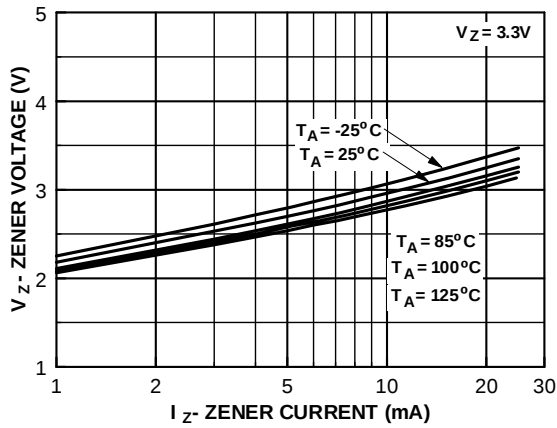


Figure 3. 3.3 Zener Voltage vs. Temperature

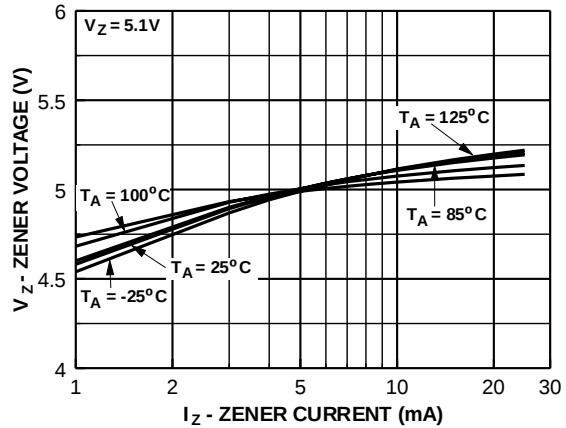


Figure 4. 5.1 Zener Voltage vs. Temperature

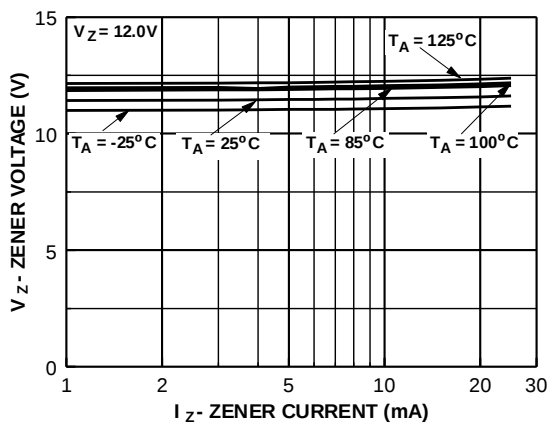


Figure 5. 12 Zener Voltage vs. Zener Temperature

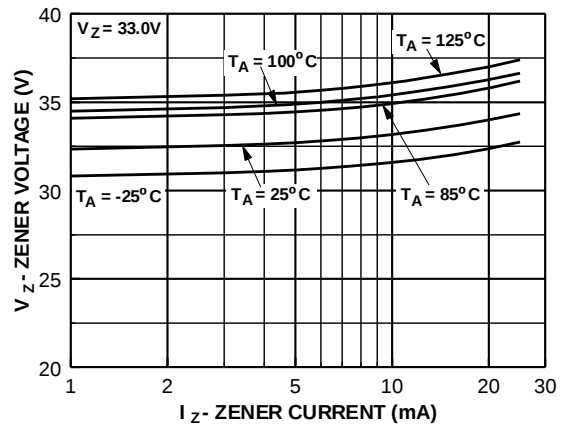


Figure 6. 33 Zener Voltage vs. Zener Temperature

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™	FACT Quiet Series™	ISOPLANAR™	POP™	SuperFET™
ActiveArray™	FAST®	LittleFET™	Power247™	SuperSOT™-3
Bottomless™	FASTr™	MICROCOUPLER™	PowerTrench®	SuperSOT™-6
CoolFET™	FPS™	MicroFET™	QFET®	SuperSOT™-8
CROSSVOLT™	FRFET™	MicroPak™	QS™	SyncFET™
DOME™	GlobalOptoisolator™	MICROWIRE™	QT Optoelectronics™	TinyLogic®
EcoSPARK™	GTO™	MSX™	Quiet Series™	TINYOPTO™
E ² CMOS™	HiSeC™	MSXPro™	RapidConfigure™	TruTranslation™
EnSigna™	I ² C™	OCX™	RapidConnect™	UHC™
FACT™	ImpliedDisconnect™	OCXPro™	SILENT SWITCHER®	UltraFET®
Across the board. Around the world.™		OPTOLOGIC®	SMART START™	VCX™
The Power Franchise™		OPTOPLANAR™	SPM™	
Programmable Active Droop™		PACMAN™	Stealth™	

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.