

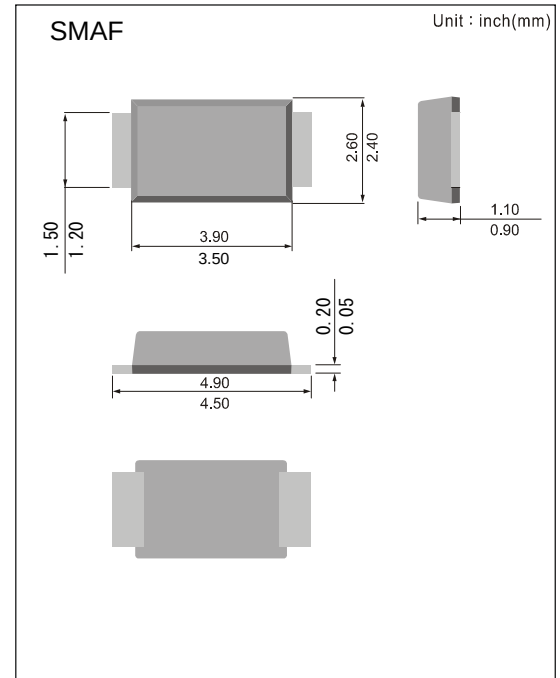
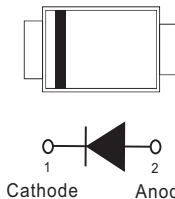
SURFACE MOUNT SILICON ZENER DIODE
VOLTAGE 3.6~200 Volts POWER 2 Watts

FEATURES

- For surface mounted applications in order to optimize board space
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- Lead free in comply with EU RoHS 2002/95/EC directives
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case : SMAF Molded Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Standard packaging : 12mm tape (EIA-481)
- Weight : 0.0011 ounces, 0.0328 grams
- Marking : Marking Code



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS Ratings at 25°C ambient temperature unless otherwise specified.

Rating	Symbol	Value	Unit
DC Power Dissipation at $T_L = 75^\circ\text{C}$ (Note1)	P_D	2.0	W
Maximum Forward Voltage at $I_F = 200\text{ mA}$	V_F	1.2	V
Junction Temperature Range	T_J	- 55 to + 175	°C
Storage Temperature Range	T_{STG}	- 55 to + 175	°C

ELECTRICAL CHARACTERISTICS

Rating at = 25 °C ambient temperature unless otherwise specified

TYPE	Marking	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		V _Z @ I _{ZT}	I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R @ V _R		I _{ZM}
		(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMAF2EZ3.6	2000	3.6	139	5.0	400	1.0	80	1.0	504
1SMAF2EZ3.9	20A0	3.9	128	5.0	400	1.0	30	1.0	468
1SMAF2EZ4.3	2001	4.3	116	4.5	400	1.0	20	1.0	434
1SMAF2EZ4.7	2002	4.7	106	4.5	550	1.0	5.0	1.0	386
1SMAF2EZ5.1	2003	5.1	98.0	3.5	600	1.0	5.0	1.0	356
1SMAF2EZ5.6	2004	5.6	89.5	2.5	500	1.0	5.0	2.0	324
1SMAF2EZ6.2	2005	6.2	80.5	1.5	700	1.0	5.0	3.0	292
1SMAF2EZ6.8	2006	6.8	73.5	2.0	700	1.0	5.0	4.0	266
1SMAF2EZ7.5	2007	7.5	66.5	2.0	700	0.5	50	5.0	242
1SMAF2EZ8.2	2008	8.2	61.0	2.3	700	0.5	50	6.0	220
1SMAF2EZ9.1	2009	9.1	55.0	2.5	700	0.5	50	7.0	200
1SMAF2EZ10	2010	10	50.0	3.5	700	0.25	50	7.6	182
1SMAF2EZ11	2011	11	45.5	4.0	700	0.25	50	8.4	166
1SMAF2EZ12	2012	12	41.5	4.5	700	0.25	1.0	9.1	152
1SMAF2EZ13	2013	13	38.5	5.0	700	0.25	0.5	9.9	138
1SMAF2EZ14	2014	14	35.7	5.5	700	0.25	0.5	10.6	130
1SMAF2EZ15	2015	15	33.4	7.0	700	0.25	0.5	11.4	122
1SMAF2EZ16	2016	16	31.2	8.0	700	0.25	0.5	12.2	114
1SMAF2EZ17	2017	17	29.4	9.0	750	0.25	0.5	13.0	107
1SMAF2EZ18	2018	18	27.8	10	750	0.25	0.5	13.7	100
1SMAF2EZ19	2019	19	26.3	11	750	0.25	0.5	14.4	95
1SMAF2EZ20	2020	20	25.0	11	750	0.25	0.5	15.2	90
1SMAF2EZ22	2022	22	22.8	12	750	0.25	0.5	16.7	82
1SMAF2EZ24	2024	24	20.8	13	750	0.25	0.5	18.2	76
1SMAF2EZ27	2027	27	18.5	18	750	0.25	0.5	20.6	68
1SMAF2EZ30	2030	30	16.6	20	1000	0.25	0.5	22.5	60
1SMAF2EZ33	2033	33	15.1	23	1000	0.25	0.5	25.1	55
1SMAF2EZ36	2036	36	13.9	25	1000	0.25	0.5	27.4	50
1SMAF2EZ39	2039	39	12.8	30	1000	0.25	0.5	29.7	47
1SMAF2EZ43	2043	43	11.6	35	1500	0.25	0.5	32.7	43
1SMAF2EZ47	2047	47	10.6	40	1500	0.25	0.5	35.8	39
1SMAF2EZ51	2051	51	9.8	48	1500	0.25	0.5	38.8	36
1SMAF2EZ56	2056	56	9.0	55	2000	0.25	0.5	42.6	32
1SMAF2EZ62	2062	62	8.1	60	2000	0.25	0.5	47.1	29
1SMAF2EZ68	2068	68	7.4	75	2000	0.25	0.5	51.7	27
1SMAF2EZ75	2075	75	6.7	90	2000	0.25	0.5	56.0	24
1SMAF2EZ82	2082	82	6.1	100	3000	0.25	0.5	62.2	22
1SMAF2EZ91	2091	91	5.5	125	3000	0.25	0.5	69.2	20
1SMAF2EZ100	2100	100	5.0	175	3000	0.25	0.5	76.0	18
1SMAF2EZ110	2110	110	4.5	250	4000	0.25	0.5	83.6	17
1SMAF2EZ120	2120	120	4.2	325	4500	0.25	0.5	91.2	15
1SMAF2EZ130	2130	130	3.8	400	5000	0.25	0.5	98.8	14
1SMAF2EZ140	2140	140	3.6	500	5500	0.25	0.5	106.4	13
1SMAF2EZ150	2150	150	3.3	575	6000	0.25	0.5	114.0	12
1SMAF2EZ160	2160	160	3.1	650	6500	0.25	0.5	121.6	11
1SMAF2EZ170	2170	170	2.9	675	7000	0.25	0.5	130.4	11
1SMAF2EZ180	2180	180	2.8	725	7000	0.25	0.5	136.8	10
1SMAF2EZ190	2190	190	2.6	825	8000	0.25	0.5	144.8	10
1SMAF2EZ200	2200	200	2.5	900	8000	0.25	0.5	152.0	9.0

Note :

- (1) " EZ " will be omitted in marking on the diode
- (2) Standard Tolerance:±5%

RATING AND CHARACTERISTICS CURVES (1SMAF2EZ3.6 THRU 1SMAF2EZ200)

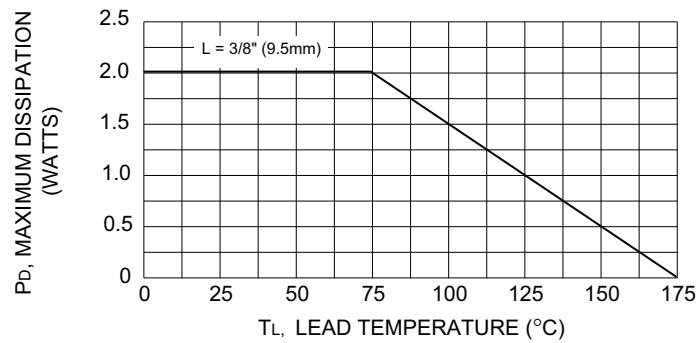


Fig. 1 POWER TEMPERATURE DERATING CURVE

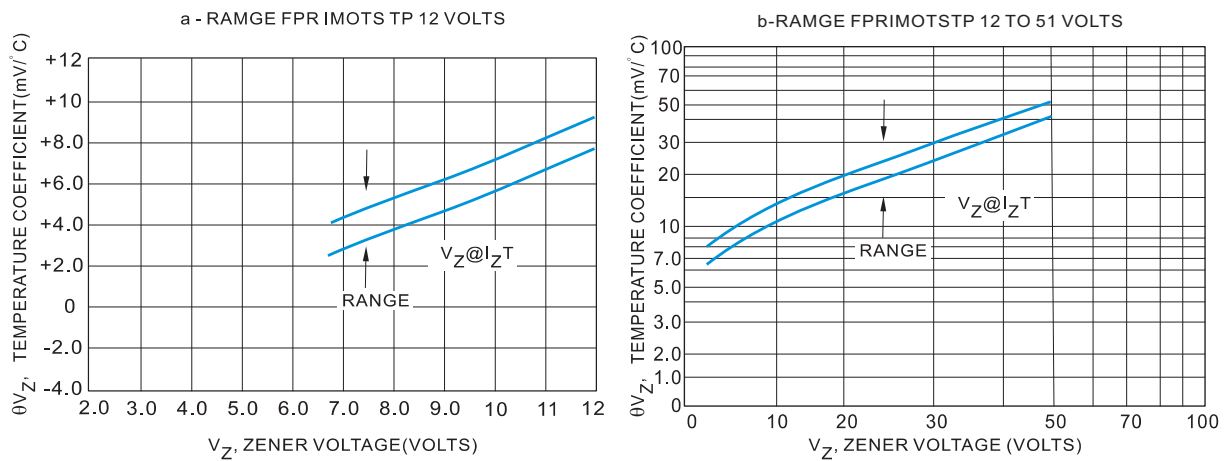


Fig. 2 TEMPERATURE COEFFICIENTS (-55°C TO 150°C TEMPERATURE RANGE; 90% OF THE UNITS ARE IN THE RANGES INDICATED)

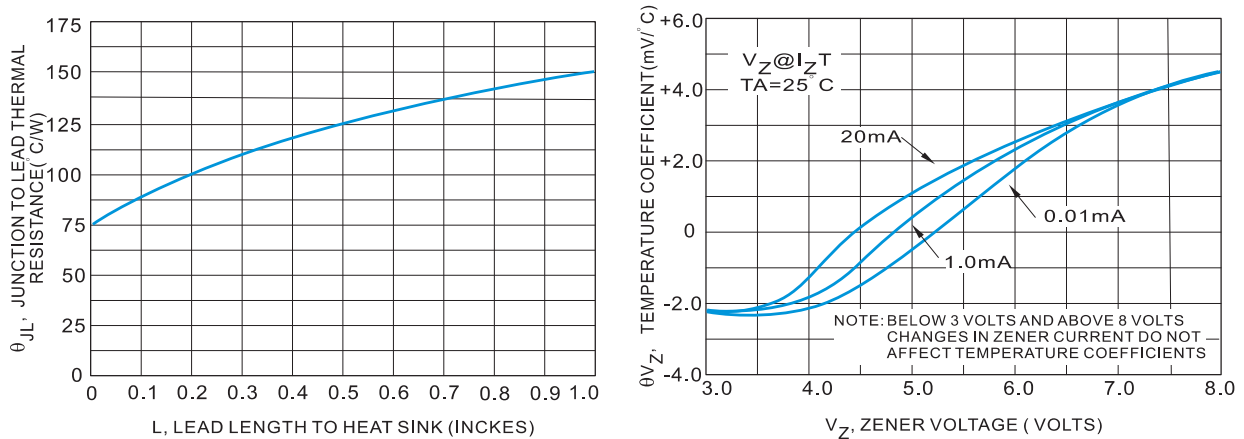
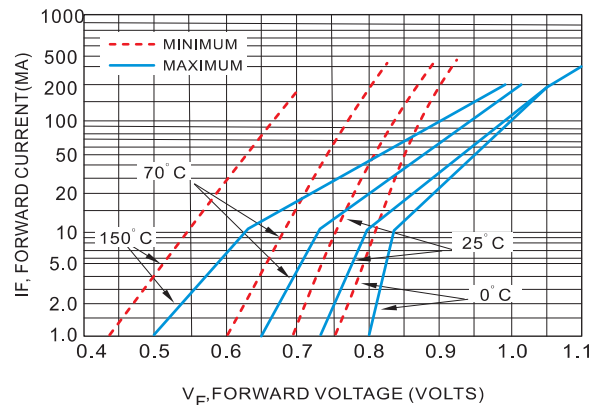
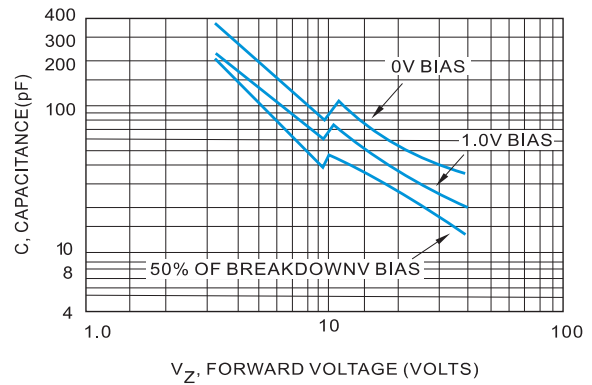
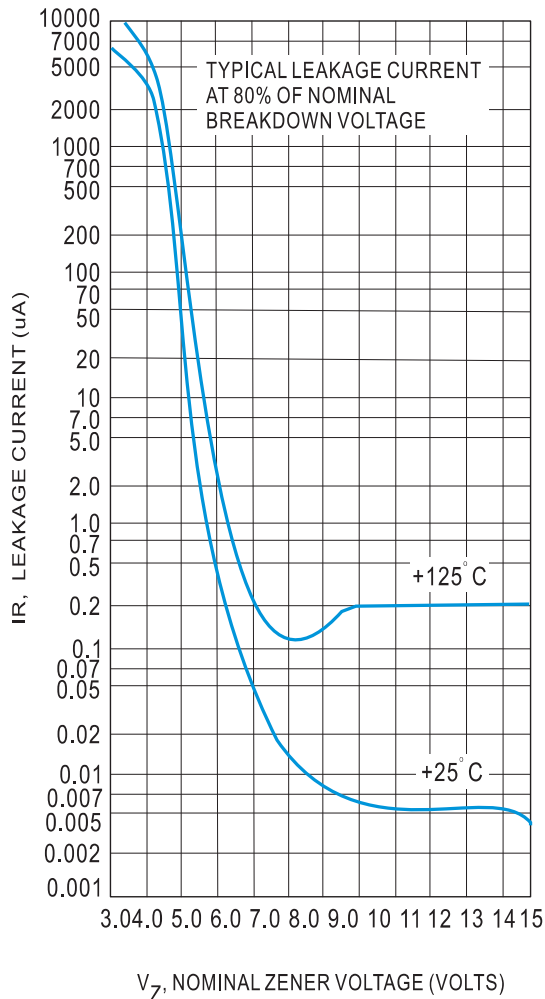
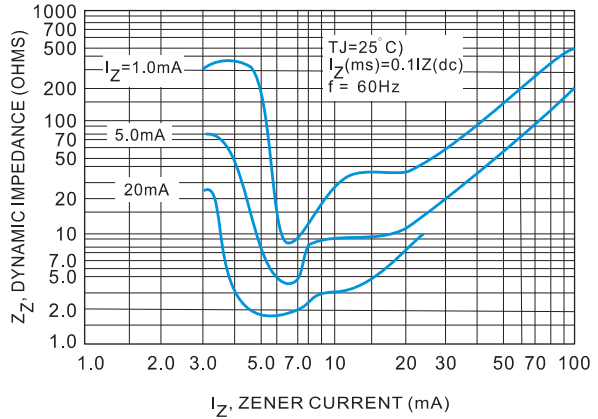
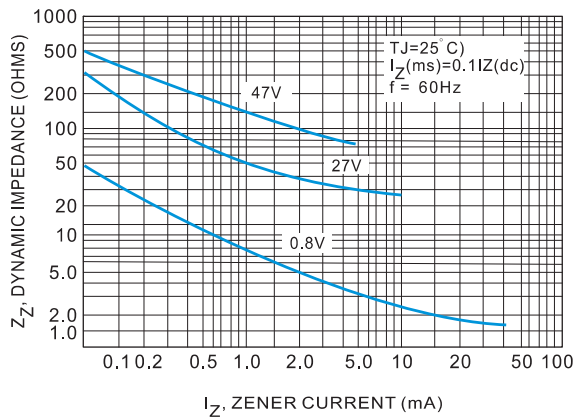
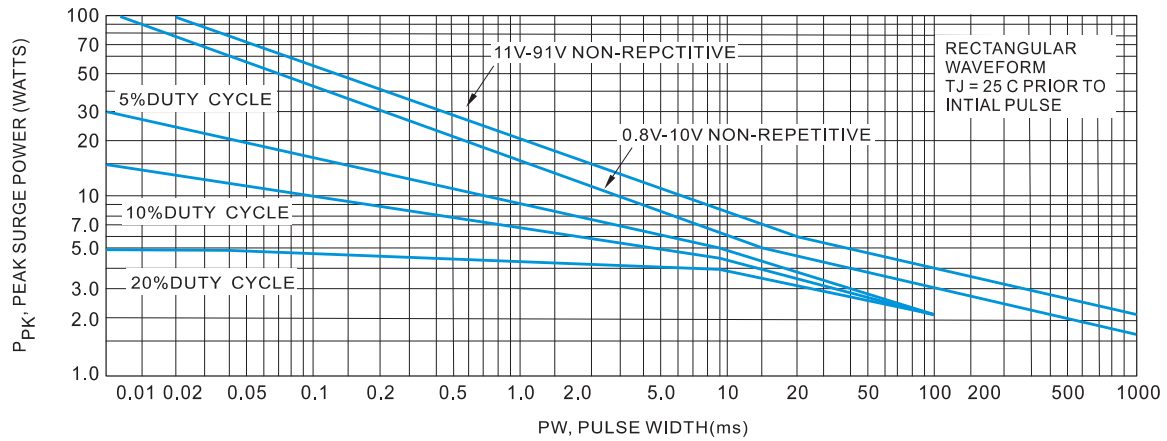


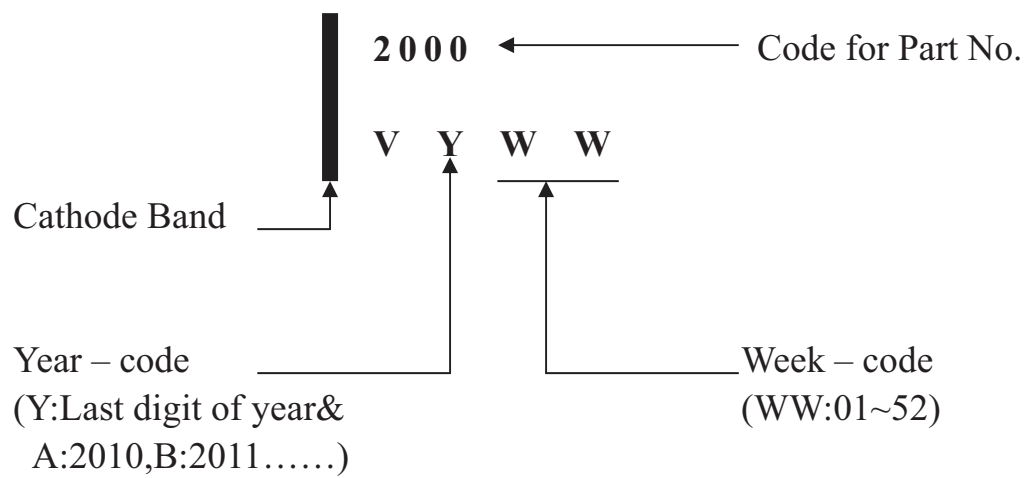
Fig. 3 TYPICAL THERMAL RESISTANCE VERSUS LEAD LENGTH

Fig. 4 EFFECT OF ZENER CURRENT

RATING AND CHARACTERISTICS CURVES (1SMAF2EZ3.6 THRU 1SMAF2EZ200)



Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMAF	-T	3,000	12,000	---	---	178	390*205*310	96,000	---

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