RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

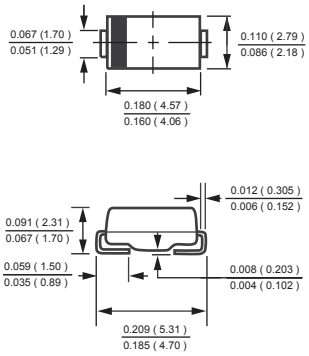
FM4735W(A) THRU FM4763W(A)

SURFACE MOUNT
GLASS PASSIVATED ZENER SILICON RECTIFIER
VOLTAGE RANGE 6.2 TO 91.0 Volts STEADY STATE POWER 1.0 WATT

FEATURES
* Plastic package has underwriters laboratory
* Excellent clamping capability
* Low zener impedance
* Low regulation factor

MECHANICAL DATA
* Epoxy : Device has UL flammability classification 94V-0

DO-214AC



Dimensions in inches and (millimeters)

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

MAXIMUN RATINGS (@ TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	Ratings	UNITS
Power Dissipation	PTOT	1	W
Thermal Resis	$R_{th}JA$	170	K / mW
Tolarance	-	5	%
Forward Voltage@If = 100mA	Vf	1.0	V
Junction Temp	T_J	150	°C
Storage Temp	T_{stg}	-55 to 150	°C

ELECTRICAL CHARACTERISTICS (@ TA = 25°C unless otherwise noted)

TYPE	NOMINAL ZENER VOLTAGE VZ at IZT (NOTE 1) (Volts)			TEST CURRENT	MAXIMUM DYNAMIC IMPEDANCE			MAXIMUM DC REVERSE LEAKAGE CURRENT		MAXIMUM SURGE CURRENT	MAXIMUM FORWARD VOLTAGE
	Min.	Typ.	Max.	IZT (mA)	ZZT at IZT (ohms)	ZZK at IZK (ohms)	(NOTE 1) IZK (mA)	IR (uA)	VR (Volts)	(NOTE 2) IRM (mApk)	VF at 200mA (Volts)
FM4735W	4.96	6.2	7.34	41.0	2.0	700	1.00	50.0	3.0	730.0	1.2
FM4735WA	5.58	6.2	6.82	41.0	2.0	700	1.00	50.0	3.0	730.0	1.2
FM4736W	5.44	6.8	8.16	37.0	3.5	700	1.00	10.0	4.0	660.0	1.2
FM4736WA	6.12	6.8	7.48	37.0	3.5	700	1.00	10.0	4.0	660.0	1.2
FM4737W	6.0	7.5	9.0	34.0	4.0	700	0.50	10.0	5.0	605.0	1.2
FM4737WA	6.75	7.5	8.25	34.0	4.0	700	0.50	10.0	5.0	605.0	1.2
FM4738W	6.56	8.2	9.84	31.0	4.5	700	0.50	10.0	6.0	550.0	1.2
FM4738WA	7.38	8.2	9.02	31.0	4.5	700	0.50	10.0	6.0	550.0	1.2
FM4739W	7.28	9.1	10.92	28.0	5.0	700	0.50	10.0	7.0	500.0	1.2
FM4739WA	8.19	9.1	10.01	28.0	5.0	700	0.50	10.0	7.0	500.0	1.2
FM4740W	8.0	10.0	12.0	25.0	7.0	700	0.25	10.0	7.6	454.0	1.2
FM4740WA	9.0	10.0	11.0	25.0	7.0	700	0.25	10.0	7.6	454.0	1.2

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

TYPE	NOMINAL ZENER VOLTAGE			TEST CURRENT	MAXIMUM DYNAMIC IMPEDANCE			MAXIMUM DC REVERSE LEAKAGE CURRENT		MAXIMUM SURGE CURRENT	MAXIMUM FORWARD VOLTAGE
	VZ at IZT (NOTE 1) (Volts)			IZT (mA)	ZZT at IZT (ohms)	ZZK at IZK (ohms)	(NOTE 1) IZK (mA)	IR (uA)	VR (Volts)	(NOTE 2) IRM (mApk)	VF at 200mA (Volts)
	Min.	Typ.	Max.								
FM4741W	8.8	11.0	13.2	23.0	8.0	700	0.25	5.0	8.4	414.0	1.2
FM4741WA	9.9	11.0	12.1	23.0	8.0	700	0.25	5.0	8.4	414.0	1.2
FM4742W	9.6	12.0	14.4	21.0	9.0	700	0.25	5.0	9.1	380.0	1.2
FM4742WA	10.8	12.0	13.2	21.0	9.0	700	0.25	5.0	9.1	380.0	1.2
FM4743W	10.4	13.0	15.6	19.0	10.0	700	0.25	5.0	9.9	344.0	1.2
FM4743WA	11.7	13.0	14.3	19.0	10.0	700	0.25	5.0	9.9	344.0	1.2
FM4744W	12.0	15.0	18.0	17.0	14.0	700	0.25	5.0	11.4	305.0	1.2
FM4744WA	13.5	15.0	16.5	17.0	14.0	700	0.25	5.0	11.4	305.0	1.2
FM4745W	12.8	16.0	19.2	15.5	16.0	700	0.25	5.0	12.2	285.0	1.2
FM4745WA	14.4	16.0	17.6	15.5	16.0	700	0.25	5.0	12.2	285.0	1.2
FM4746W	14.4	18.0	21.6	14.0	20.0	750	0.25	5.0	13.7	250.0	1.2
FM4746WA	16.2	18.0	19.8	14.0	20.0	750	0.25	5.0	13.7	250.0	1.2
FM4747W	16.0	20.0	24.0	12.5	22.0	750	0.25	5.0	15.2	225.0	1.2
FM4747WA	18.0	20.0	22.0	12.5	22.0	750	0.25	5.0	15.2	225.0	1.2
FM4748W	17.6	22.0	26.4	11.5	23.0	750	0.25	5.0	16.7	205.0	1.2
FM4748WA	19.8	22.0	24.2	11.5	23.0	750	0.25	5.0	16.7	205.0	1.2
FM4749W	23.2	24.0	28.8	10.5	25.0	750	0.25	5.0	18.2	190.0	1.2
FM4749WA	21.6	24.0	26.4	10.5	25.0	750	0.25	5.0	18.2	190.0	1.2
FM4750W	21.6	27.0	32.4	9.5	35.0	750	0.25	5.0	20.6	170.0	1.2
FM4750WA	24.3	27.0	29.7	9.5	35.0	750	0.25	5.0	20.6	170.0	1.2
FM4751W	24.0	30.0	36.0	8.5	40.0	1000	0.25	5.0	22.8	150.0	1.2
FM4751WA	27.0	30.0	33.0	8.5	40.0	1000	0.25	5.0	22.8	150.0	1.2
FM4752W	26.4	33.0	39.6	7.5	45.0	1000	0.25	5.0	25.1	135.0	1.2
FM4752WA	29.7	33.0	36.3	7.5	45.0	1000	0.25	5.0	25.1	135.0	1.2
FM4753W	28.8	36.0	43.2	7.0	50.0	1000	0.25	5.0	27.4	125.0	1.2
FM4753WA	32.4	36.0	39.6	7.0	50.0	1000	0.25	5.0	27.4	125.0	1.2
FM4754W	31.2	39.0	46.8	6.5	60.0	1000	0.25	5.0	29.7	115.0	1.2
FM4754WA	35.1	39.0	42.9	6.5	60.0	1000	0.25	5.0	29.7	115.0	1.2
FM4755W	34.4	43.0	51.6	6.0	70.0	1500	0.25	5.0	32.7	110.0	1.2
FM4755WA	38.7	43.0	47.3	6.0	70.0	1500	0.25	5.0	32.7	110.0	1.2
FM4756W	37.6	47.0	56.4	5.5	80.0	1500	0.25	5.0	35.8	95.0	1.2
FM4756WA	42.3	47.0	51.7	5.5	80.0	1500	0.25	5.0	35.8	95.0	1.2
FM4757W	40.8	51.0	61.2	5.0	95.0	1500	0.25	5.0	38.8	90.0	1.2
FM4757WA	45.9	51.0	56.1	5.0	95.0	1500	0.25	5.0	38.8	90.0	1.2
FM4758W	44.8	56.0	67.2	4.5	110.0	2000	0.25	5.0	42.6	80.0	1.2
FM4758WA	50.4	56.0	61.6	4.5	110.0	2000	0.25	5.0	42.6	80.0	1.2
FM4759W	49.6	62.0	74.4	4.0	125.0	2000	0.25	5.0	47.1	70.0	1.2
FM4759WA	55.8	62.0	68.2	4.0	125.0	2000	0.25	5.0	47.1	70.0	1.2

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

TYPE	NOMINAL ZENER VOLTAGE			TEST CURRENT	MAXIMUM DYNAMIC IMPEDANCE			MAXIMUM DC REVERSE LEAKAGE CURRENT		MAXIMUM SURGE CURRENT	MAXIMUM FORWARD VOLTAGE
	VZ at IZT (NOTE 1) (Volts)			IZT (mA)	ZZT at IZT (ohms)	ZZK at IZK (ohms)	(NOTE 1) IZK (mA)	IR (uA)	VR (Volts)	(NOTE 2) IRM (mApk)	VF at 200mA (Volts)
	Min.	Typ.	Max.								
FM4760W	54.4	68.0	81.6	3.7	150.0	2000	0.25	5.0	51.7	65.0	1.2
FM4760WA	61.2	68.0	74.8	3.7	150.0	2000	0.25	5.0	51.7	65.0	1.2
FM4761W	60.0	75.0	90.0	3.3	175.0	2000	0.25	5.0	56.0	60.0	1.2
FM4761WA	67.5	75.0	82.5	3.3	175.0	2000	0.25	5.0	56.0	60.0	1.2
FM4762W	65.6	82.0	98.4	3.0	200.0	3000	0.25	5.0	62.2	55.0	1.2
FM4762WA	73.8	82.0	90.2	3.0	200.0	3000	0.25	5.0	62.2	55.0	1.2
FM4763W	72.8	91.0	109.2	2.0	250.0	3000	0.25	5.0	69.2	50.0	1.2
FM4763WA	81.9	91.0	100.1	2.0	250.0	3000	0.25	5.0	69.2	50.0	1.2

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Notes :

1. Standard V_Z Tolerance is 20% , Suffix " A " denotes 10% tolerance.
2. Surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on IZT per JEDEC Method.
3. Maximum steady state power dissipation is 1.0 watt at TL = 75°C.
4. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

RATING AND CHARACTERISTICS CURVES (FM4735W(A) THRU FM4763W(A))

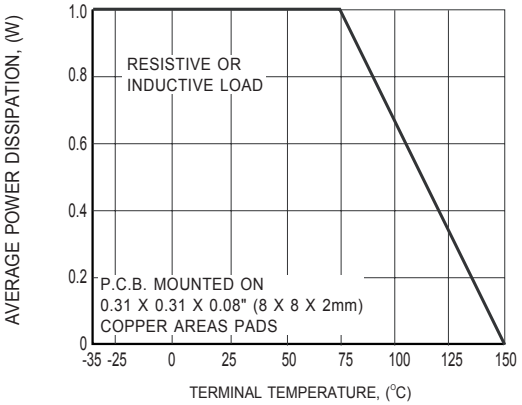

FIG.1 MAXIMUM CONTINUOUS POWER DISSIPATION

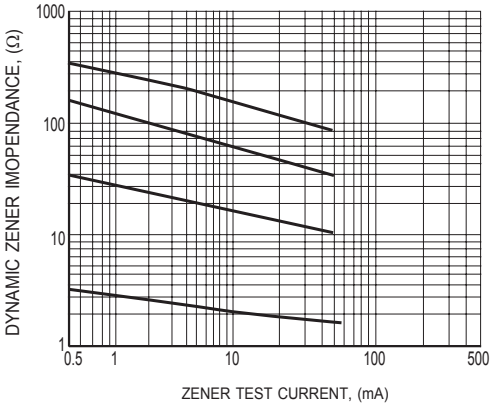

FIG.2 TYPICAL ZENER IMPENDANCE

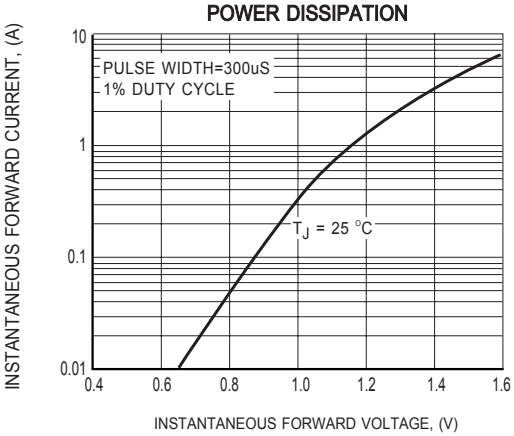

FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS FOR FM4763W

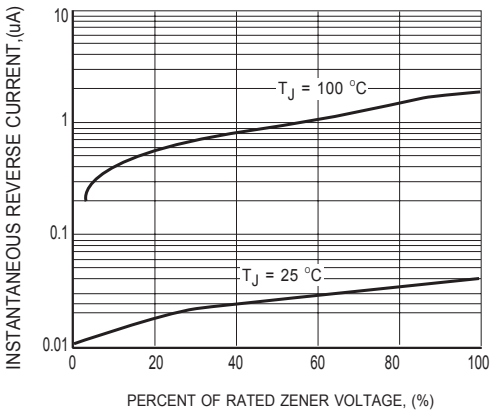

FIG.4 TYPICAL REVERSE CHARACTERISTICS

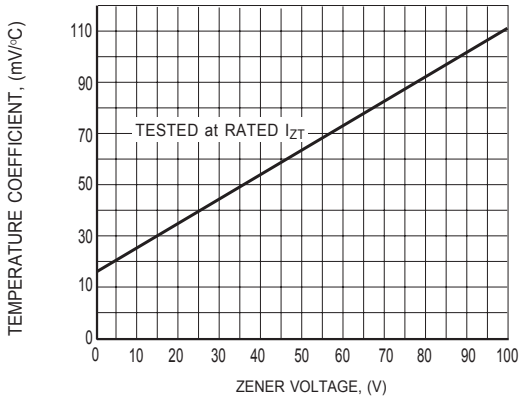

FIG.5 TYPICAL TEMPERATURE COEFFICIENTS

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