



1SMA4736-AU~1SMA4757-AU

SURFACE MOUNT SILICON ZENER DIODE

VOLTAGE 6.8 to 51 Volts **POWER** 1 Watts

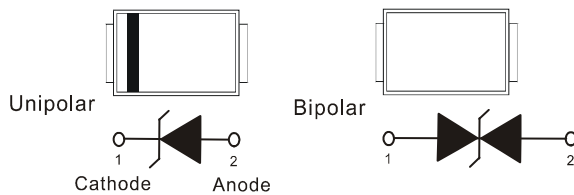
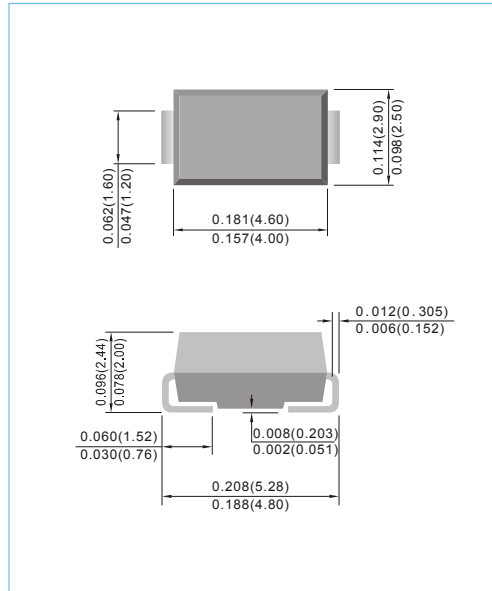
SMA / DO-214AC Unit : inch(mm)

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
- Acquire quality system certificate : TS16949
- AEC-Q101 qualified
- Lead free in comply with EU RoHS 2011/65/EU directives
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: JEDEC DO-214AC, Molded plastic over passivated junction.
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard Packaging: 12mm tape (EIA-481)
- Weight: 0.0023 ounce, 0.0679 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Units
Peak Pulse Power Dissipation on $T_A=50^\circ\text{C}$ (Notes A) Derate above 50 °C	P_D	1.0	Watts
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	10	Amps
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	°C

NOTES:

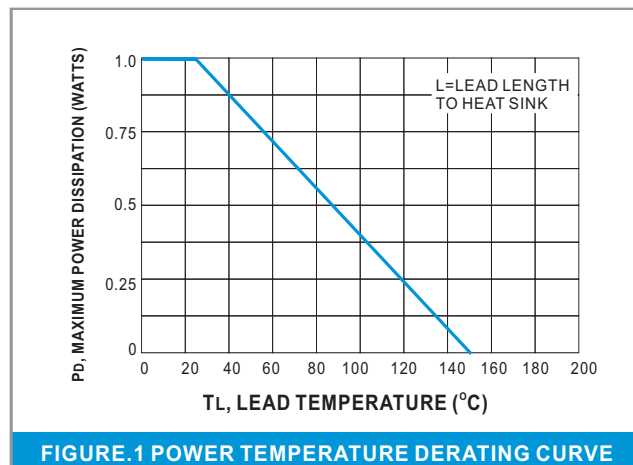
- Mounted on 5.0mm² (.013mm thick) land areas.
- Measured on 8.3ms, and single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.
- Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.



1SMA4736-AU~1SMA4757-AU

Part Number	Nominal Zener Voltage			Maximum Zener Impedance				Max Reverse Leakage Current		Marking Code
	$V_Z @ I_{ZT}$			$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$		
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA Max	V	
1 Watt ZENER										
1SMA4736-AU	6.8	6.46	7.14	3.5	37	700	1	5	4	736B
1SMA4737-AU	7.5	7.13	7.88	4	34	700	0.5	5	5	737B
1SMA4738-AU	8.2	7.79	8.61	4.5	31	700	0.5	5	6	738B
1SMA4739-AU	9.1	8.65	9.56	5	28	700	0.5	0.5	7	739B
1SMA4740-AU	10	9.5	10.5	7	25	700	0.25	0.5	7.6	740B
1SMA4741-AU	11	10.45	11.55	8	23	700	0.25	0.1	8.4	741B
1SMA4742-AU	12	11.4	12.6	9	21	700	0.25	0.1	9.1	742B
1SMA4743-AU	13	12.35	13.65	10	19	700	0.25	0.1	9.9	743B
1SMA4744-AU	15	14.25	15.75	14	17	700	0.25	0.1	11.4	744B
1SMA4745-AU	16	15.2	16.8	16	15.5	700	0.25	0.1	12.2	745B
1SMA4746-AU	18	17.1	18.9	20	14	750	0.25	0.1	13.7	746B
1SMA4747-AU	20	19	21	22	12.5	750	0.25	0.1	15.2	747B
1SMA4748-AU	22	20.9	23.1	23	11.5	750	0.25	0.1	16.7	748B
1SMA4749-AU	24	22.8	25.2	25	10.5	750	0.25	0.1	18.2	749B
1SMA4750-AU	27	25.65	28.35	35	9.5	750	0.25	0.1	20.6	750B
1SMA4751-AU	30	28.5	31.5	40	8.5	1000	0.25	0.1	22.8	751B
1SMA4752-AU	33	31.35	34.65	45	7.5	1000	0.25	0.1	25.1	752B
1SMA4753-AU	36	34.2	37.8	50	7	1000	0.25	0.1	27.4	753B
1SMA4754-AU	39	37.05	40.95	60	6.5	1000	0.25	0.1	29.7	754B
1SMA4755-AU	43	40.85	45.15	70	6	1500	0.25	0.1	32.7	755B
1SMA4756-AU	47	44.65	49.35	80	5.5	1500	0.25	0.1	35.8	756B
1SMA4757-AU	51	48.45	53.55	95	5	1500	0.25	0.1	38.8	757B

RATING AND CHARACTERISTICS CURVES





1SMA4736-AU~1SMA4757-AU

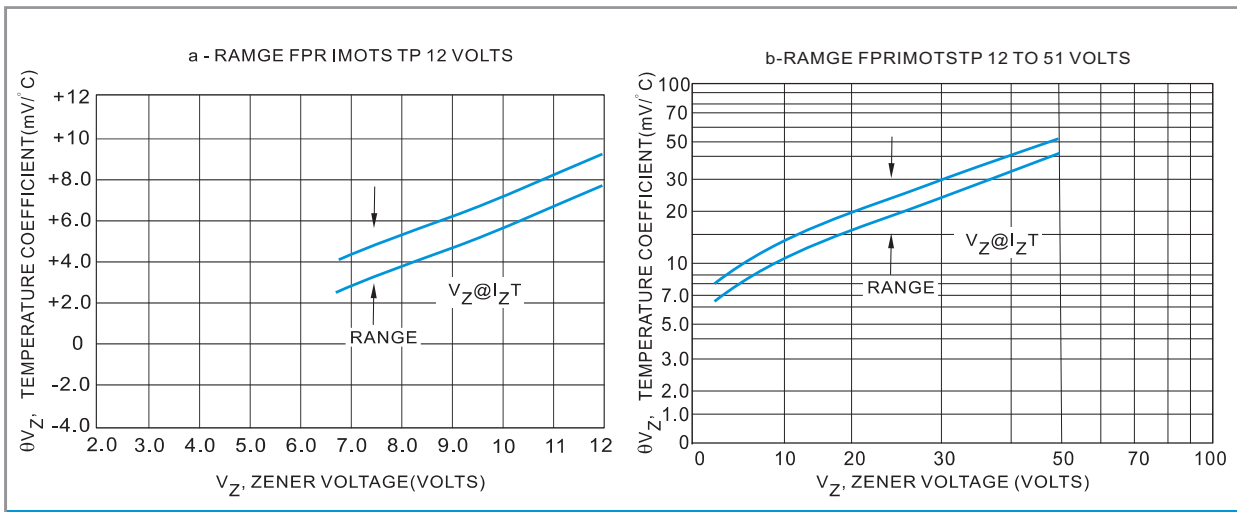


FIGURE 2 - TEMPERATURE COEFFICIENTS
(-55° C TO +150° C TEMPERATURE RANGE; 90% OF THE UNITS ARE IN THE RANGES INDICATED.)

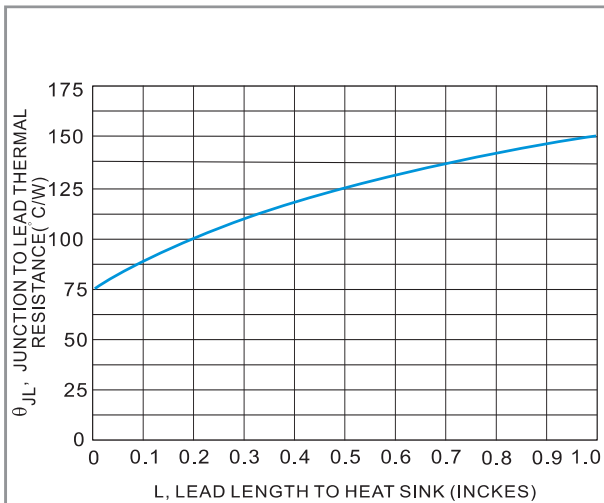


FIGURE 3 - TYPICAL THERMAL RESISTANCE versus LEAD LENGTH

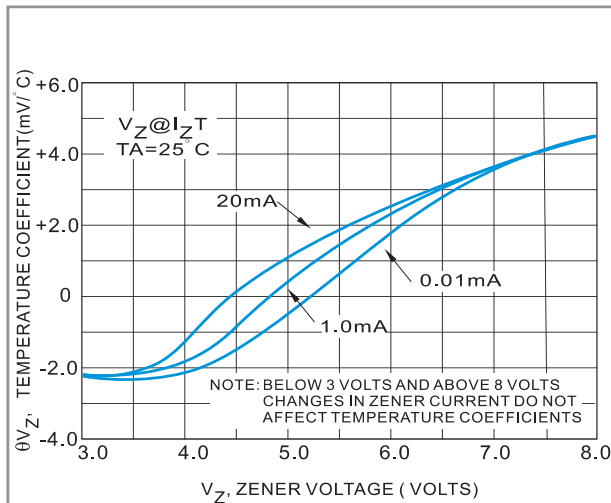
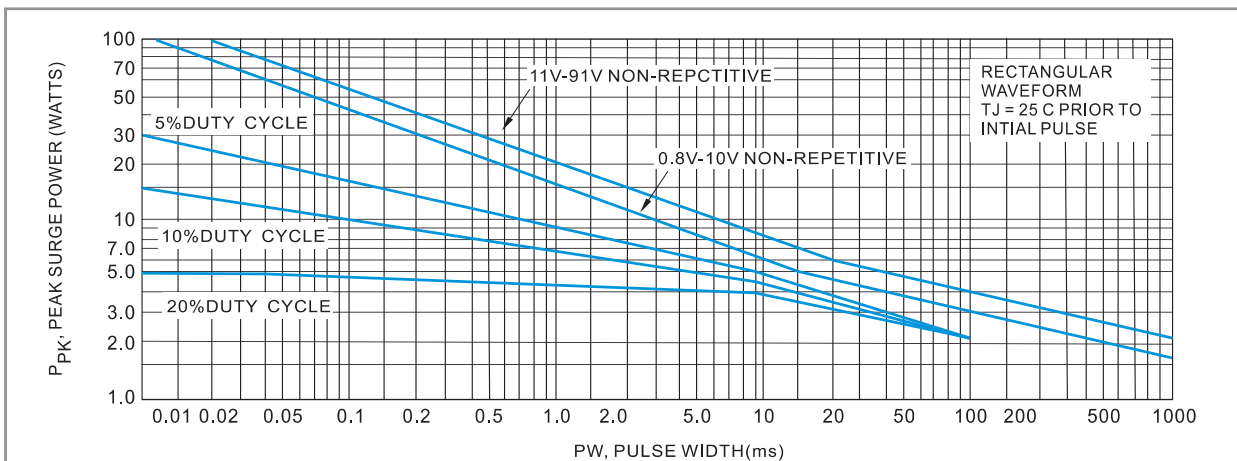


FIGURE 4 - EFFECT OF ZENER CURRENT



This graph represents 90 percentile data points.
FOR worst-case design characteristics, multiply surge power by 2/3

FIGURE 5 - MAXIMUM SURGE POWER



1SMA4736-AU~1SMA4757-AU

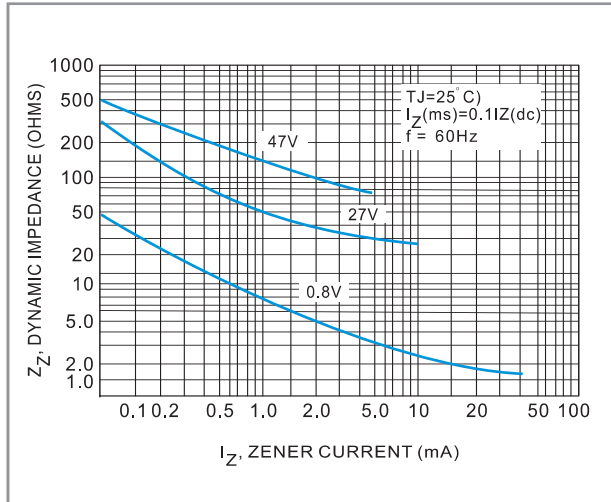


FIGURE 6 - EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

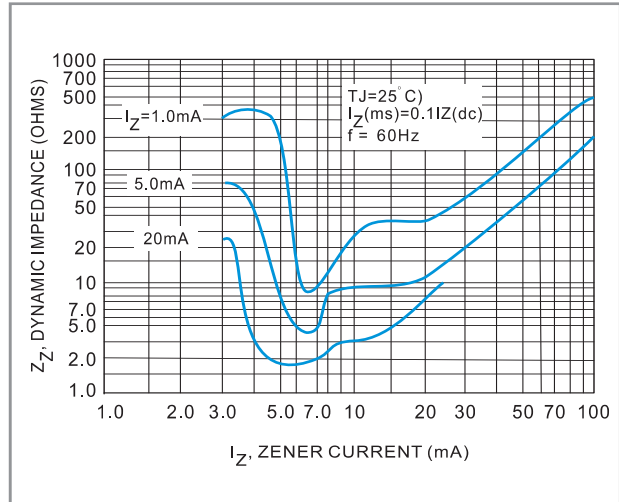


FIGURE 7 - EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

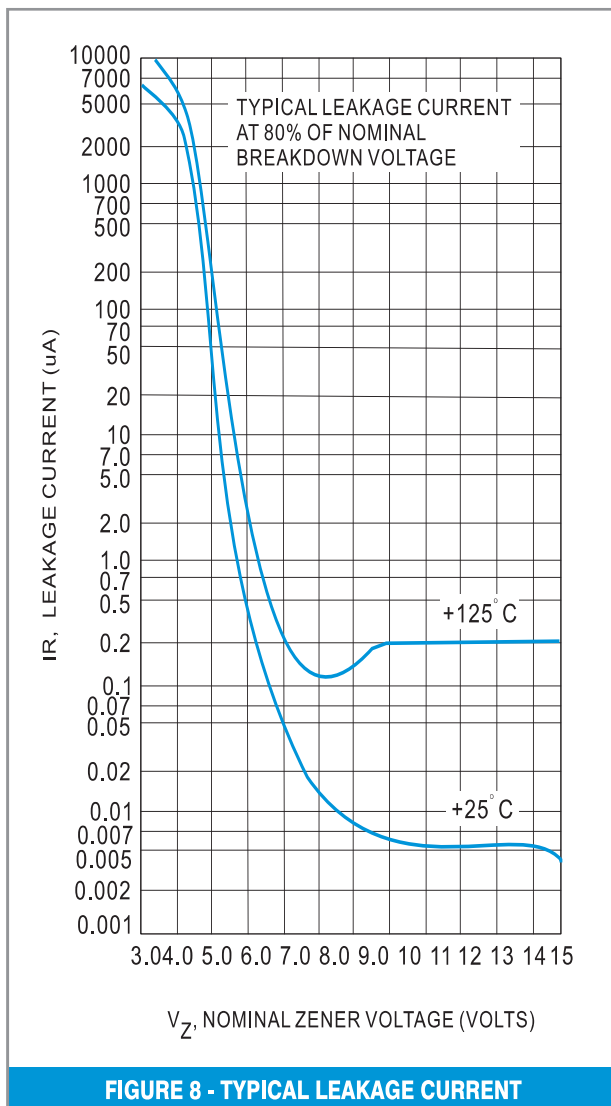


FIGURE 8 - TYPICAL LEAKAGE CURRENT

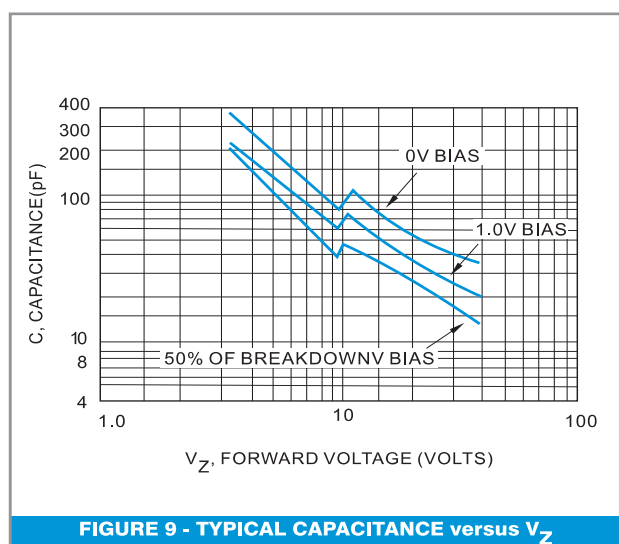


FIGURE 9 - TYPICAL CAPACITANCE versus V_Z

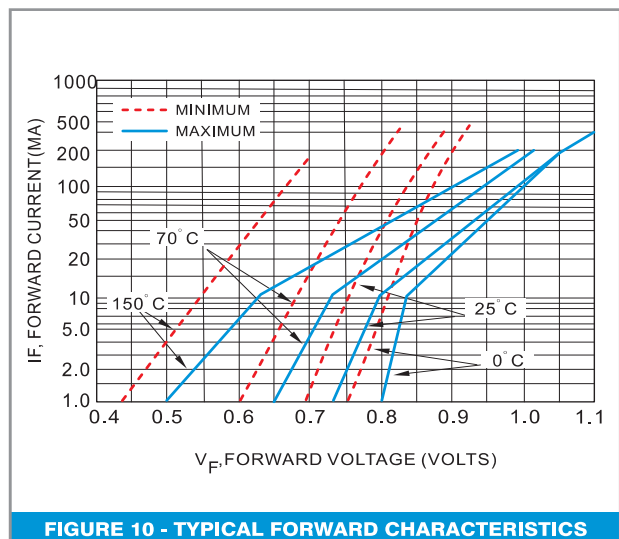
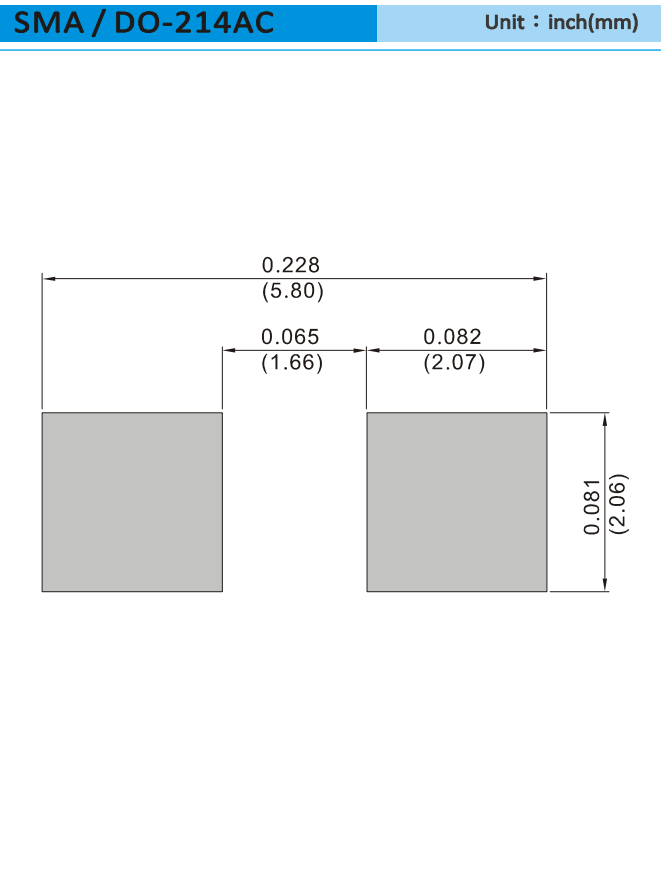


FIGURE 10 - TYPICAL FORWARD CHARACTERISTICS



1SMA4736-AU~1SMA4757-AU

MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 7.5K per 13" plastic Reel
T/R - 1.8K per 7" plastic Reel



1SMA4736-AU~1SMA4757-AU

Part No_packing code_Version

1SMA4736-AU_R1_000A1

1SMA4736-AU_R2_000A1

For example :

RB500V-40_R2_00001



Packing type	Packing Code XX			Version Code XXXXX		
	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



1SMA4736-AU~1SMA4757-AU

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.