

SPECIFICATION SHEET NO.	T0813 – 1SMA4742AL742A	
ORIGINAL MFG/PART NO.	LGE Diodes/1SMA4742A-L	
NEXTGEN PART CODE	1SMA4742AL742A	Indicate This Code For RFQ /Order
DATE	Aug. 13, 2026	
REVISION	A2	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD Zener Diodes, Case DO-214AC/SMA, 1SMA Series, 2 Pads Zener reverse voltage (Nom) (Vzt): 12V, Power Dissipation at Ta=50°C: 1.0 Watts. Junction and Storage Temperature Range (TJ, TSTG): -55°C ~+150°C Package in Tape/Reel, 5000pcs/Reel RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE			
Issued/Checked/Approved			
Effective Date: Aug. 13, 2026			

CUSTOMER APPROVE	
Date:	

MAIN FEATURE

- Small Plastic Package Suitable For Surface Mounted Design.
- Built-in Strain Relief
- Glass Passivated Junction
- Low Inductance
- 1.0W Total Power Dissipation
- Wide Zener Reverse Voltage Range 3.3V To 330V.
- High temperature soldering guaranteed: 260°C/10 seconds
- Meet MSL 1 Requirement
- Cross Competitors Parts and More.
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)



Image shown is a representation only. Exact specifications should be obtained from the product dimension.



APPLICATION

- For Printed Circuit Board

ELECTRICAL CHARACTERISTICS

- See Page 5 ~ Page 8 For Different Part Code.
- All Products Parameters are Subject To NextGen Components' Final Confirmation.

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code 1SMA4742AL742A For RFQ and Order.

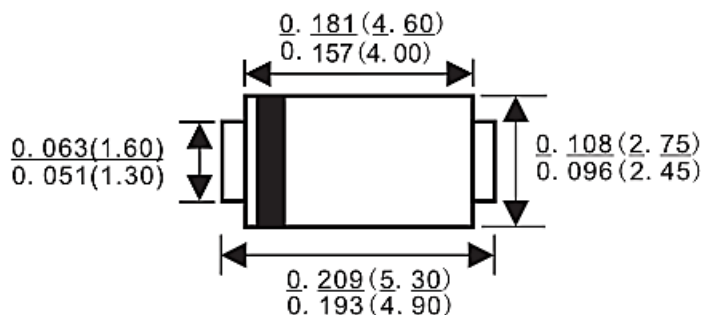
PART CODE GUIDE

RFQ
[Request For Quotation](#)

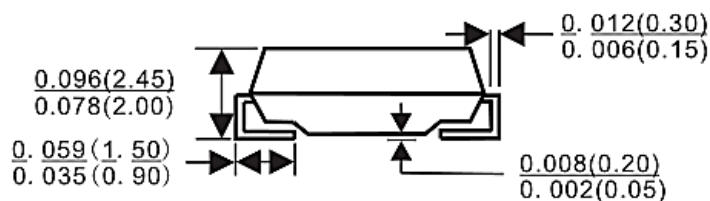
CODE	NAME	KEY SPECIFICATION OPTION
1SMA	Product Series Code	SMD Zener Series Diodes, Case DO-214AC/SMA, 2 Pads, 1SMA series
4742A	Parameters Code	Letter or Digits (A~Z, a~z or 0~9)
L	Internal Control Code	Letter or Digits (A~Z, a~z or 0~9)
742A	Marking Code	Marking "742A"
XX	Special/Custom Parameters Code	Letter or Digits (A~Z, a~z or 0~9) for Special Parametric; Blank: N/A

DIMENSION - Unit: mm, Case DO-214AC/SMA, Inch/mm

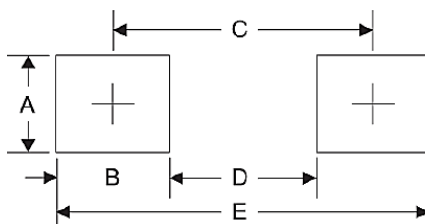
Top View



Side View



Recommend Pad Layout



SYMBOL	A	B	C	D	E
Unit (Inch)	0.066	0.060	0.154	0.095	0.215
Unit (mm)	1.68	1.52	3.9	2.41	5.45

MECHANICAL DATA

CASE	TERMINALS	POLARITY	MOUNTING POSITION	WEIGHT PER PIECE
JEDEC SMA/DO-214AC molded plastic body	Solderable per MIL-STD-750, Method 2026	Polarity symbol marking on body	Any	0.002 Ounce, 0.055 Grams

MAX. RATINGS & CHARACTERISTICS -Ratings at 25 °C Ambient Temperature Unless Otherwise Specified.

Parameter	SYMBOLS	VALUE	UNITS
Power Dissipation at TA=50°C	P _D	1.0	W
Forward Voltage @ I _F =200mA	V _F	1.2	V
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{stg}	-55 ~ +150	°C

MAX. RATINGS & ELECTRICAL CHARACTERISTICS at Ta = 25°C - FOR DIFFERENT PART CODE

Part Code	Zener Voltage Range (See Note 1) V _{ZT} @ I _{ZT} (V)			Test Current I _{ZT} (mA)	Dynamic Impedance Max. Z _T @ I _{ZT} (Ω)	Reverse Current		Admissible Zener Current I _{ZM} (mA)	Marking Code
	Min.	Nom	Max.			Max. I _R (μA)	@ V _R (V)		
1SMA4728AL728A	3.1	3.3	3.5	75	10	100	1	285	728A
1SMA4729AL729A	3.4	3.6	3.8	69	10	100	1	263	729A
1SMA4730AL730A	3.7	3.9	4.1	64	9	50	1	243	730A
1SMA4731AL731A	4.06	4.3	4.56	58	9	25	1	219	731A
1SMA4732AL732A	4.5	4.7	4.93	53	8	10	1	203	732A
1SMA4733AL733A	4.84	5.1	5.36	49	7	10	1	186	733A
1SMA4734AL734A	5.32	5.6	5.92	45	5	10	2	170	734A
1SMA4735AL735A	5.86	6.2	6.51	41	2	10	3	154	735A
1SMA4736AL736A	6.46	6.8	7.18	37	3.5	10	4	140	736A
1SMA4737AL737A	7.12	7.5	7.88	34	4	10	5	127	737A
1SMA4738AL738A	7.79	8.2	8.67	31	4.5	10	6	116	738A
1SMA4739AL739A	8.6	9.1	9.59	28	5	10	7	104	739A
1SMA4740AL740A	9.5	10	10.5	25	7	10	7	95	740A
1SMA4741AL741A	10.4	11	11.6	23	8	5	8	86	741A
1SMA4742AL742A	11.4	12	12.6	21	9	5	9	79	742A
1SMA4743AL743A	12.4	13	14.1	19	10	5	10	71	743A
1SMA4744AL744A	13.8	15	15.8	17	14	5	11	63	744A
1SMA4745AL745A	15.2	16	17.1	16	16	5	12	58	745A
1SMA4746AL746A	16.8	18	19.2	14	20	5	13	52	746A
1SMA4747AL747A	19	20	21.2	13	22	5	15	47	747A
1SMA4748AL748A	20.8	22	23.3	12	23	5	17	43	748A

MAX. RATINGS & ELECTRICAL CHARACTERISTICS at Ta = 25°C - FOR DIFFERENT PART CODE

Part Code	Zener Voltage Range (See Note 1) V _{ZT} @ I _{ZT} (V)			Test Current I _{ZT} (mA)	Dynamic Impedance Max. Z _T @ I _{ZT} (Ω)	Reverse Current		Admissible Zener Current I _{ZM} (mA)	Marking Code
	Min.	Nom	Max.			Max. I _R (μA)	@ V _R (V)		
1SMA4749AL749A	22.8	24	26	11	25	5	18	38	749A
1SMA4750AL750A	25.3	27	28.9	9.5	35	5	21	35	750A
1SMA4751AL751A	28.2	30	32	8.5	40	5	23	31	751A
1SMA4752AL752A	31.3	33	34.9	7.5	45	5	25	28	752A
1SMA4753AL753A	34.2	36	37.9	7	50	5	27	26	753A
1SMA4754AL754A	37.2	39	41.5	6.5	60	5	30	24	754A
1SMA4755AL755A	40.9	43	45.6	6	70	1	32	22	755A
1SMA4756AL756A	44.9	47	49.8	5.5	80	1	35	20	756A
1SMA4757AL757A	48.6	51	54	5	95	1	38	18	757A
1SMA4758AL758A	53.6	56	58.8	4.5	110	1	42	17	758A
1SMA4759AL759A	58.9	62	65.6	4	125	1	47	15	759A
1SMA4760AL760A	64.6	68	71.7	3.7	150	1	52	14	760A
1SMA4761AL761A	71.2	75	78.8	3.3	175	1	56	12	761A
1SMA4762AL762A	77.9	82	87	3	200	1	62	11	762A
1SMA4763AL763A	86	91	96	2.8	250	1	69	10	763A
1SMA4764AL764A	95	100	105	2.5	350	1	76	9.5	764A
1SMA4765AL765A	104	110	116	2.3	450	1	84	8.6	765A
1SMA4766AL766A	114	120	127	2	550	1	91	7.8	766A
1SMA4767AL767A	125	135	142	1.9	700	1	100	7	767A
1SMA4768AL768A	140	150	157	1.7	900	1	110	6.3	768A
1SMA4769AL769A	155	165	172	1.6	1100	1	120	5.8	769A

MAX. RATINGS & ELECTRICAL CHARACTERISTICS at Ta = 25°C - FOR DIFFERENT PART CODE

Part Code	Zener Voltage Range (See Note 1) V _{ZT} @ I _{ZT} (V)			Test Current I _{ZT} (mA)	Dynamic Impedance Max. Z _{VT} @ I _{ZT} (Ω)	Reverse Current		Admissible Zener Current I _{ZM} (mA)	Marking Code
	Min.	Nom	Max.			Max. I _R (μA)	@ V _R (V)		
1SMA4770AL770A	170	180	191	1.4	1200	1	135	5.2	770A
1SMA4771AL771A	189	200	211	1.2	1400	1	150	4.7	771A
1SMA4772AL772A	209	220	231	1	1600	1	165	4.3	772A
1SMA4773AL773A	229	240	251	1	1800	1	180	3.9	773A
1SMA4774AL774A	249	260	271	1	2000	1	190	3.7	774A
1SMA4775AL775A	269	280	291	1	2100	1	205	3.4	775A
1SMA4776AL776A	289	300	315	1	2300	1	230	3.1	776A
1SMA4777AL777A	313	330	346	1	2500	1	250	2.8	777A

Notes

1. Suffix " A " indicates ± 5.0% tolerance..
2. The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method.
3. V_{ZT} is tested with pulses (20 ms)

RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25°C Unless Otherwise Specified.

Figure 1. Power Temperature Derating Curve

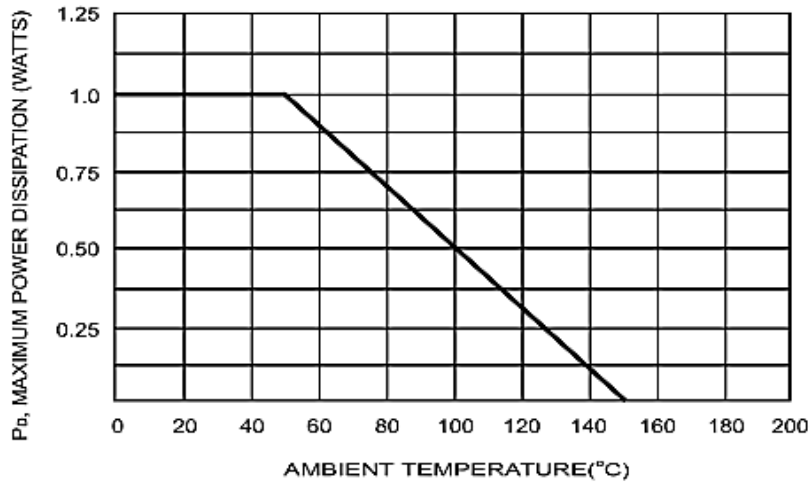
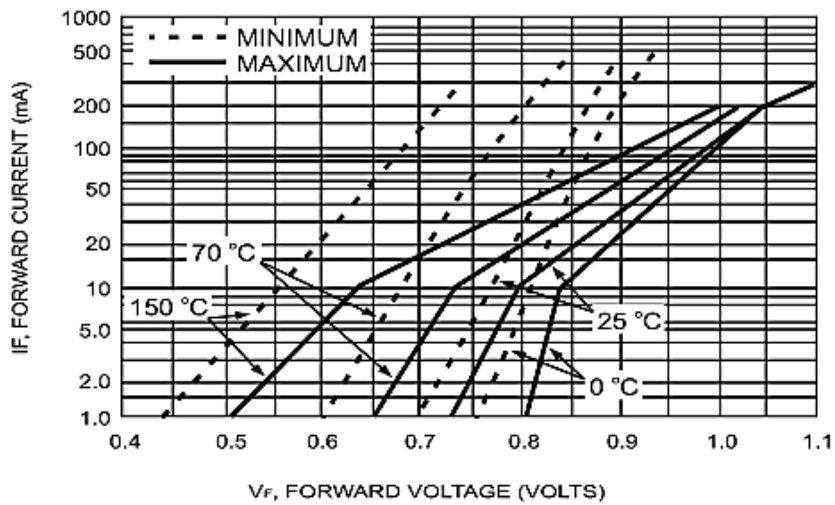


Figure 2. Typical Forward Characteristics Curve



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Figure 3. Effect Of Zener Current On Zener Impedance Curve

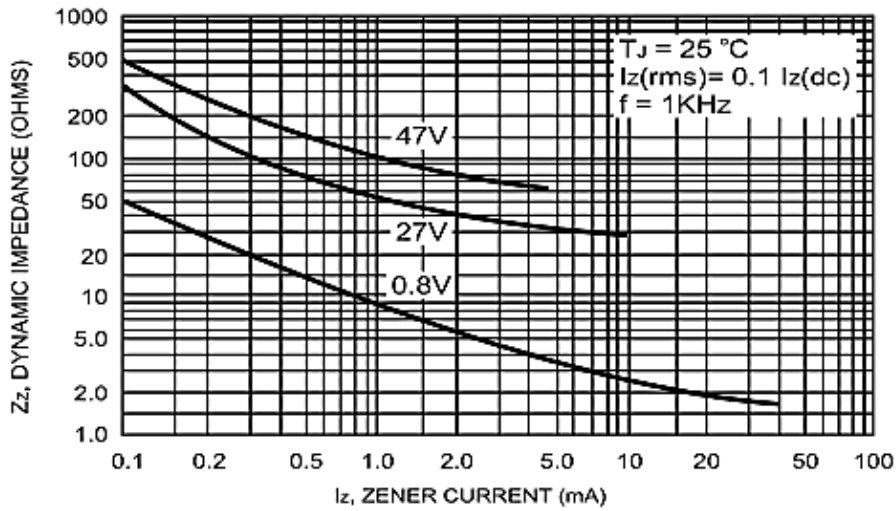
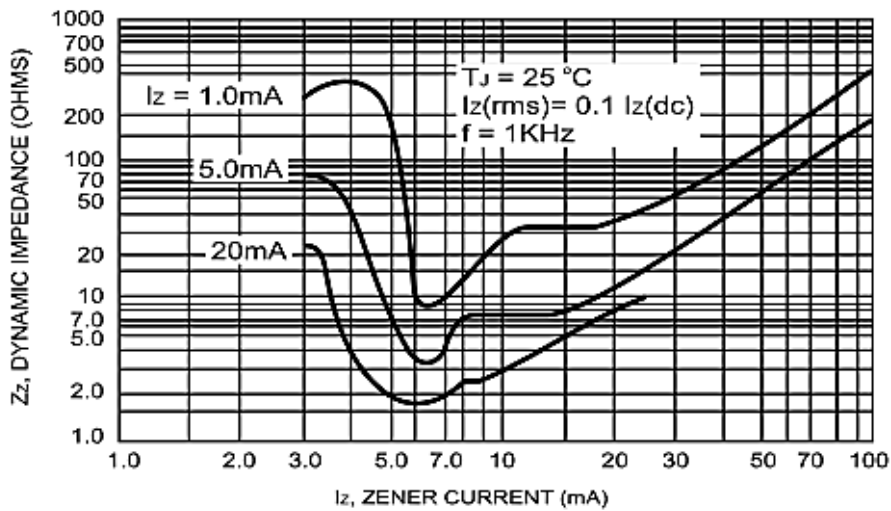
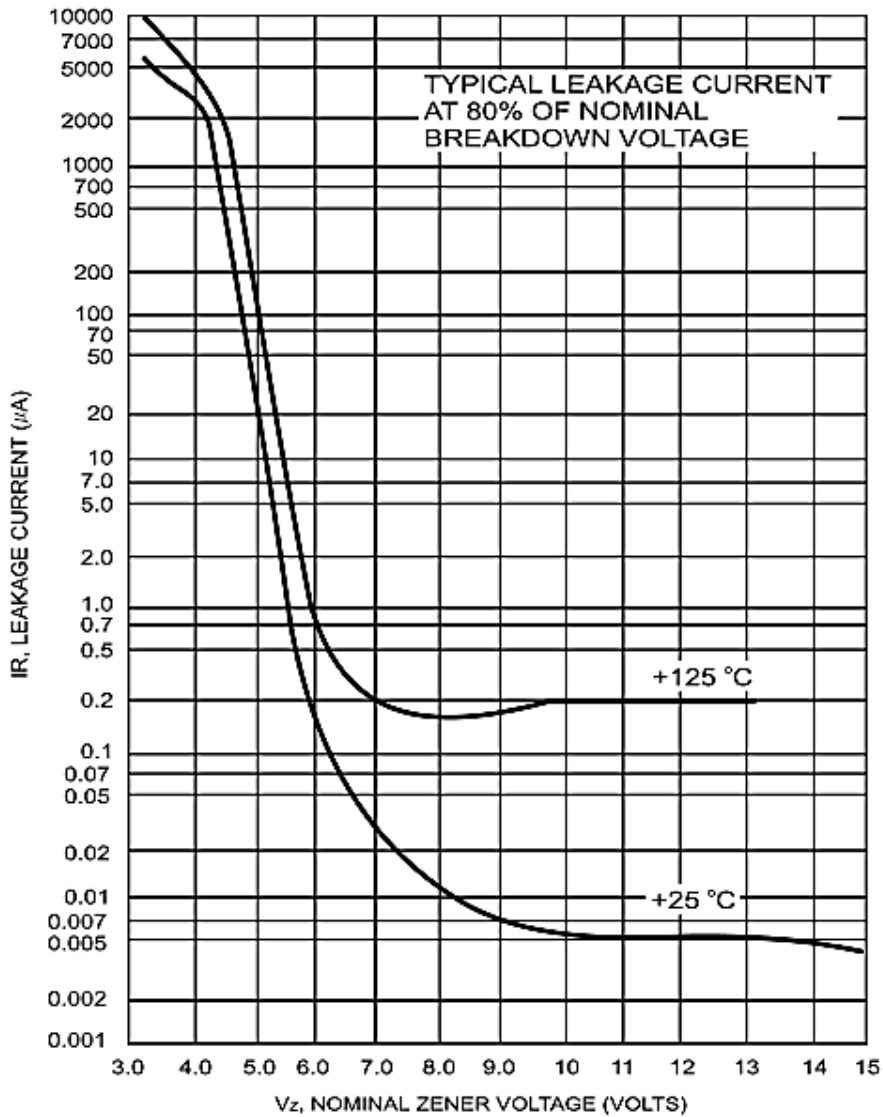


Figure 4. - Effect Of Zener Voltage On Zener Impedance Curve



RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25°C Unless Otherwise Specified.

Figure 5. Typical Leakage Current Curve



RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25°C Unless Otherwise Specified.

Figure 6. Typical Capacitance versus Vz Curve

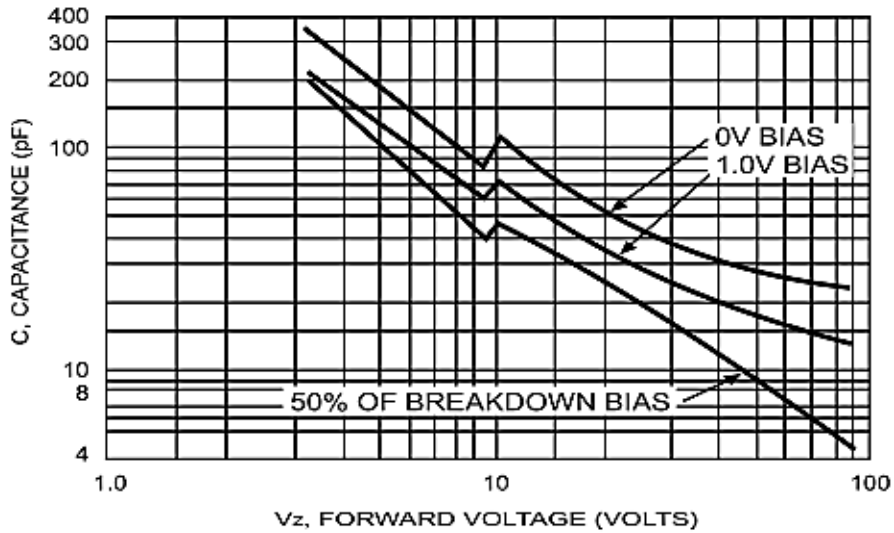
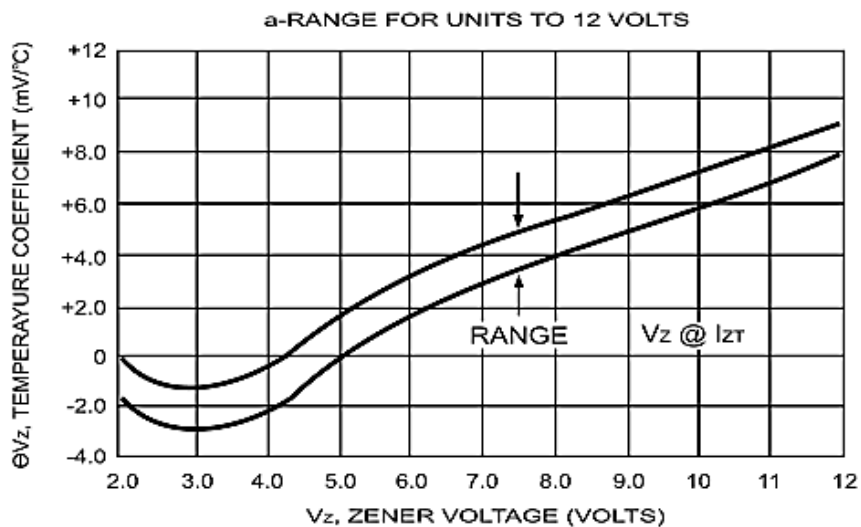


Figure 7. Temperature Coefficients Curve



RATINGS AND CHARACTERISTICS CURVES- For Reference Only, $T_a=25^\circ\text{C}$ Unless Otherwise Specified.

Figure 8. Temperature Coefficients Curve

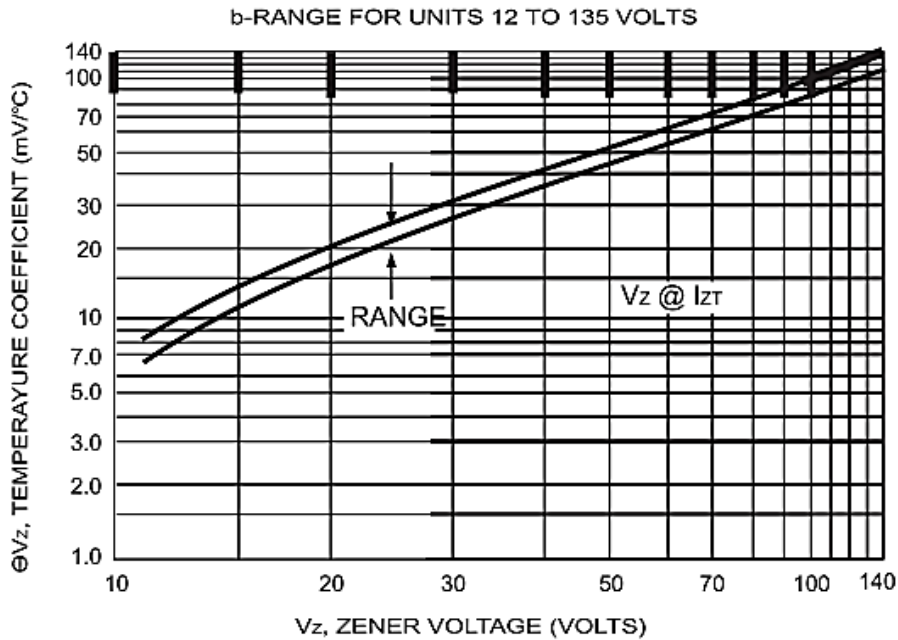
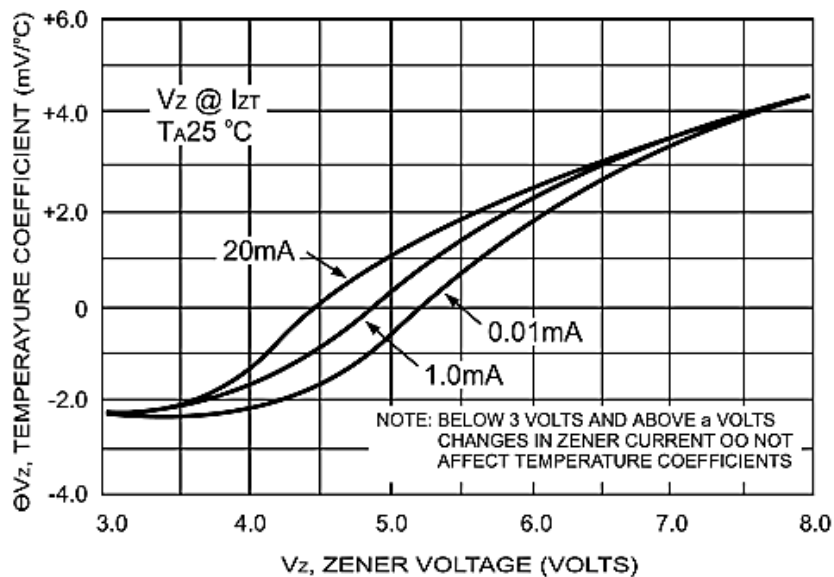
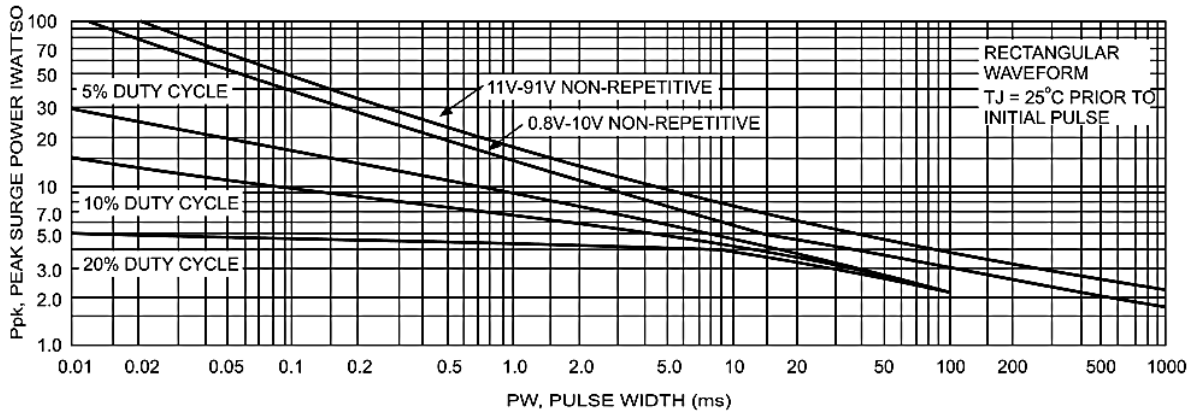


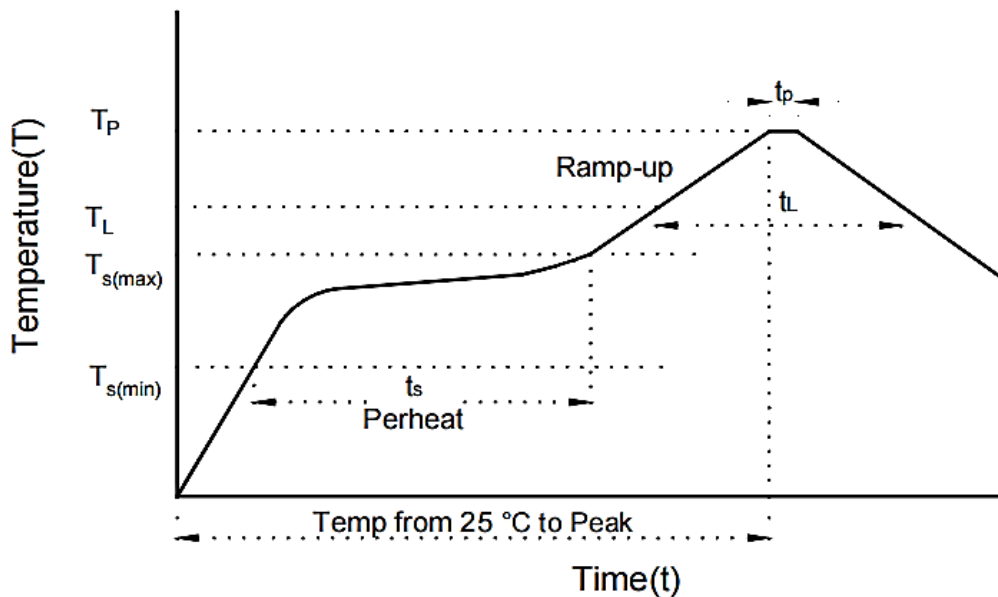
Figure 9. Effect Of Zener Current Curve



RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25°C Unless Otherwise Specified.

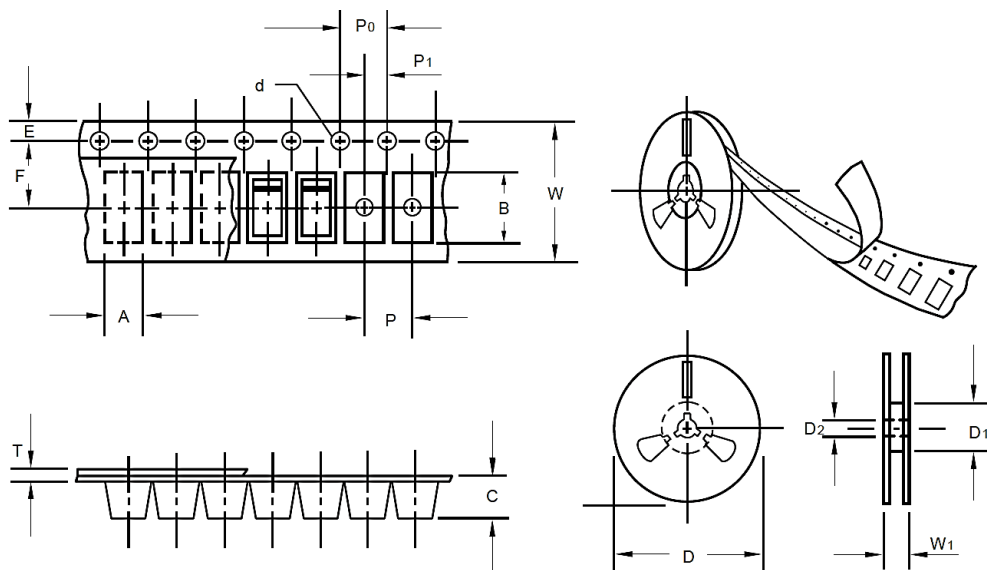
Figure 10. Maximum Surge Power Curve



SUGGESTED REFLOW PROFILE - For Reference Only


PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (T_L Max to T_p)		3°C/second Max
Preheat	Temperature Min (T_s Min.)	150°C
	Temperature Max (T_s Max.)	200°C
	Time (t_s Min. to t_s Max.)	60 ~ 180 seconds
Time maintained above	Temperature (T_L)	217°C
	Time (t_L)	60 ~ 150 seconds
Peak/Classification Temperature (T_p)		260 °C
Time within 5°C of actual Peak Temperature (t_p)		10 seconds Max.
Ramp-down Rate		6 °C /Second Max.
Time 25 °C to Peak Temperature		8 Minutes Max.
Suggest reflow times		3 Times Max.

TAPE/REEL - Unit: mm, All Devices are packed in accordance with EIA standard RS-481-A and specifications



ITEM	SYMBOL	TOLERANCE	SMA/DO-214AC
Carrier width	A	0.1	2.8
Carrier Length	B	0.1	5.33
Carrier Depth	C	0.1	2.36
Sprocket hole	d	0.05	1.50
13"Reel outside diameter	D	2	330
13"Reel inner diameter	D1	Min.	50.0
Feed hole diameter	D2	0.5	13
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.5
Punch hole pitch	P	0.1	4
Sprocket hole pitch	P0	0.1	4
Embossment center	P1	0.1	2
Overall tape thickness	T	0.1	0.28
Tape width	W	0.3	12.0
Reel width	W1	1	18.0
Qty. Per Reel (pcs)	5000		

IMPORTANT NOTES AND DISCLAIMER

1. **ROHS COMPLIANCE:** The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.
2. **REACH COMPLIANCE:** REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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