

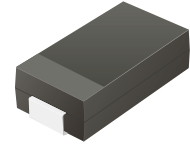
CZRA4733B-HF Thru. CZRA1330B-HF

Zener Voltage: 5.1 to 330 V

DC Power: 1 W

RoHS Device

Halogen Free

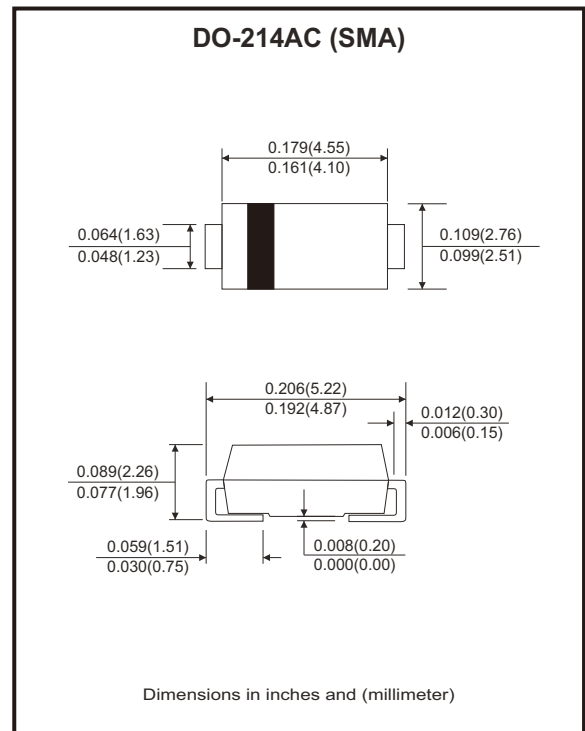


Features

- Glass passivated chip.
- Low leakage.
- Built-in strain relief.
- Low inductance.
- High peak reverse power dissipation.
- For use in stabilizing and clipping circuits with high power rating.

Mechanical data

- Case: JEDEC DO-214AC/SMA, molded plastic.
- Epoxy: UL 94V-0 rate flame retardant.
- Lead: Solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Mounting position: Any.
- Weight: 0.069 grams approx.



Circuit Diagram



Maximum Ratings (T_A=25°C unless otherwise noted)

Characteristics	Symbol	Value	Units
DC power dissipation at T _L =50°C (Note 1)	P _D	1	W
Maximum forward voltage at I _F =200 mA	V _F	1.2	V
Maximum thermal resistance junction to ambient air (Note 2)	R _{θJA}	170	°C/W
Junction temperature range	T _J	-55 to +175	°C
Storage temperature range	T _{STG}	-55 to +175	°C

Notes: 1. Mounted on 5.0mm² (1 oz thick) land areas, lead temperature at T_L=50°C.

2. Valid provided that leads are kept at ambient temperature at a distance of 10mm from case.

Electrical Characteristics (TA=25°C unless otherwise noted)

Part No	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum Surge Current	Marking Code
	Vz@IzT(V)	IzT (mA)	ZzT@IzT(Ω)	Zzk@Izk(Ω)	Izk (mA)	IR (μA)	VR (V)	IzM (mA)	IRM (mApk)	
CZRA4733B-HF	5.1	49.0	7.0	550	1.00	10.0	1.0	177.0	885	33A
CZRA4734B-HF	5.6	45.0	5.0	600	1.00	10.0	2.0	161.0	805	34A
CZRA4735B-HF	6.2	41.0	2.0	700	1.00	10.0	3.0	146.0	730	35A
CZRA4736B-HF	6.8	37.0	3.5	700	1.00	5.0	4.0	133.0	660	36A
CZRA4737B-HF	7.5	34.0	4.0	700	0.50	5.0	5.0	121.0	605	37A
CZRA4738B-HF	8.2	31.0	4.5	700	0.50	5.0	6.0	110.0	550	38A
CZRA4739B-HF	9.1	28.0	5.0	700	0.50	0.5	7.0	100.0	500	39A
CZRA4740B-HF	10.0	25.0	7.0	700	0.25	0.5	7.6	91.0	454	40A
CZRA4741B-HF	11.0	23.0	8.0	700	0.25	0.1	8.4	83.0	414	41A
CZRA4742B-HF	12.0	21.0	9.0	700	0.25	0.1	9.1	76.0	380	42A
CZRA4743B-HF	13.0	19.0	10.0	700	0.25	0.1	9.9	69.0	344	43A
CZRA4744B-HF	15.0	17.0	14.0	700	0.25	0.1	11.4	61.0	305	44A
CZRA4745B-HF	16.0	15.5	16.0	700	0.25	0.1	12.2	57.0	285	45A
CZRA4746B-HF	18.0	14.0	20.0	750	0.25	0.1	13.7	50.0	250	46A
CZRA4747B-HF	20.0	12.5	22.0	750	0.25	0.1	15.2	45.0	225	47A
CZRA4748B-HF	22.0	11.5	23.0	750	0.25	0.1	16.7	41.0	205	48A
CZRA4749B-HF	24.0	10.5	25.0	750	0.25	0.1	18.2	38.0	190	49A
CZRA4750B-HF	27.0	9.5	35.0	750	0.25	0.1	20.6	34.0	170	50A
CZRA4751B-HF	30.0	8.5	40.0	1000	0.25	0.1	22.8	30.0	150	51A
CZRA4752B-HF	33.0	7.5	45.0	1000	0.25	0.1	25.1	27.0	135	52A
CZRA4753B-HF	36.0	7.0	50.0	1000	0.25	0.1	27.4	25.0	125	53A
CZRA4754B-HF	39.0	6.5	60.0	1000	0.25	0.1	29.7	23.0	115	54A
CZRA4755B-HF	43.0	6.0	70.0	1500	0.25	0.1	32.7	22.0	110	55A
CZRA4756B-HF	47.0	5.5	80.0	1500	0.25	0.1	35.8	19.0	95	56A
CZRA4757B-HF	51.0	5.0	95.0	1500	0.25	0.1	38.8	18.0	90	57A
CZRA4758B-HF	56.0	4.5	110.0	2000	0.25	0.1	42.6	16.0	80	58A
CZRA4759B-HF	62.0	4.0	125.0	2000	0.25	0.1	47.1	14.0	70	59A
CZRA4760B-HF	68.0	3.7	150.0	2000	0.25	0.1	51.7	13.0	65	60A
CZRA4761B-HF	75.0	3.3	175.0	2000	0.25	0.1	56.0	12.0	60	61A
CZRA4762B-HF	82.0	3.0	200.0	3000	0.25	0.1	62.2	11.0	55	62A
CZRA4763B-HF	91.0	2.8	250.0	3000	0.25	0.1	69.2	10.0	50	63A
CZRA4764B-HF	100.0	2.5	350.0	3000	0.25	0.1	76.0	9.0	45	64A
CZRA1110B-HF	110.0	2.3	450.0	4000	0.25	0.1	83.6	8.6	40	11Z
CZRA1120B-HF	120.0	2.0	550.0	4500	0.25	0.1	91.2	7.8	37	12Z
CZRA1130B-HF	130.0	1.9	700.0	5000	0.25	0.1	98.8	7.0	34	13Z
CZRA1150B-HF	150.0	1.7	1000.0	6000	0.25	0.1	114.0	6.4	30	15Z
CZRA1160B-HF	160.0	1.6	1100.0	6500	0.25	0.1	121.6	5.8	28	16Z
CZRA1180B-HF	180.0	1.4	1200.0	7000	0.25	0.1	136.8	5.2	25	18Z
CZRA1200B-HF	200.0	1.2	1900.0	9990	0.25	0.1	152.0	4.7	22	20Z
CZRA1220B-HF	220.0	1.0	1600.0	8000	0.25	0.1	167.2	4.0	20	22Z
CZRA1240B-HF	240.0	0.9	1800.0	8500	0.25	0.1	182.4	3.8	19	24Z
CZRA1250B-HF	250.0	0.9	2000.0	9000	0.25	0.1	190.0	3.6	18	25Z
CZRA1270B-HF	270.0	0.8	2100.0	9000	0.25	0.1	205.0	3.3	16	27Z
CZRA1300B-HF	300.0	0.8	2300.0	9500	0.25	0.1	228.0	3.0	15	30Z
CZRA1330B-HF	330.0	0.7	2500.0	9500	0.25	0.1	250.2	2.7	13	33Z

Notes: 1. The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
2. The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on IzT per JEDEC.

Rating and Characteristic Curves (CZRA4733B-HF Thru. CZRA1330B-HF)

Fig.1 - Power Temperature Derating Curve

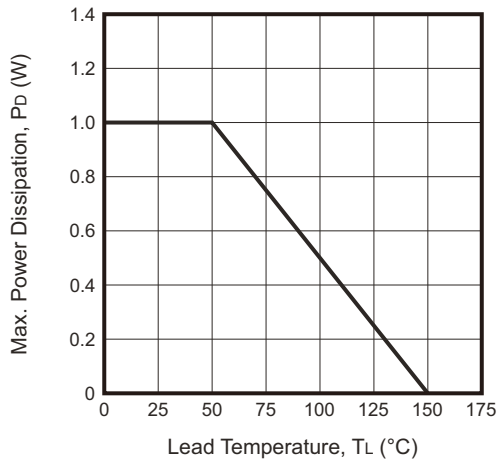


Fig.2 - Temperature Coefficients v.s. Zener Voltage

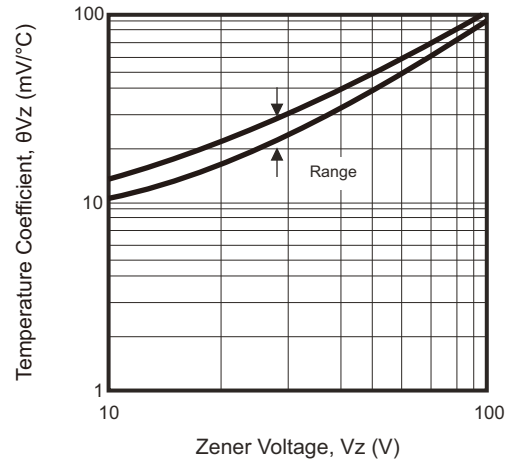


Fig.3 - Typical Thermal Resistance v.s. Lead Length

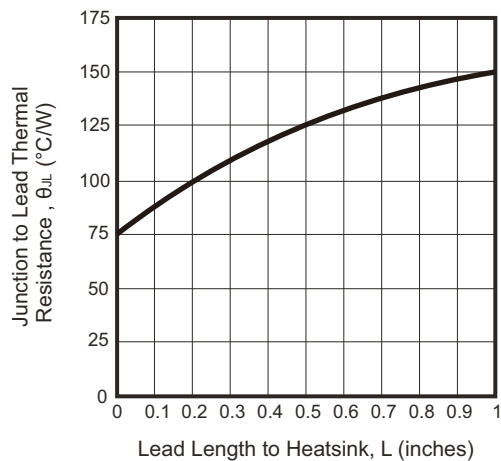
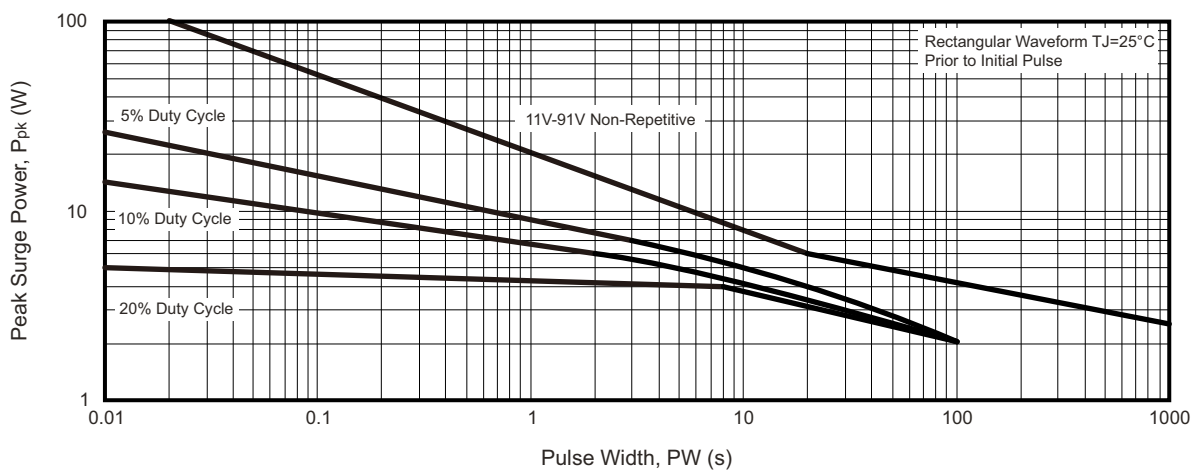
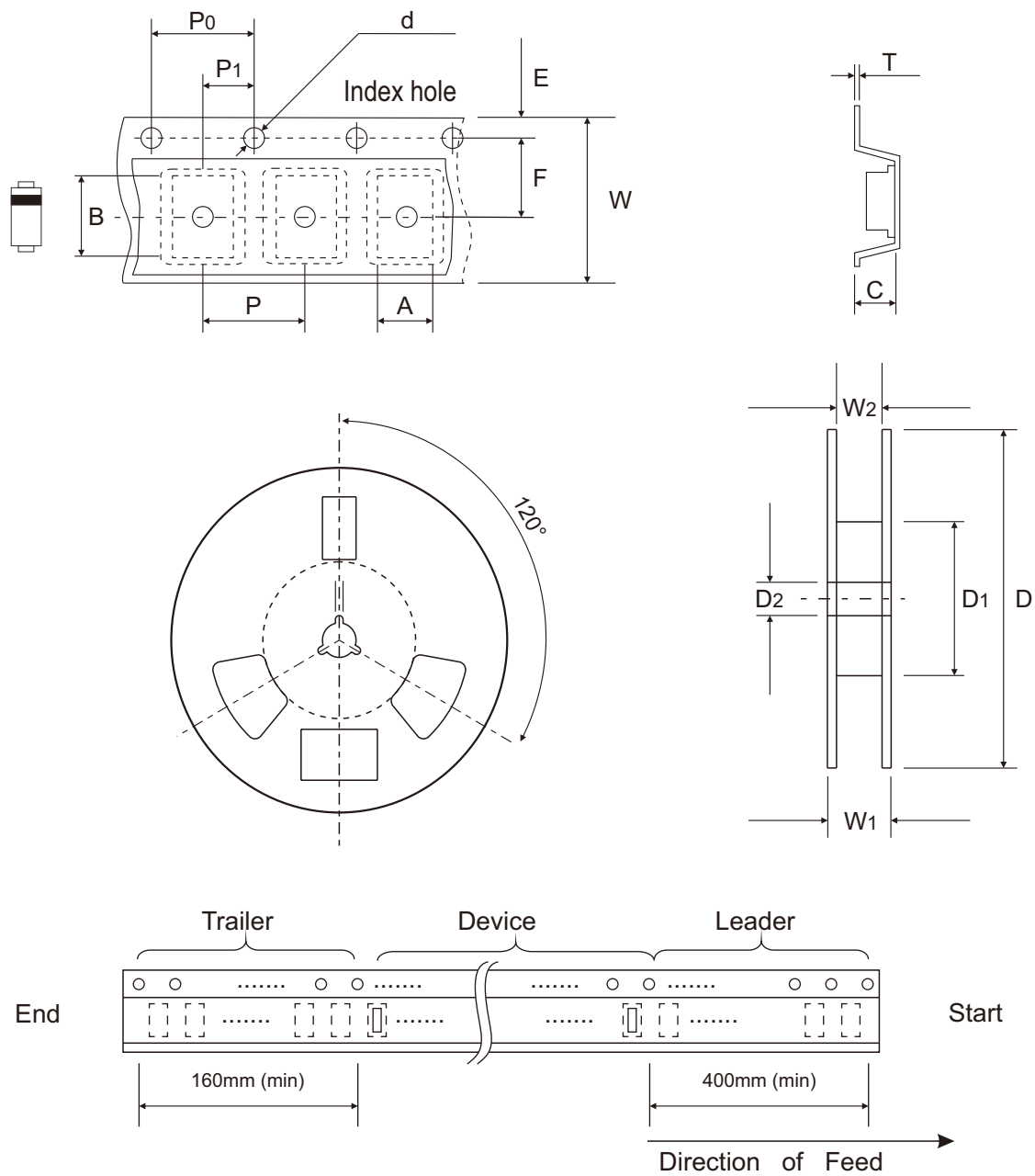


Fig.4 - Maximum Surge Power



Reel Taping Specification



DO-214AC (SMA)	SYMBOL	A	B	C	d	D	D1	D2	E
	(mm)	See Note 1			1.55 ± 0.05	330.00	50.00 (Min.)	13.00 + 0.50 - 0.20	1.75 ± 0.10
	(inch)				0.061 ± 0.002	12.992	1.969 (Min.)	0.512 + 0.020 - 0.008	0.069 ± 0.004

DO-214AC (SMA)	SYMBOL	F	P	P0	P1	T	W	W1	W2
	(mm)	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.40 (Max.)	12.00 ± 0.10	18.40 (Max.)	12.40 + 2.00 - 0.00
	(inch)	0.217 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.016 (Max.)	0.472 ± 0.004	0.724 (Max.)	0.488 + 0.079 - 0.000

Notes: 1. A, B, and C the clearance between the component and the cavity must be within 0.5mm max.
for 8mm tape and 12mm tape, 1.0mm max. for 16mm tape and 24mm tape.

Marking Code

Part Number	Marking Code
CZRA4733B-HF ~ CZRA1330B-HF	XXX

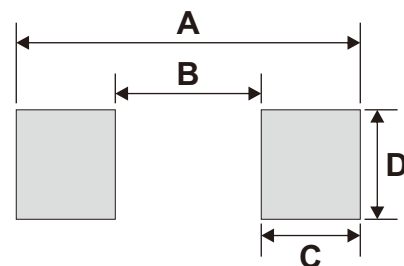


XXX = Marking code (see Page.2)

 = Cathod Band

Suggested P.C.B. PAD Layout

SIZE	DO-214AC(SMA)	
	(mm)	(inch)
A	5.28 REF	0.208 REF
B	1.88 MAX	0.074 MAX
C	1.52 MIN	0.060 MIN
D	1.68 MIN	0.066 MIN



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-214AC (SMA)	5,000	13