CZRL55C2V4-G Thru CZRL55C75-G

Voltage: 2.4 to 75 Volts

Power: 500 mWatts

RoHS Device

Features

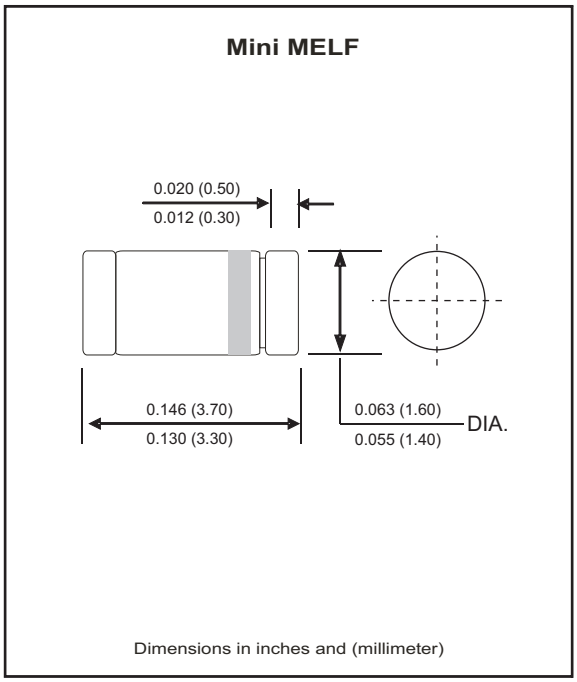
-Silicon epitaxial power Zener diodes.

-For use as low voltage stabilizer or voltage reference.

-The Zener voltages are graded according to the international E24 standard. Higher Zener voltages and 5% tolerance available on request.

-General purpose, Medium current.

-Ideal for surface mounted application.



Mechanical data

-Case: Molded glass Mini-MELF

-Terminals: Solderable per MIL-STD-750, Method 2026 guranteed

-Polarity: Color band denotes cathode

-Mounting position: Any

-Approx. weight: 0.03 grams

Maximum Rating And Electrical Characteristics

(TA=25°C, unless otherwise noted)

Parameter	Test Conditions	Symbol	Value	Unit
Power dissipation		P_D	500	mW
Forward voltage	I_F = 200mA	V_F	1.5	V
Junction temperature range		T_J	-65 ~ +175	°C
Storage temperature range		T_{STG}	-65 ~ +175	°C
Maximum thermal resistance Junction to ambient	On PC board 50×50×1.6mm	$R_{\theta JA}$	500	K/W

SMD Zener Diode

Comchip
SMD Diode Specialist

Electrical Characteristics (T_A=25°C, V_F=1.5V Max.@I_F=200mA for all types)

Part No.	Nominal Zener Voltage			Max. Zener Impedance				Max. Reverse Leakage Current		Typ. Temp. Coefficient	Marking Code
	VZ @ IZT			ZZT @ IZT		ZZK @ IZK		IR @ VR		VZ % / K	
	Nom.	Min.	Max.	ohm	mA	ohm	mA	uA	V		
CZRL55C2V4	2.4	2.28	2.56	85	5.0	600	1.0	50.0	1.0	-0.09~-0.06	C2V4
CZRL55C2V7	2.7	2.50	2.90	85	5.0	600	1.0	10.0	1.0	-0.09~-0.06	C2V7
CZRL55C3V0	3.0	2.80	3.20	90	5.0	600	1.0	4.0	1.0	-0.08~-0.05	C3V0
CZRL55C3V3	3.3	3.10	3.50	90	5.0	600	1.0	2.0	1.0	-0.08~-0.05	C3V3
CZRL55C3V6	3.6	3.40	3.80	90	5.0	600	1.0	2.0	1.0	-0.08~-0.05	C3V6
CZRL55C3V9	3.9	3.70	4.10	90	5.0	600	1.0	2.0	1.0	-0.08~-0.05	C3V9
CZRL55C4V3	4.3	4.00	4.60	90	5.0	600	1.0	1.0	1.0	-0.06~-0.03	C4V3
CZRL55C4V7	4.7	4.40	5.00	80	5.0	600	1.0	0.5	1.0	-0.05~+0.02	C4V7
CZRL55C5V1	5.1	4.80	5.40	60	5.0	550	1.0	0.1	1.0	-0.02~+0.02	C5V1
CZRL55C5V6	5.6	5.20	6.00	40	5.0	450	1.0	0.1	1.0	-0.05~+0.05	C5V6
CZRL55C6V2	6.2	5.80	6.60	10	5.0	200	1.0	0.1	2.0	0.03~0.06	C6V2
CZRL55C6V8	6.8	6.40	7.20	8	5.0	150	1.0	0.1	3.0	0.03~0.07	C6V8
CZRL55C7V5	7.5	7.00	7.90	7	5.0	50	1.0	0.1	5.0	0.03~0.07	C7V5
CZRL55C8V2	8.2	7.70	8.70	7	5.0	50	1.0	0.1	6.2	0.03~0.08	C8V2
CZRL55C9V1	9.1	8.50	9.60	10	5.0	50	1.0	0.1	6.8	0.03~0.09	C9V1
CZRL55C10	10.0	9.40	10.60	15	5.0	70	1.0	0.1	7.5	0.03~0.10	C10V
CZRL55C11	11.0	10.40	11.60	20	5.0	70	1.0	0.1	8.2	0.03~0.11	C11V
CZRL55C12	12.0	11.40	12.70	20	5.0	90	1.0	0.1	9.1	0.03~0.11	C12V
CZRL55C13	13.0	12.40	14.10	26	5.0	110	1.0	0.1	10	0.03~0.11	C13V
CZRL55C15	15.0	13.80	15.60	30	5.0	110	1.0	0.1	11	0.03~0.11	C15V
CZRL55C16	16.0	15.30	17.10	40	5.0	170	1.0	0.1	12	0.03~0.11	C16V
CZRL55C18	18.0	16.80	19.10	50	5.0	170	1.0	0.1	13	0.03~0.11	C18V
CZRL55C20	20.0	18.80	21.20	55	5.0	220	1.0	0.1	15	0.03~0.11	C20V
CZRL55C22	22.0	20.80	23.30	55	5.0	220	1.0	0.1	16	0.04~0.12	C22V
CZRL55C24	24.0	22.80	25.60	80	5.0	220	1.0	0.1	18	0.04~0.12	C24V
CZRL55C27	27.0	25.10	28.90	80	5.0	220	1.0	0.1	20	0.04~0.12	C27V
CZRL55C30	30.0	28.00	32.00	80	5.0	220	1.0	0.1	22	0.04~0.12	C30V
CZRL55C33	33.0	31.00	35.00	80	5.0	220	1.0	0.1	24	0.04~0.12	C33V
CZRL55C36	36.0	34.00	38.00	80	5.0	220	1.0	0.1	27	0.04~0.12	C36V
CZRL55C39	39.0	37.00	41.00	90	2.5	500	0.5	0.1	30	0.04~0.12	C39V
CZRL55C43	43.0	40.00	46.00	90	2.5	600	0.5	0.1	33	0.04~0.12	C43V
CZRL55C47	47.0	44.00	50.00	110	2.5	700	0.5	0.1	36	0.04~0.12	C47V
CZRL55C51	51.0	48.00	54.00	125.0	2.5	700	0.5	0.1	39	0.04~0.12	C51V
CZRL55C56	56.0	52.00	60.00	135.0	2.5	1000	0.5	0.1	43	0.04~0.12	C56V
CZRL55C62	62.0	58.00	66.00	150.0	2.5	1000	0.5	0.1	47	0.04~0.12	C62V
CZRL55C68	68.0	64.00	72.00	200.0	2.5	1000	0.5	0.1	51	0.04~0.12	C68V
CZRL55C75	75.0	70.00	79.00	250.0	2.5	1500	0.5	0.1	56	0.04~0.12	C75V

Note: 1. Zener voltage tolerance suffix “C” for ± 5%
2. Zener voltage is measured with a pulse test current Iz at an ambient temperture of 25°C.

RATING AND CHARACTERISTIC CURVES (CZRL55C2V4-G Thru. CZRL55C75-G)

Fig.1- Total Power Dissipation vs. Ambient Temperature

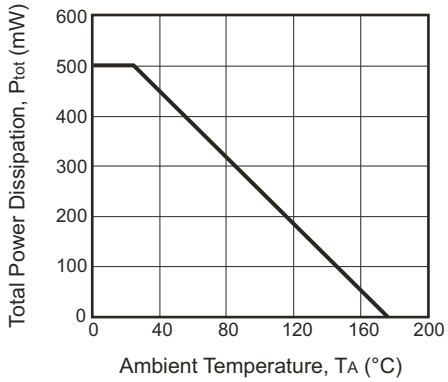


Fig.2- Typical Change of Working Voltage Under Operating Condition at TA=25°C

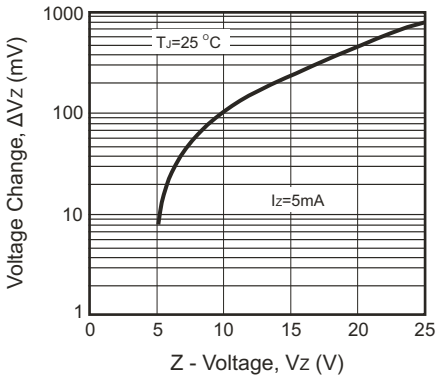


Fig.3- Typical Change of Working Voltage vs. Junction Temperature

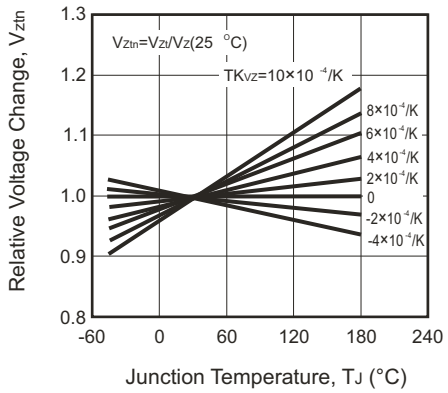


Fig.4- Temperature Coefficient of Vz vs. Z-Voltage

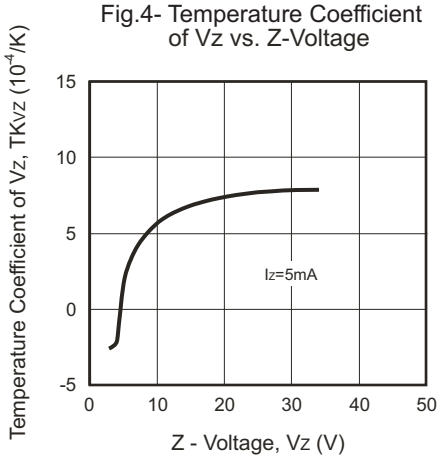
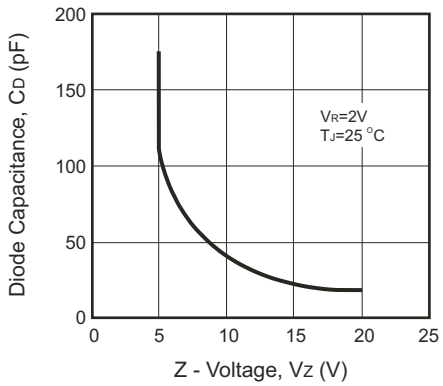
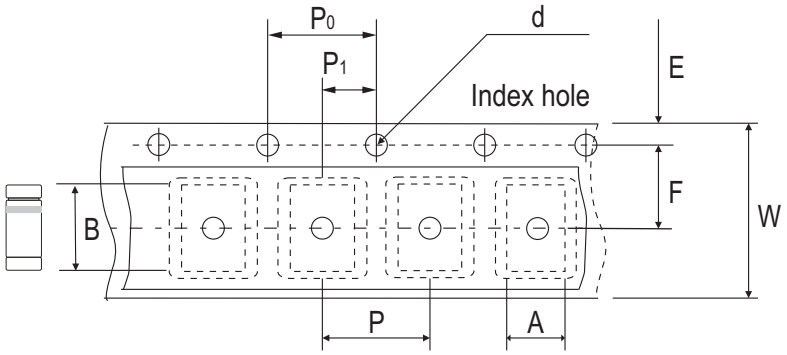
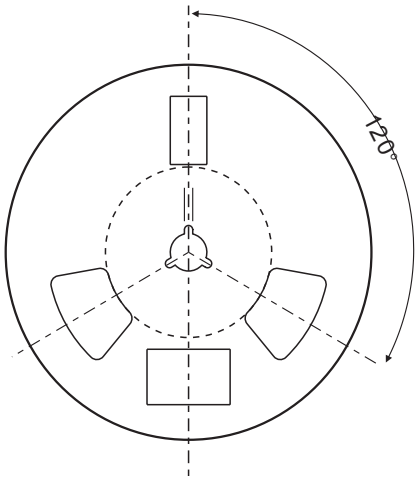


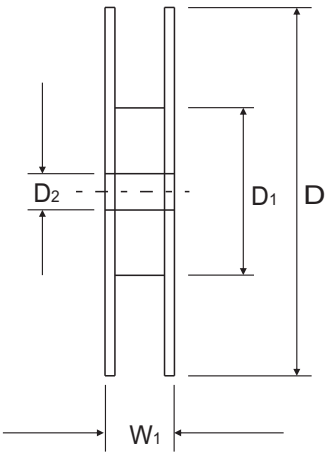
Fig.5- Diode Capacitance vs. Z-Voltage

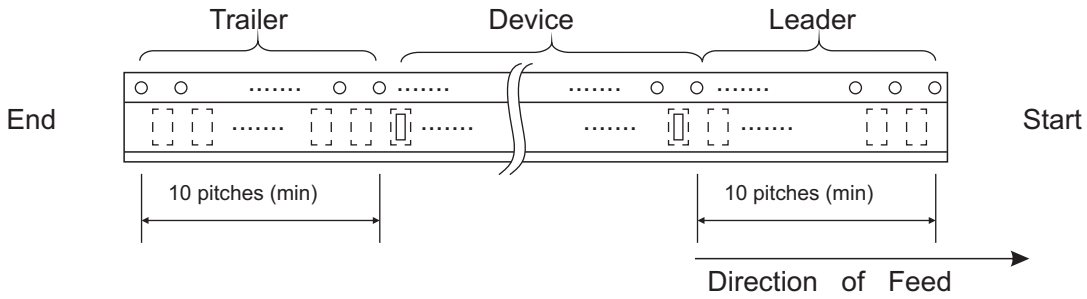


Reel Taping Specification









	SYMBOL	A	B	C	d	D	D1	D2
Mini MELF	(mm)	2.00 (max)	3.70 (max)	1.80 (max)	1.50 ± 0.10	180 (max)	60.00 (min)	13.00 ± 0.50
	(inch)	0.079 (max)	0.146 (max)	0.017 (max)	0.059 ± 0.004	7.0 (max)	2.362 (min)	0.512 ± 0.020

	SYMBOL	E	F	P	P0	P1	W	W1
Mini MELF	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 ± 0.30	14.90 (max)
	(inch)	0.069 ± 0.004	0.138± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 ± 0.012	0.587 (max)

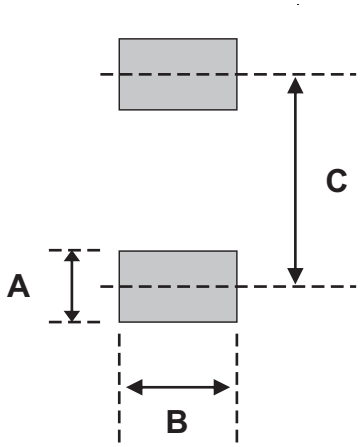
Marking Code

XXXX: Marking code (see Page.2)

: Cathode Band

Suggested PAD Layout

SIZE	Mini MELF	
	(mm)	(inch)
A	0.90	0.035
B	1.80	0.070
C	3.50	0.137



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
Mini MELF	2,500	7