

GQZ2.0~GQZ56

SURFACE MOUNT ZENER DIODES

VOLTAGE 2 to 56 Volt **POWER** 500 mWatt

QUADRO-MELF

Unit : inch(mm)

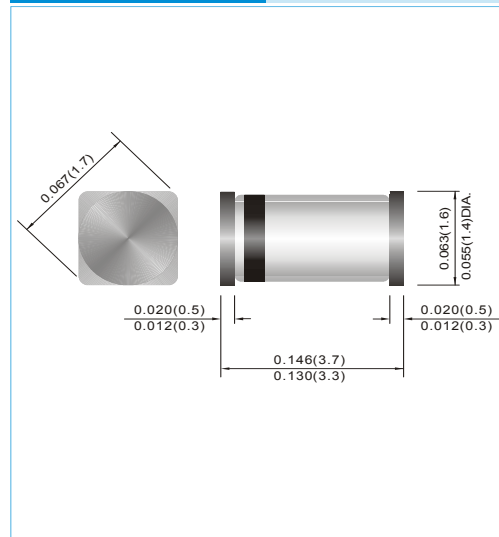
FEATURES

- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)

MECHANICAL DATA

- Case: Molded Glass QUADRO-MELF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.03 grams
- Packing information

T/R - 2.5K per 7" plastic Reel



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Power Dissipation at $T_A = 25^\circ\text{C}$	P_{TOT}	500	mW
Junction Temperature Range	T_J	175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to + 175	$^\circ\text{C}$
Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.			

Parameter	Symbol	Min.	Typ.	Max.	Units
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	--	--	0.3	$^\circ\text{C}/\text{mW}$
Forward Voltage at $I_F = 100\text{mA}$	V_F	--	--	1	V
Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.					

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Part Number	Nominal Zener Voltage		Max. Zener Impedance				Max Reverse Leakage Current	
	V _Z @ I _{ZT}		Z _{zt} @ I _{ZT}		Z _{zk} @ I _{ZK}		I _R @ V _R	
	Min. V	Max. V	Ω	mA	Ω	mA	μA	V
GQZ2.0A	1.88	2.1	140	20	2000	1	120	0.5
GQZ2.0B	2.02	2.2	140	20	2000	1	120	0.5
GQZ2.2A	2.12	2.3	120	20	2000	1	120	0.7
GQZ2.2B	2.22	2.41	120	20	2000	1	120	0.7
GQZ2.4A	2.33	2.52	100	20	2000	1	120	1
GQZ2.4B	2.43	2.63	100	20	2000	1	120	1
GQZ2.7A	2.54	2.75	100	20	1000	1	120	1
GQZ2.7B	2.69	2.91	100	20	1000	1	120	1
GQZ3.0A	2.85	3.07	80	20	1000	1	50	1
GQZ3.0B	3.01	3.22	80	20	1000	1	50	1
GQZ3.3A	3.16	3.38	70	20	1000	1	20	1
GQZ3.3B	3.32	3.53	70	20	1000	1	20	1
GQZ3.6A	3.46	3.69	60	20	1000	1	10	1
GQZ3.6B	3.6	3.84	60	20	1000	1	10	1
GQZ3.9A	3.74	4.01	50	20	1000	1	5	1
GQZ3.9B	3.89	4.16	50	20	1000	1	5	1
GQZ4.3A	4.04	4.29	40	20	1000	1	5	1
GQZ4.3B	4.17	4.43	40	20	1000	1	5	1
GQZ4.3C	4.3	4.57	40	20	1000	1	5	1
GQZ4.7A	4.44	4.68	25	20	900	1	5	1
GQZ4.7B	4.55	4.8	25	20	900	1	5	1
GQZ4.7C	4.68	4.93	25	20	900	1	5	1
GQZ5.1A	4.81	5.07	20	20	800	1	5	1.5
GQZ5.1B	4.94	5.2	20	20	800	1	5	1.5
GQZ5.1C	5.09	5.37	20	20	800	1	5	1.5
GQZ5.6A	5.28	5.55	13	20	500	1	5	2.5
GQZ5.6B	5.45	5.73	13	20	500	1	5	2.5
GQZ5.6C	5.61	5.91	13	20	500	1	5	2.5
GQZ6.2A	5.78	6.09	10	20	300	1	5	3
GQZ6.2B	5.96	6.27	10	20	300	1	5	3
GQZ6.2C	6.12	6.44	10	20	300	1	5	3
GQZ6.8A	6.29	6.63	8	20	150	0.5	2	3.5
GQZ6.8B	6.49	6.83	8	20	150	0.5	2	3.5
GQZ6.8C	6.66	7.01	8	20	150	0.5	2	3.5
GQZ7.5A	6.85	7.22	8	20	120	0.5	0.5	4
GQZ7.5B	7.07	7.45	8	20	120	0.5	0.5	4
GQZ7.5C	7.29	7.67	8	20	120	0.5	0.5	4
GQZ8.2A	7.53	7.92	8	20	120	0.5	0.5	5
GQZ8.2B	7.78	8.19	8	20	120	0.5	0.5	5
GQZ8.2C	8.03	8.45	8	20	120	0.5	0.5	5
GQZ9.1A	8.29	8.73	8	20	120	0.5	0.5	6
GQZ9.1B	8.57	9.01	8	20	120	0.5	0.5	6
GQZ9.1C	8.83	9.3	8	20	120	0.5	0.5	6
GQZ10A	9.12	9.59	8	20	120	0.5	0.2	7
GQZ10B	9.41	9.9	8	20	120	0.5	0.2	7
GQZ10C	9.7	10.2	8	20	120	0.5	0.2	7
GQZ10D	9.94	10.44	8	20	120	0.5	0.2	7
GQZ11A	10.18	10.71	10	10	120	0.5	0.2	8
GQZ11B	10.5	11.05	10	10	120	0.5	0.2	8
GQZ11C	10.82	11.38	10	10	120	0.5	0.2	8

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Part Number	Nominal Zener Voltage		Max. Zener Impedance				Max Reverse Leakage Current	
	V _Z @ I _{ZT}		Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R @ V _R	
	Min. V	Max. V	Ω	mA	Ω	mA	μA	V
GQZ12A	11.13	11.71	12	10	110	0.5	0.2	9
GQZ12B	11.44	12.03	12	10	110	0.5	0.2	9
GQZ12C	11.74	12.35	12	10	110	0.5	0.2	9
GQZ13A	12.11	12.75	14	10	110	0.5	0.2	10
GQZ13B	12.55	13.21	14	10	110	0.5	0.2	10
GQZ13C	12.99	13.66	14	10	110	0.5	0.2	10
GQZ15A	13.44	14.13	16	10	110	0.5	0.2	11
GQZ15B	13.89	14.62	16	10	110	0.5	0.2	11
GQZ15C	14.35	15.09	16	10	110	0.5	0.2	11
GQZ16A	14.8	15.57	18	10	150	0.5	0.2	12
GQZ16B	15.25	16.04	18	10	150	0.5	0.2	12
GQZ16C	15.69	16.51	18	10	150	0.5	0.2	12
GQZ18A	16.22	17.06	23	10	150	0.5	0.2	13
GQZ18B	16.82	17.7	23	10	150	0.5	0.2	13
GQZ18C	17.42	18.33	23	10	150	0.5	0.2	13
GQZ20A	18.02	18.96	28	10	200	0.5	0.2	15
GQZ20B	18.63	19.59	28	10	200	0.5	0.2	15
GQZ20C	19.23	20.22	28	10	200	0.5	0.2	15
GQZ20D	19.72	20.72	28	10	200	0.5	0.2	15
GQZ22A	20.15	21.2	30	5	200	0.5	0.2	17
GQZ22B	20.64	21.71	30	5	200	0.5	0.2	17
GQZ22C	21.08	22.17	30	5	200	0.5	0.2	17
GQZ22D	21.52	22.63	30	5	200	0.5	0.2	17
GQZ24A	22.05	23.18	35	5	200	0.5	0.2	19
GQZ24B	22.61	23.77	35	5	200	0.5	0.2	19
GQZ24C	23.12	24.31	35	5	200	0.5	0.2	19
GQZ24D	23.63	24.85	35	5	200	0.5	0.2	19
GQZ27A	24.26	25.52	45	5	250	0.5	0.2	21
GQZ27B	24.97	26.26	45	5	250	0.5	0.2	21
GQZ27C	25.63	26.95	45	5	250	0.5	0.2	21
GQZ27D	26.29	27.64	45	5	250	0.5	0.2	21
GQZ30A	26.99	28.39	55	5	250	0.5	0.2	23
GQZ30B	27.7	29.13	55	5	250	0.5	0.2	23
GQZ30C	28.36	29.82	55	5	250	0.5	0.2	23
GQZ30D	29.02	30.51	55	5	250	0.5	0.2	23
GQZ33A	29.68	31.22	65	5	250	0.5	0.2	25
GQZ33B	30.32	31.88	65	5	250	0.5	0.2	25
GQZ33C	30.9	32.5	65	5	250	0.5	0.2	25
GQZ33D	31.49	33.11	65	5	250	0.5	0.2	25
GQZ36A	32.14	33.79	75	5	250	0.5	0.2	27
GQZ36B	32.79	34.49	75	5	250	0.5	0.2	27
GQZ36C	33.4	35.13	75	5	250	0.5	0.2	27
GQZ36D	34.01	35.77	75	5	250	0.5	0.2	27
GQZ39A	34.68	36.47	85	5	250	0.5	0.2	30
GQZ39B	35.36	37.19	85	5	250	0.5	0.2	30
GQZ39C	36	37.85	85	5	250	0.5	0.2	30
GQZ39D	36.63	38.52	85	5	250	0.5	0.2	30
GQZ43	40	45	90	5	-	-	0.2	33
GQZ47	44	49	90	5	-	-	0.2	36
GQZ51	48	54	110	5	-	-	0.2	39
GQZ56	53	60	110	5	-	-	0.2	43

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RATING AND CHARACTERISTIC CURVES

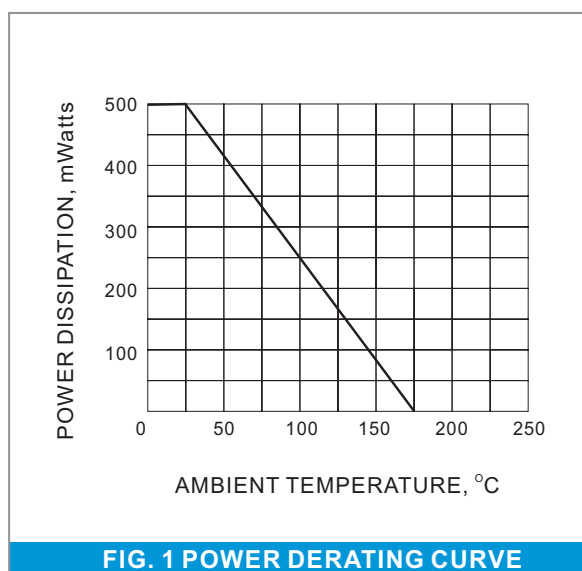


FIG. 1 POWER DERATING CURVE

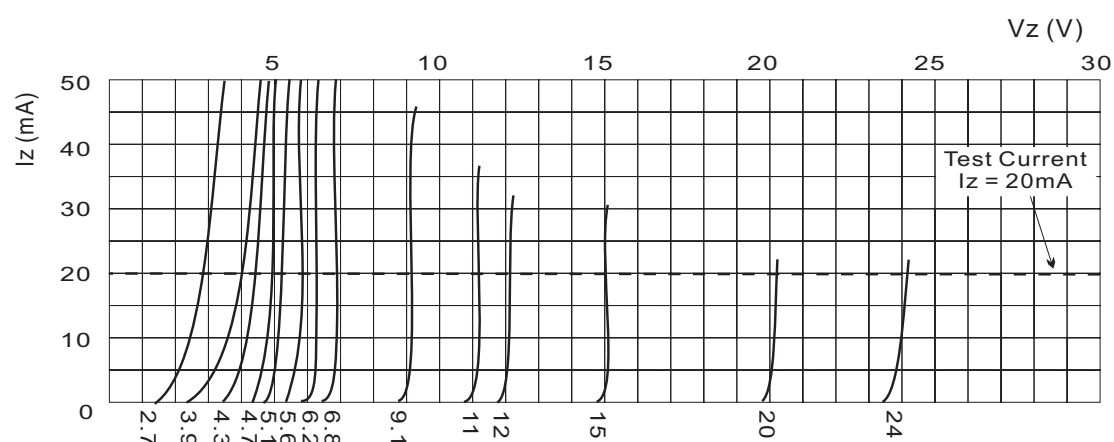


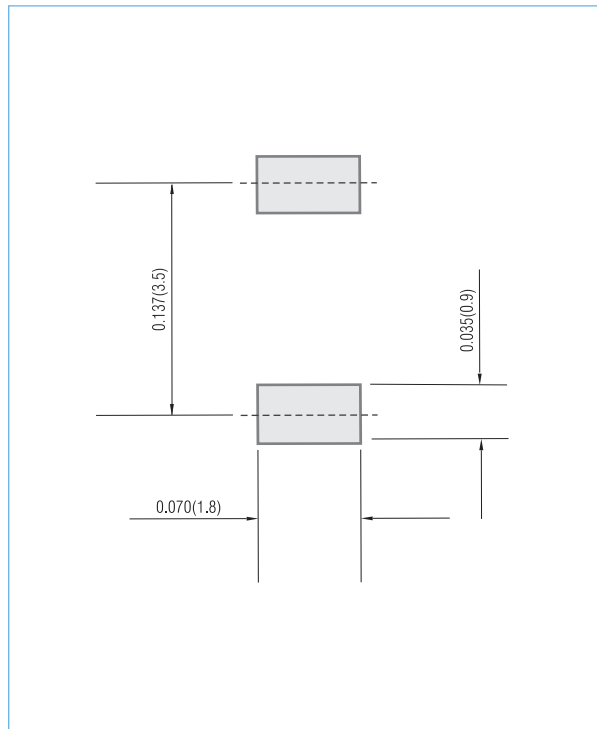
Fig.2 BREAKDOWN CHARACTERISTICS

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MOUNTING PAD LAYOUT

QUADRO-MELF

Unit: inch (mm)



ORDER INFORMATION

- Packing information

T/R - 10K per 13" plastic Reel

T/R - 2.5K per 7" plastic Reel

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Part No_packing code_Version

GQZ2.0_R2_10001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	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			

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