

GQZ2.0~GQZ56

SURFACE MOUNT ZENER DIODES

VOLTAGE

2 to 56 Volts

POWER

500 mWatts

QUADRO-MELF

Unit : inch(mm)

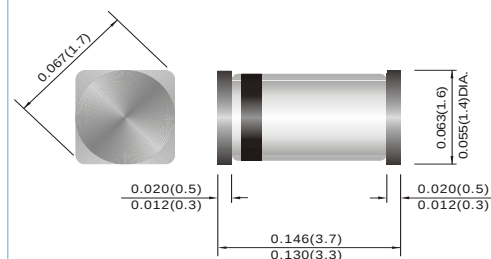
FEATURES

- Planar Die construction
- 500mW Power Dissipation
- Ideally Suited for Automated Assembly Processes
- Lead free in comply with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: Molded Glass QUADRO-MELF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.03 grams
- Mounting Position: Any
- 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	
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V
500 mW Zener Diodes									
GQZ 2.0A	2	1.88	2.1	140	20	2000	1	120	0.5
GQZ 2.0B	2	2.02	2.2	140	20	2000	1	120	0.5
GQZ 2.2A	2.2	2.12	2.3	120	20	2000	1	120	0.7
GQZ 2.2B	2.2	2.22	2.41	120	20	2000	1	120	0.7
GQZ 2.4A	2.4	2.33	2.52	100	20	2000	1	120	1
GQZ 2.4B	2.4	2.43	2.63	100	20	2000	1	120	1
GQZ 2.7A	2.7	2.54	2.75	100	20	1000	1	120	1
GQZ 2.7B	2.7	2.69	2.91	100	20	1000	1	120	1
GQZ 3.0A	3	2.85	3.07	80	20	1000	1	50	1
GQZ 3.0B	3	3.01	3.22	80	20	1000	1	50	1
GQZ 3.3A	3.3	3.16	3.38	70	20	1000	1	20	1
GQZ 3.3B	3.3	3.32	3.53	70	20	1000	1	20	1
GQZ 3.6A	3.6	3.46	3.69	60	20	1000	1	10	1
GQZ 3.6B	3.6	3.6	3.84	60	20	1000	1	10	1
GQZ 3.9A	3.9	3.74	4.01	50	20	1000	1	5	1
GQZ 3.9B	3.9	3.89	4.16	50	20	1000	1	5	1
GQZ 4.3A	4.3	4.04	4.29	40	20	1000	1	5	1
GQZ 4.3B	4.3	4.17	4.43	40	20	1000	1	5	1
GQZ 4.3C	4.3	4.3	4.57	40	20	1000	1	5	1
GQZ 4.7A	4.7	4.44	4.68	25	20	900	1	5	1
GQZ 4.7B	4.7	4.55	4.8	25	20	900	1	5	1
GQZ 4.7C	4.7	4.68	4.93	25	20	900	1	5	1
GQZ 5.1A	5.1	4.81	5.07	20	20	800	1	5	1.5
GQZ 5.1B	5.1	4.94	5.2	20	20	800	1	5	1.5
GQZ 5.1C	5.1	5.09	5.37	20	20	800	1	5	1.5
GQZ 5.6A	5.6	5.28	5.55	13	20	500	1	5	2.5
GQZ 5.6B	5.6	5.45	5.73	13	20	500	1	5	2.5
GQZ 5.6C	5.6	5.61	5.91	13	20	500	1	5	2.5
GQZ 6.2A	6.2	5.78	6.09	10	20	300	1	5	3
GQZ 6.2B	6.2	5.96	6.27	10	20	300	1	5	3
GQZ 6.2C	6.2	6.12	6.44	10	20	300	1	5	3
GQZ 6.8A	6.8	6.29	6.63	8	20	150	0.5	2	3.5
GQZ 6.8B	6.8	6.49	6.83	8	20	150	0.5	2	3.5
GQZ 6.8C	6.8	6.66	7.01	8	20	150	0.5	2	3.5
GQZ 7.5A	7.5	6.85	7.22	8	20	120	0.5	0.5	4
GQZ 7.5B	7.5	7.07	7.45	8	20	120	0.5	0.5	4
GQZ 7.5C	7.5	7.29	7.67	8	20	120	0.5	0.5	4
GQZ 8.2A	8.2	7.53	7.92	8	20	120	0.5	0.5	5
GQZ 8.2B	8.2	7.78	8.19	8	20	120	0.5	0.5	5
GQZ 8.2C	8.2	8.03	8.45	8	20	120	0.5	0.5	5
GQZ 9.1A	9.1	8.29	8.73	8	20	120	0.5	0.5	6
GQZ 9.1B	9.1	8.57	9.01	8	20	120	0.5	0.5	6
GQZ 9.1C	9.1	8.83	9.3	8	20	120	0.5	0.5	6
GQZ 10A	10	9.12	9.59	8	20	120	0.5	0.2	7
GQZ 10B	10	9.41	9.9	8	20	120	0.5	0.2	7
GQZ 10C	10	9.7	10.2	8	20	120	0.5	0.2	7
GQZ 10D	10	9.94	10.44	8	20	120	0.5	0.2	7
GQZ 11A	11	10.18	10.71	10	10	120	0.5	0.2	8
GQZ 11B	11	10.5	11.05	10	10	120	0.5	0.2	8
GQZ 11C	11	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	
	Nom. V	Min. V	Max. V	Ω	mA	Ω	mA	μA	V
500 mW Zener Diodes									
GQZ 12A	12	11.13	11.71	12	10	110	0.5	0.2	9
GQZ 12B	12	11.44	12.03	12	10	110	0.5	0.2	9
GQZ 12C	12	11.74	12.35	12	10	110	0.5	0.2	9
GQZ 13A	13	12.11	12.75	14	10	110	0.5	0.2	10
GQZ 13B	13	12.55	13.21	14	10	110	0.5	0.2	10
GQZ 13C	13	12.99	13.66	14	10	110	0.5	0.2	10
GQZ 15A	15	13.44	14.13	16	10	110	0.5	0.2	11
GQZ 15B	15	13.89	14.62	16	10	110	0.5	0.2	11
GQZ 15C	15	14.35	15.09	16	10	110	0.5	0.2	11
GQZ 16A	16	14.8	15.57	18	10	150	0.5	0.2	12
GQZ 16B	16	15.25	16.04	18	10	150	0.5	0.2	12
GQZ 16C	16	15.69	16.51	18	10	150	0.5	0.2	12
GQZ 18A	18	16.22	17.06	23	10	150	0.5	0.2	13
GQZ 18B	18	16.82	17.7	23	10	150	0.5	0.2	13
GQZ 18C	18	17.42	18.33	23	10	150	0.5	0.2	13
GQZ 20A	20	18.02	18.96	28	10	200	0.5	0.2	15
GQZ 20B	20	18.63	19.59	28	10	200	0.5	0.2	15
GQZ 20C	20	19.23	20.22	28	10	200	0.5	0.2	15
GQZ 20D	20	19.72	20.72	28	10	200	0.5	0.2	15
GQZ 22A	22	20.15	21.2	30	5	200	0.5	0.2	17
GQZ 22B	22	20.64	21.71	30	5	200	0.5	0.2	17
GQZ 22C	22	21.08	22.17	30	5	200	0.5	0.2	17
GQZ 22D	22	21.52	22.63	30	5	200	0.5	0.2	17
GQZ 24A	24	22.05	23.18	35	5	200	0.5	0.2	19
GQZ 24B	24	22.61	23.77	35	5	200	0.5	0.2	19
GQZ 24C	24	23.12	24.31	35	5	200	0.5	0.2	19
GQZ 24D	24	23.63	24.85	35	5	200	0.5	0.2	19
GQZ 27A	27	24.26	25.52	45	5	250	0.5	0.2	21
GQZ 27B	27	24.97	26.26	45	5	250	0.5	0.2	21
GQZ 27C	27	25.63	26.95	45	5	250	0.5	0.2	21
GQZ 27D	27	26.29	27.64	45	5	250	0.5	0.2	21
GQZ 30A	30	26.99	28.39	55	5	250	0.5	0.2	23
GQZ 30B	30	27.7	29.13	55	5	250	0.5	0.2	23
GQZ 30C	30	28.36	29.82	55	5	250	0.5	0.2	23
GQZ 30D	30	29.02	30.51	55	5	250	0.5	0.2	23
GQZ 33A	33	29.68	31.22	65	5	250	0.5	0.2	25
GQZ 33B	33	30.32	31.88	65	5	250	0.5	0.2	25
GQZ 33C	33	30.9	32.5	65	5	250	0.5	0.2	25
GQZ 33D	33	31.49	33.11	65	5	250	0.5	0.2	25
GQZ 36A	36	32.14	33.79	75	5	250	0.5	0.2	27
GQZ 36B	36	32.79	34.49	75	5	250	0.5	0.2	27
GQZ 36C	36	33.4	35.13	75	5	250	0.5	0.2	27
GQZ 36D	36	34.01	35.77	75	5	250	0.5	0.2	27
GQZ 39A	39	34.68	36.47	85	5	250	0.5	0.2	30
GQZ 39B	39	35.36	37.19	85	5	250	0.5	0.2	30
GQZ 39C	39	36	37.85	85	5	250	0.5	0.2	30
GQZ 39D	39	36.63	38.52	85	5	250	0.5	0.2	30
GQZ 43	43	40	45	90	5	-	-	0.2	33
GQZ 47	47	44	49	90	5	-	-	0.2	36
GQZ 51	51	48	54	110	5	-	-	0.2	39
GQZ 56	56	53	60	110	5	-	-	0.2	43

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RATING AND CHARACTERISTIC CURVES

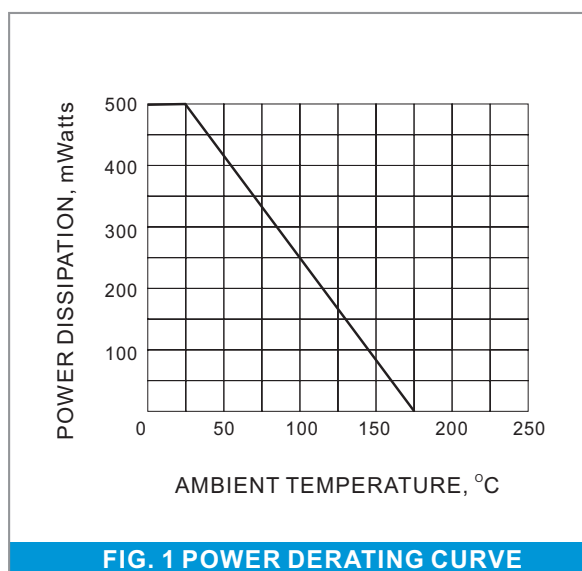


FIG. 1 POWER DERATING CURVE

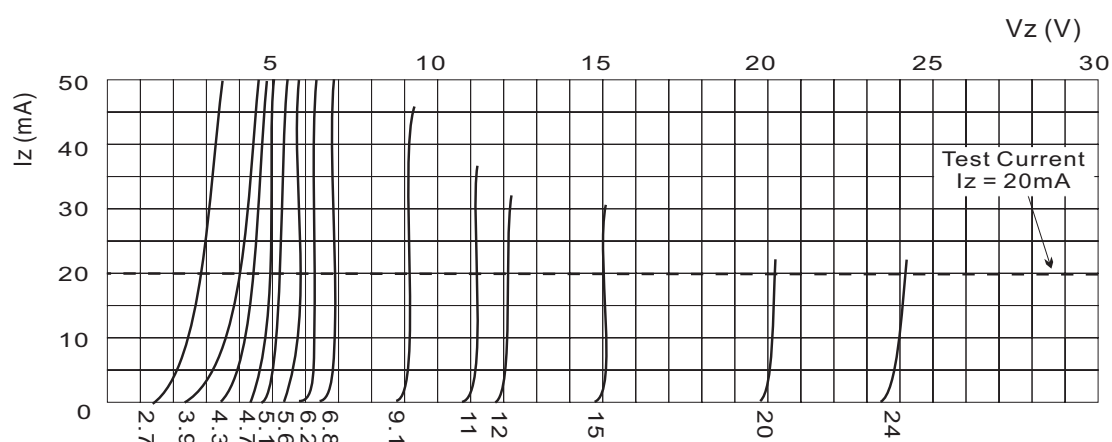


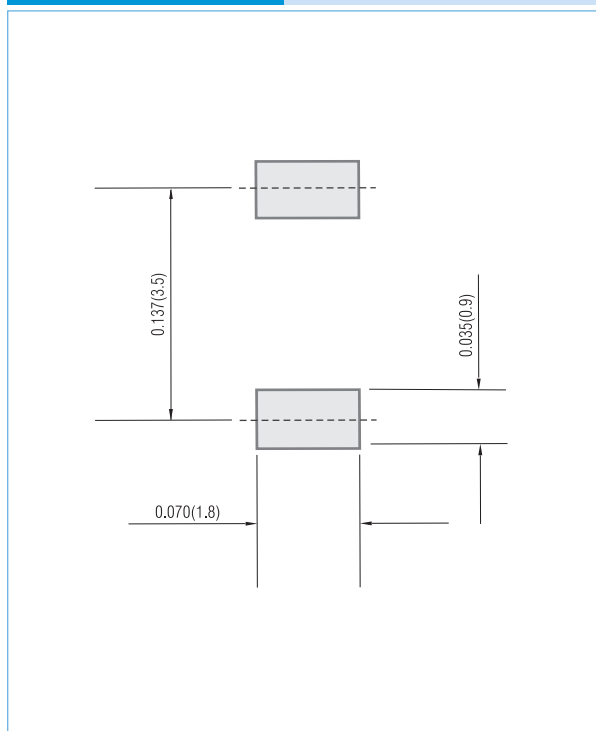
Fig.2 BREAKDOWN CHARACTERISTICS

GQZ2.0~GQZ56

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

LEGAL STATEMENT

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For example :

RB500V-40_R2_00001

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

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
T/B	A	N/A	0	HF	0	serial number
T/R	R	7"	1	RoHS	1	serial number
B/P	B	13"	2			
T/P	T	26mm	X			
TRR	S	52mm	Y			
TRL	L	PBCU	U			
FORMING	F	PBCD	D			

Part No_packing code_Version

GQZ2.0A_R1_10001

GQZ2.0A_R2_10001