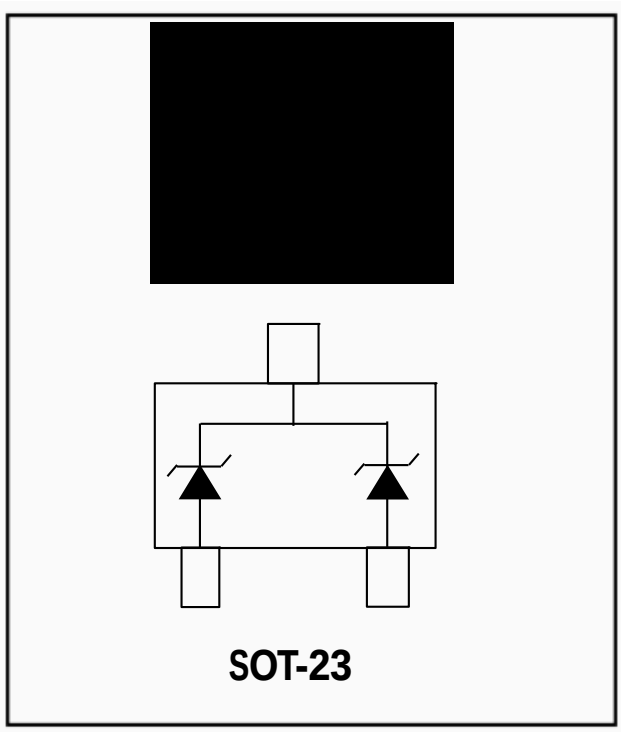
Zener Diodes, 40 Watt Peak Power Dual Common Cathode Zeners



Features

- ●SOT−23 Package Allows Either Two Separate Unidirectional Configurations or a Single Bidirectional Configuration
- ● Peak Power-40W@1.0ms(Unidirectional)
- ● Transient protection for each line according to IEC61000-4-2(ESD): ±30kV contact, ±30kV air
- ● ESD Rating: Class 3B(16KV)per the HBM
- ●Maximum Clamping Voltage@Peak Pulse Current
- ● RoHS Compliant
- ● Part no. with suffix “Q” means AEC-Q101 qualified

Applications

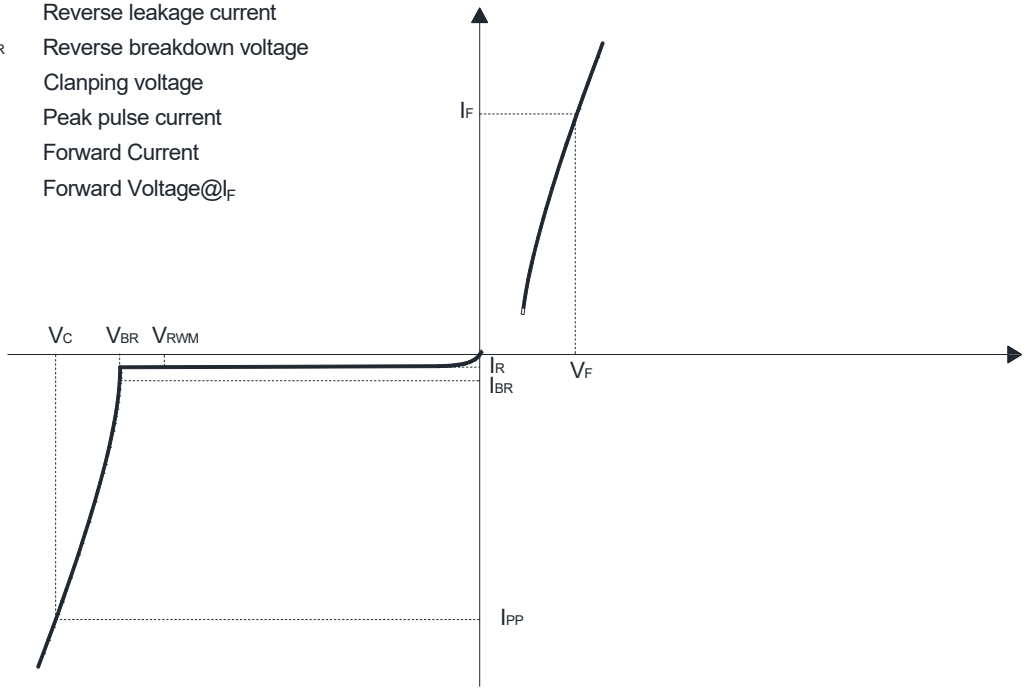
- ●Test Equipment/Instrumentation
- ●Notebooks / Desktops / Servers
- ●Computer Peripherals
- ●Automotive applications

Mechanical Data

- ● Package: SOT-23
- ● Lead Finish: Matte Tin
- ● Case Material: “Green” Molding Compound
- ● Moisture Sensitivity: Level 1 per J-STD-020

■Definitions of electrical characteristics

V_{RWM}	Reverse stand-off voltage
I_R	Reverse leakage current
V_{BR}	Reverse breakdown voltage
V_C	Clanping voltage
I_{PP}	Peak pulse current
I_F	Forward Current
V_F	Forward Voltage@I_F



■Maximum Ratings

PARAMETER	SYMBOL	LIMITS	UNIT
Peak pulse power (t_p = 10/1000μs)	P_{pk}	40	W
ESD according to IEC61000-4-2 air discharge	V_{ESD}	±30	KV
ESD according to IEC61000-4-2 contact discharge		±30	
Power Dissipation	P_D	225	mW
Thermal Resistance Junction to Ambient	R_{thJA}	556	°C/W
Junction temperature	T_J	-55~150	
Storage temperature	T_{STG}	-55~150	

Notes:

CAUTION: Stresses above those listed in “Absolute Maximum Ratings” may cause permanent damage to the component. This is a stress only rating and operation of the component at these or any other conditions above those indicated in the operational sections of this specification is not implied.

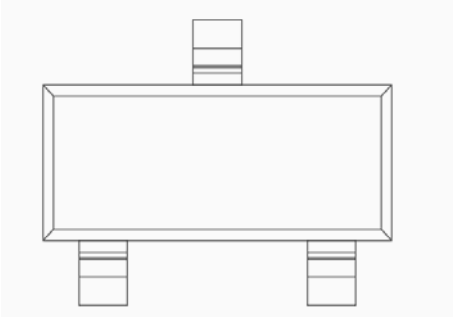
■Electrical Characteristics T_J=25

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse Standoff Voltage	V_{RWM}	V	I_R≤1μA			22
Reverse breakdown voltage	V_{BR}	V	I_{BR} = 1mA	25.65	27	28.35
Reverse leakage current	I_R	nA	V_{RWM} = 22V			50
Forward Voltage	V_F	V	I_F = 10mA			0.9
Clamping voltage	V_C	V	I_{PP} = 1A, t_p = 10/1000μs			40

■Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MMBZ27VCQ	F2	Approximate 10	3000	30000	120000	7 reel

■ Marking Information



Note:
1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black

■ **Characteristics** (Typical)

Fig.1: P_D-T_A

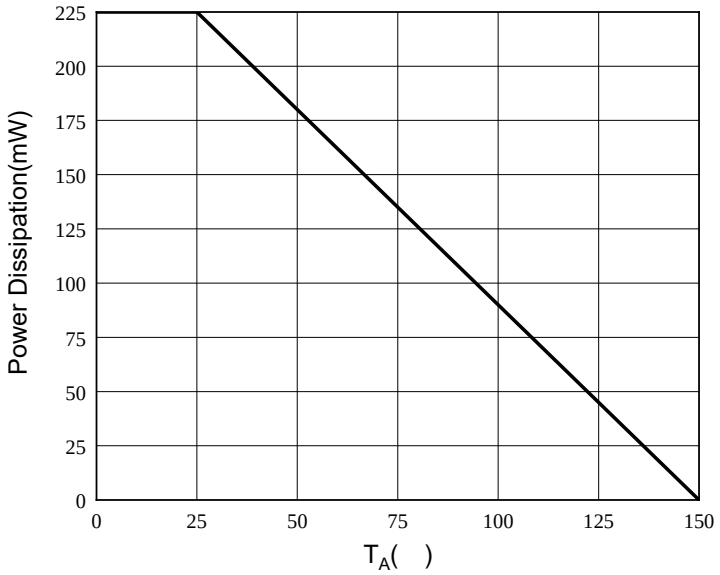


Fig.2:Typical Breakdown Voltage VS Temperature

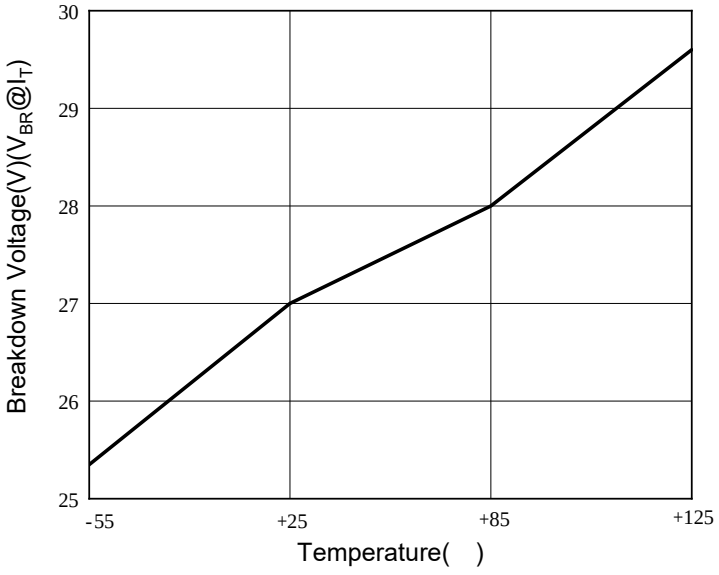


Fig.3: Reverse Characteristics

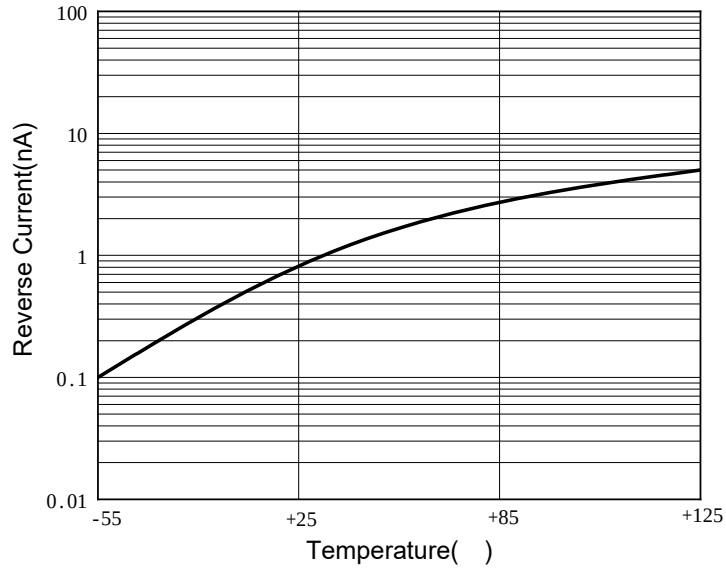


Fig.4 Pulse Waveform

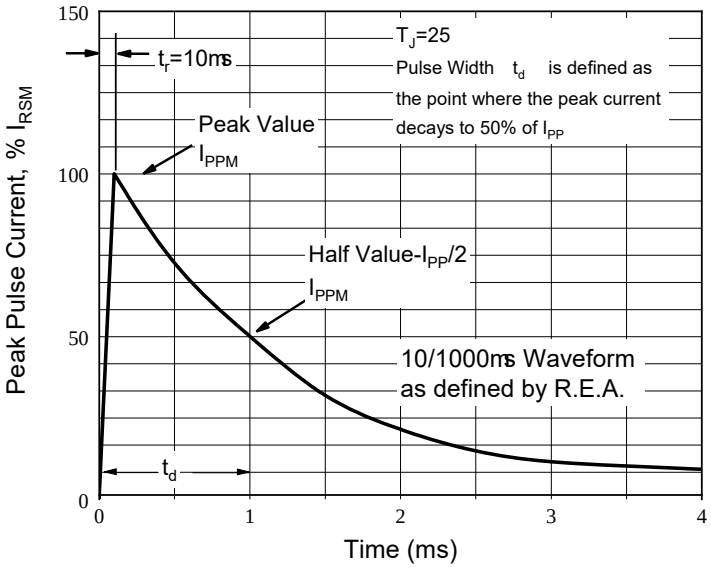


Fig.5: Power Derating Curve

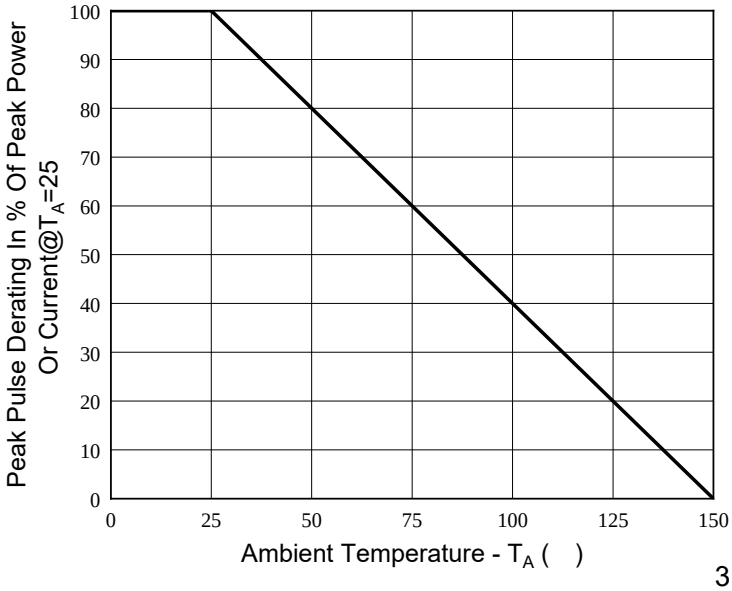
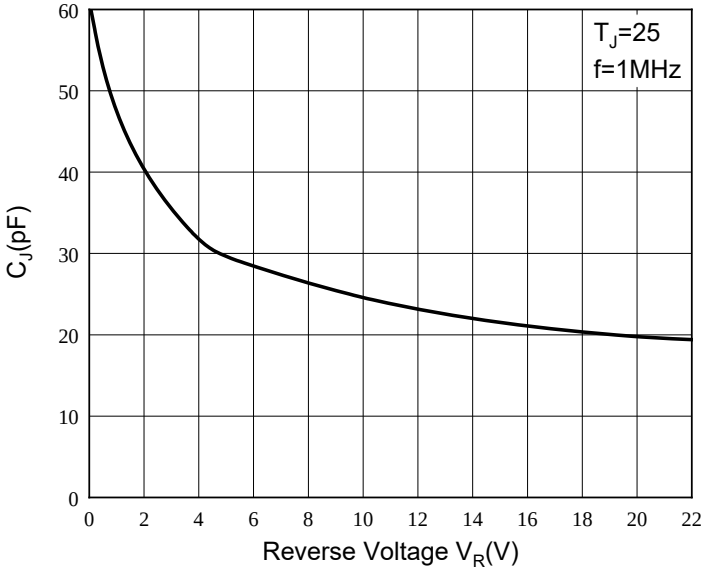
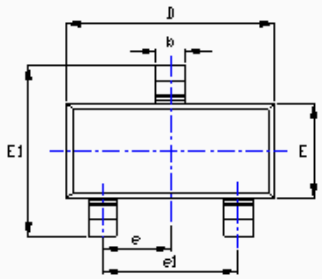


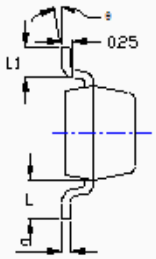
Fig.6: Capacitance Characteristics



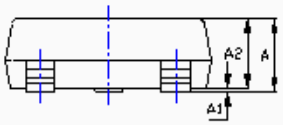
■ Outline Dimensions



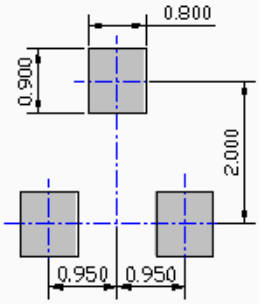
TOP VIEW



SIDE VIEW



SIDE VIEW



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

NOTE:
1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

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