

Features

- Fast speed switching
- For general purpose switching application
- High conductance
- Silicon epitaxial planar chip
- Lead-free parts meet RoHS requirements
- Compliant to Halogen-free
- Suffix "-Q1" for AEC-Q101

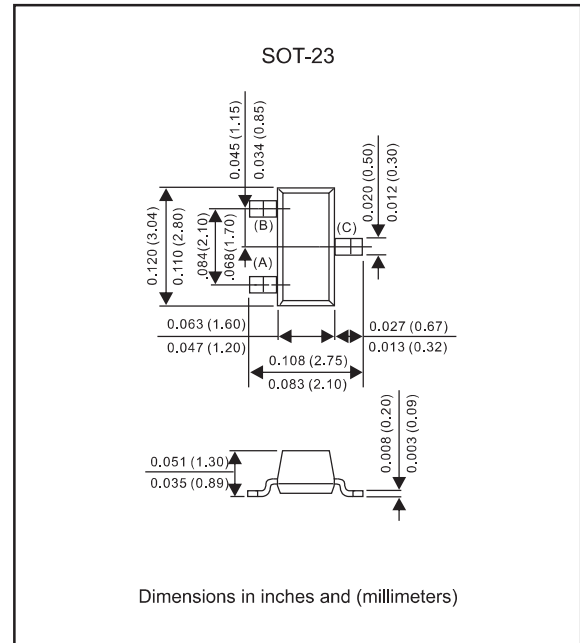
Mechanical data

Package : SOT-23

- Terminals : Tin plated leads, solderable per J-STD-002 and JESD22-B102

Mounting Position : Any

Package outline



Maximum Ratings (Ta=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Value
Repetitive peak reverse voltage	V_{RRM}	V	85
Forward current, per leg	I_F	mA	200
Non-repetitive surge peak forward current @ t=8.3ms half-sine wave	I_{FSM}	A	2
Non-repetitive surge peak forward current @ t=1ms square wave			2
Power dissipation	P_D	mW	225
Junction temperature	T_J	°C	-55 to +150
Storage temperature	T_{STG}	°C	-55 to +150

Electrical Characteristics (T_a=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V _R	V	I _R =100uA	75		
Forward voltage	V _{F1}	V	I _F =1mA			0.9
	V _{F2}	V	I _F =10mA			1.0
	V _{F3}	V	I _F =50mA			1.1
	V _{F4}	V	I _F =150mA			1.25
Reverse leakage current	I _R	nA	V _R =75V			5
Junction capacitance	C _j	pF	V _R =0V, f=1MHz			4
Reverse recovery time	T _{rr}	us	I _F =I _R =10mA, I _{rr} =1mA , R _L =100Ω			3

Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	556
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	445

Note:

(1) Device mounted on PCB, single-sided copper, with standard footprint

Characteristics

Fig 1: P_D-T_a Curve

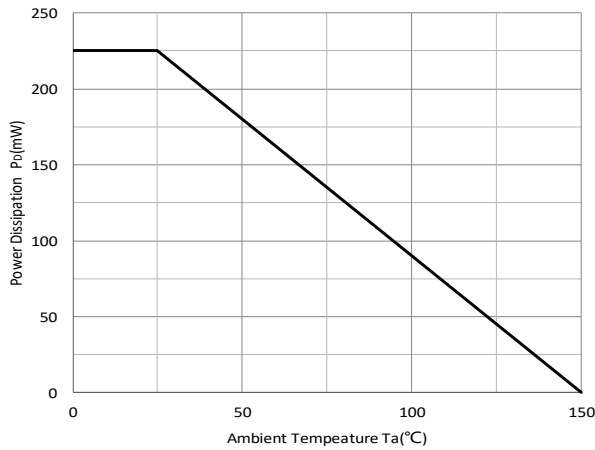


Fig 2: Capacitance Capability

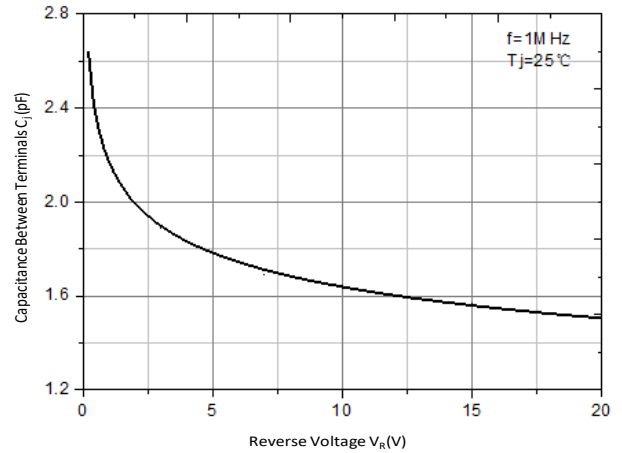


Fig 3: Typical Forward Characteristics

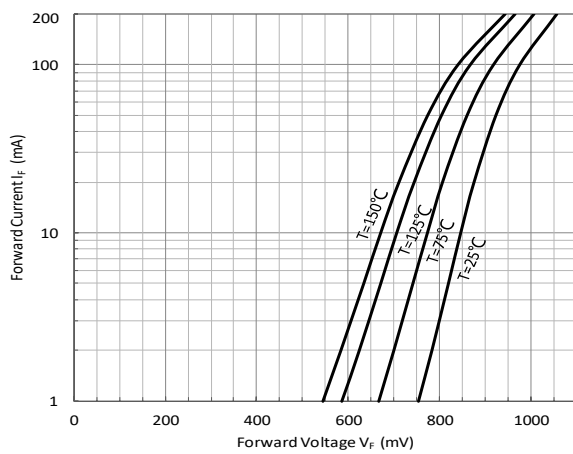
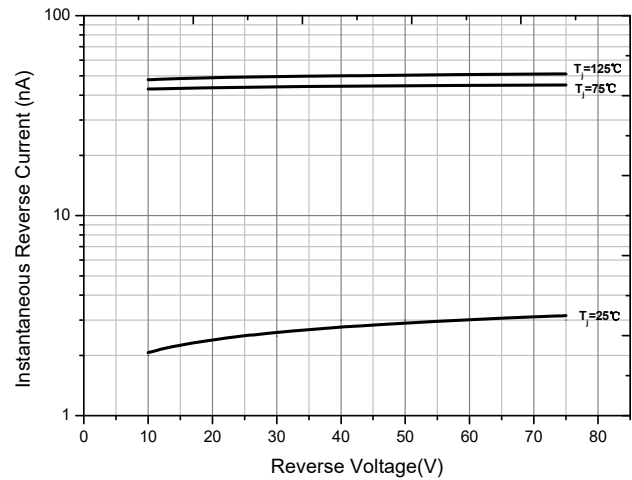
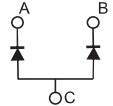


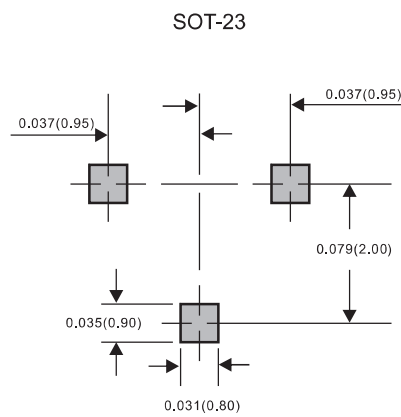
Fig 4: Typical Reverse Characteristics



Pinning information

Type number	Marking code	Symbol
BAW156-Q1	JZ	

Suggested solder pad layout



Dimensions in inches and (millimeters)