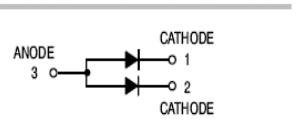
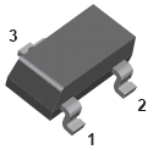
Surface mount switching diode **BAW56**

FEATURES

- For General Purpose switching Applications.
- Fast Switching Speed.
- High Conductance.
- Surface Mount Package Ideally Suited for Automatic Insertion.

Lead-free





SOT-23

APPLICATIONS

- High speed switching application.

ORDERING INFORMATION

Type No.	Marking	Package Code
BAW56	A1	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Characteristic	**Symbol**	**Limits**	**Unit**
Non-repetitive peak reverse voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working peak reverse voltage DC Reverse Voltage	V_{RRM} V_{RWM} V_R	75	V
Continuous Forward Current Single diode loaded Double diode loaded	I_F	 215 125	mA
Non-repetitive forward Surge Current @t=1.0ms @t=1.0s	I_{FSM}	 1 0.5	A
Power Dissipation	P_D	350	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	357	℃/W
Thermal Resistance Junction-to-Case	$R_{\theta jC}$	212	℃/W
Operating Junction Temperature Range	T_j	150	℃
Storage Temperature Range	T_{STG}	-65 to +150	℃

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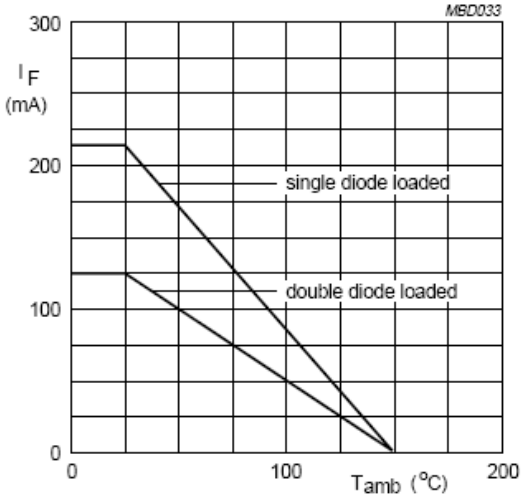
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

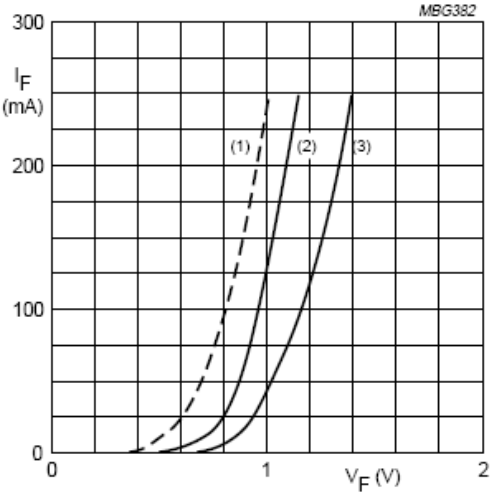
Characteristic	Symbol	Min	MAX	UNIT	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	75	-	V	I_R= 2.5μA
Forward Voltage	V_F	-	0.715 0.855 1.0 1.25	V	I_F=1mA I_F=10mA I_F=50mA I_F=150mA
Reverse Leakage Current	I_R	-	2.5 25	μA nA	V_R=75V V_R=20V
Diode Capacitance	C_D	-	2	pF	V_R=0V,f=1MHz
Reverse Recovery Time	t_{rr}	-	4	ns	I_F=I_R=10mA, I_{rr}=0.1* I_R,R_L=100Ω

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



Device mounted on an FR4 printed-circuit board.

Fig.1 Maximum permissible continuous forward current as a function of ambient temperature.



(1) T_j = 150 °C; typical values.
(2) T_j = 25 °C; typical values.
(3) T_j = 25 °C; maximum values.

Fig.2 Forward current as a function of forward voltage.

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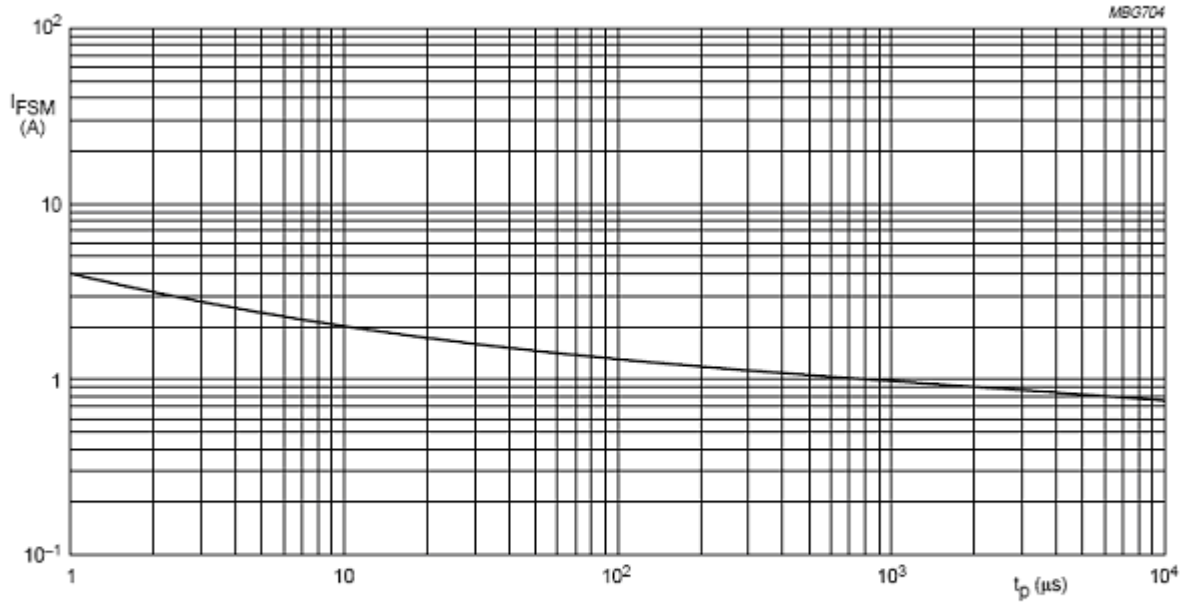


Based on square wave currents.
T_j = 25 °C prior to surge.

Fig.3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

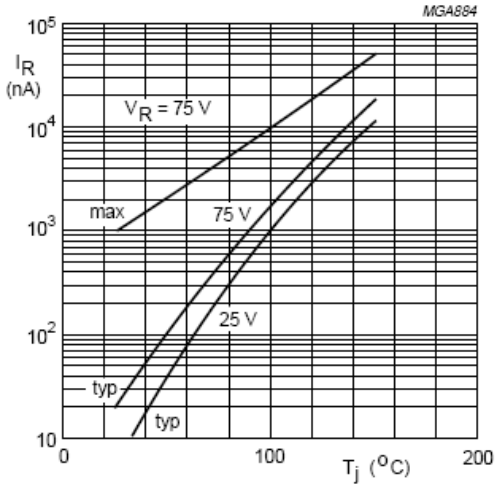
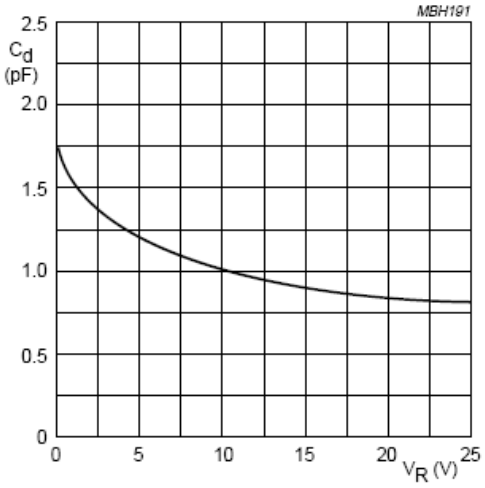


Fig.4 Reverse current as a function of junction temperature.



f = 1 MHz; T_j = 25 °C.

Fig.5 Diode capacitance as a function of reverse voltage; typical values.

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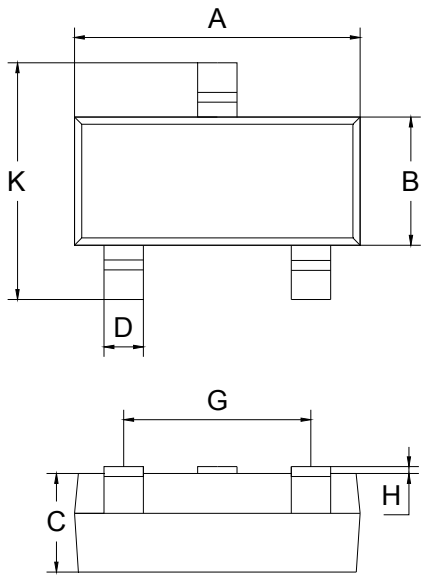
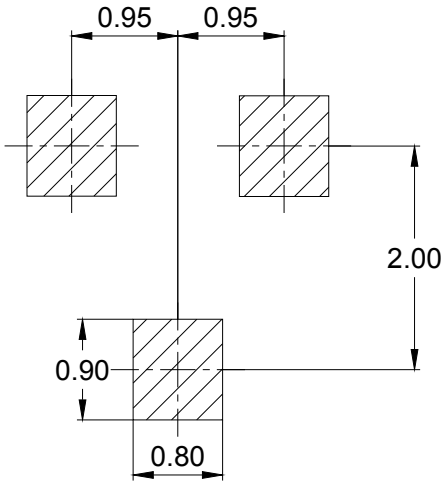
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.9	1.1
D	0.3	0.5
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.05	0.15
K	2.20	2.60
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
BAW56	SOT-23	3000/Tape&Reel