

BAL99

BAW56

BAV70

BAV99

Silicon epitaxial planar type

Features

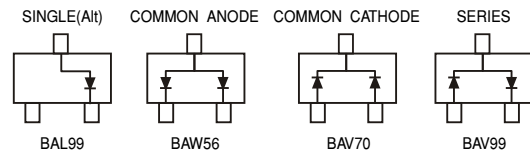
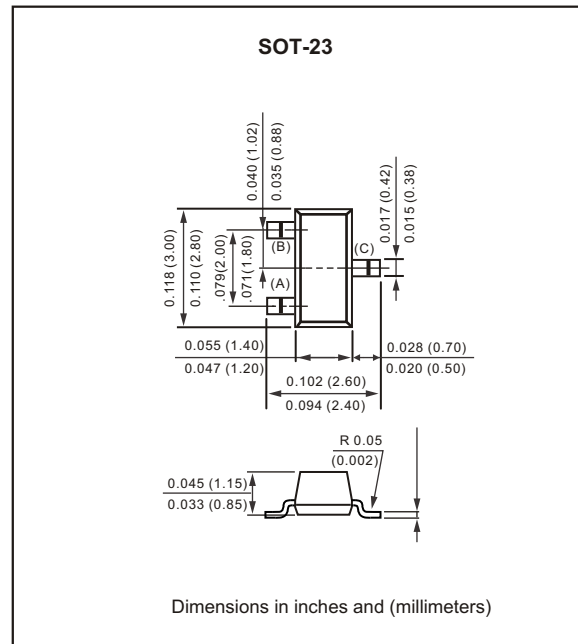
- Small surface mounting type
- High reliability
- High speed ($t_{rr} < 1.5 \text{ ns}$)

Mechanical data

Case : SOT-23

Terminals : Solder plated, solderable per MIL-STD-750,
Method 2026

Mounting Position : Any



MAXIMUM RATINGS (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Repetitive peak reverse voltage		V_{RRM}			70	V
Reverse voltage		V_R			70	V
Peak forward surge current	$t_p = 1 \mu\text{s}$	I_{FSM}			2.0	A
Repetitive peak forward current		I_{FRM}			450	mA
Forward current		I_F			215	mA
Average forward current	$V_R = 0$	I_{FAV}			715	mA
Power dissipation		P_D			225	mW
Junction temperature		T_j			175	$^\circ\text{C}$
Storage temperature		T_{STG}	-55		+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 10\text{mA}$	V_F			0.855	V
	$I_F = 150\text{mA}$	V_F			1.250	V
Reverse current	$V_R = 70\text{V}$	I_R			2.5	μA
	$V_R = 20\text{V}$, $T_j = 150^\circ\text{C}$	I_R			30	μA
	$V_R = 70\text{V}$, $T_j = 150^\circ\text{C}$	I_R			50	μA
Breakdown current	$I_R = 100\mu\text{A}$, $T_P/T = 0.01$, $T_P = 0.3\text{ms}$	$V_{(BR)}$	70			V
Diode capacitance	$V_R = 0$, $f = 1\text{MHz}$, $V_{HF} = 50\text{mV}$	C_D			1.5	pF
Reverse recovery time	$I_F = 10\text{mA}$, $V_R = 10\text{mA}$, $I_{RR} = 0.1 \times I_R$, $R_L = 100\Omega$	t_{rr}			6	ns

RATING AND CHARACTERISTIC CURVES for each diode (BAL99 BAW56 BAV70 BAV99)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

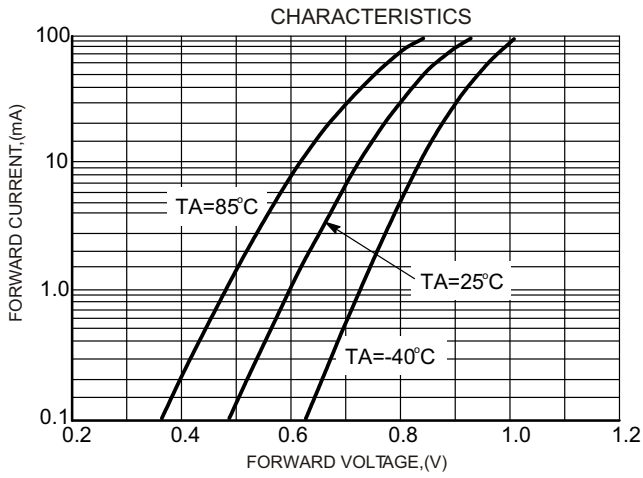


FIG.2 - Leakage Current CHARACTERISTICS

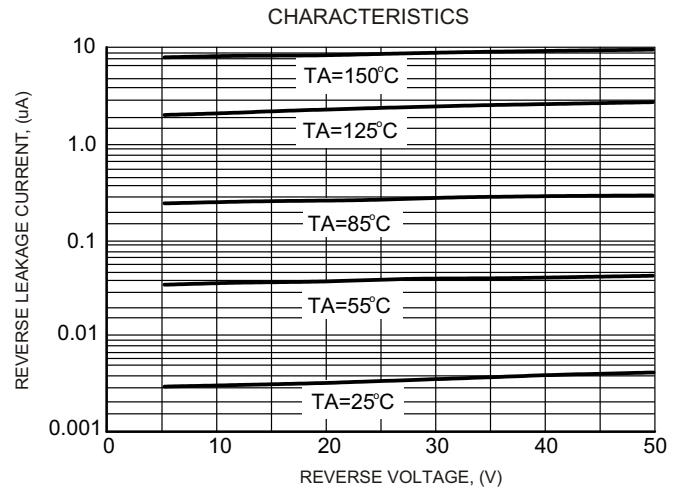
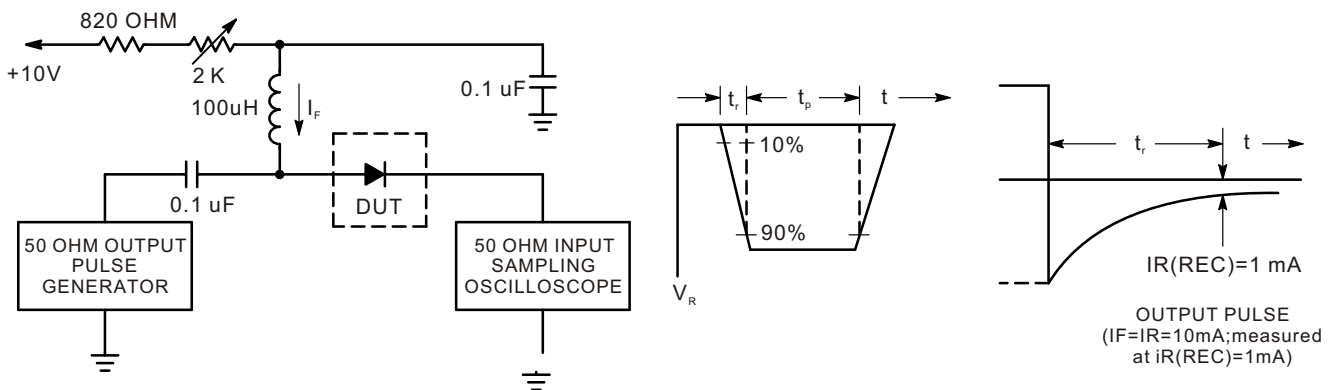
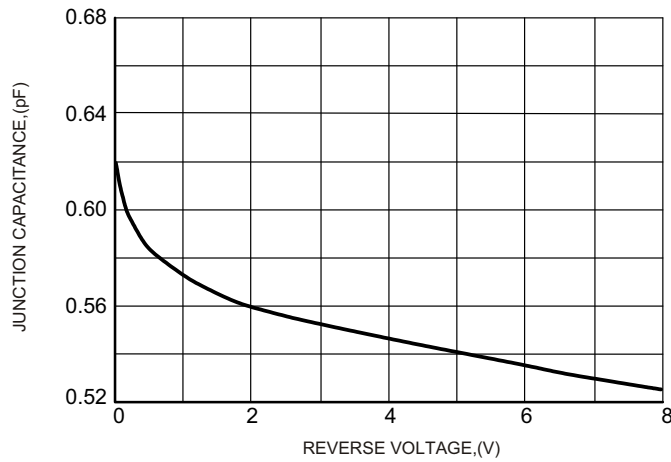


FIG.3-TYPICAL JUNCTION CAPACITANCE



- Notes : 1. A 2.0 Kohm variable resistor adjusted for a forward Current (IF) of 10mA.
 2. Input pulse is adjusted so IR(peak) is equal to 10 mA.
 3. t_p >> t_{rr}.

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Recovery Time Equivalent Test Circuit