DACO SEMICONDUCTOR CO., LTD.

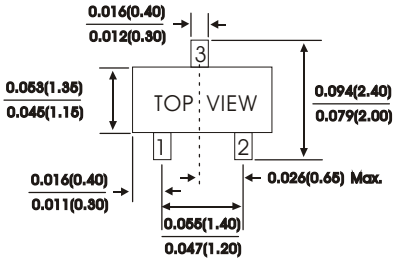
BAT54W THRU BAT54SW

SMALL SIGNAL SCHOTTKY BARRIER DIODES

SOT-323(SC-70)

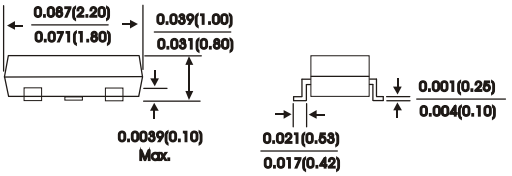
FEATURES:

- **Extremely fast switching speed**
- **Very small conduction losses**
- **Schottky barrier diodes encapsulated in a SOT-23 PACKAGE**
- **Low forward voltage**
- **High speed switching applications circuit protection**



MECHANICAL DATA

Case : SOT-323 molded plastic



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temperature unless otherwise specified.
Single phase half wave, 60 Hz resistive or inductive load.
For capacitive load. derate current by 20%.

Characteristic	Symbol	BAT54W	BAT54AW	BAT54CW	BAT54SW	Units
Maximum reverse voltage	V_R	30				Volts
Minimum reverse breakdown voltage I_R=10uA	$V_{(BR)}R$	30				Volts
Maximum average forward rectified current	$I_{(AV)}$	0.2				Amps
Maximum Peak repetitive forward curren rated V_R , square wave , 20KHZ (Per leg)	I_{FRM}	0.3				Amps
Maximum instantaneous forward voltage (Per leg) IF=0.1mA IF=1.0mA IF=10mA IF=30mA IF=100mA	V_F	0.24 0.32 0.40 0.50 1.00				Volts
Maximum reverse current at V_R=25V (Per leg)	I_R	2.0				μA
Maximum reverse recovery time (NOTE 1) (Per leg)	T_{RR}	5.0				nS
Maximum total capactitance (NOTE 2)	C_T	10				P_F
Operating junction temperature range	T_J	-55to+125				℃
Storage temperature range	T_{Stg}	-55to+150				℃

NOTES:
(1)Reverse Recovery Test CONDITION : I_F=I_R=10mA, $I_{R(REC)}$ =1.0mA
(2)Measured at 1MHZ and reverse Voltage of 1.0V

RATINGS AND CHARACTERISTIC CURVES

Device Marking

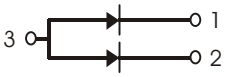
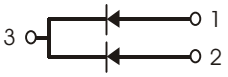
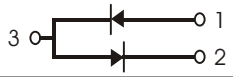
Item	Marking	Eqivalent Circuit diagram
BAT54W	B4,KL5	
BAT54AW	B6,B7,KL6	
BAT54CW	L3,KL7	
BAT54SW	B8,KL8	

FIG.1 - TYPICAL REVERSE CHARACTERISTICS

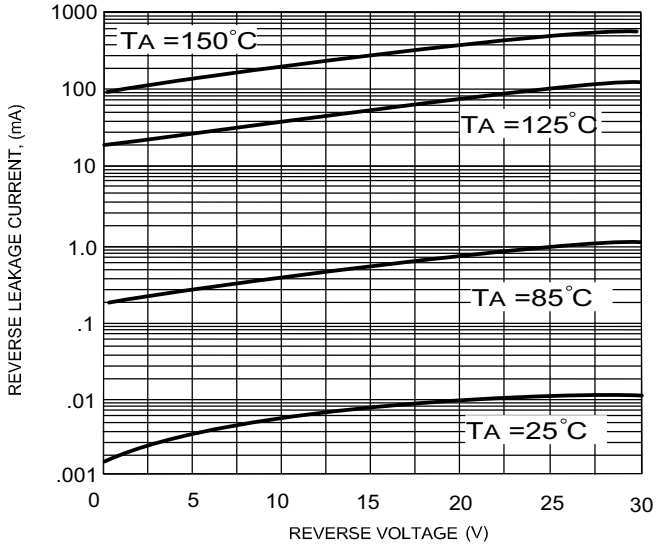


FIG.2 - TYPICAL FORWARD CHARACTERISTICS

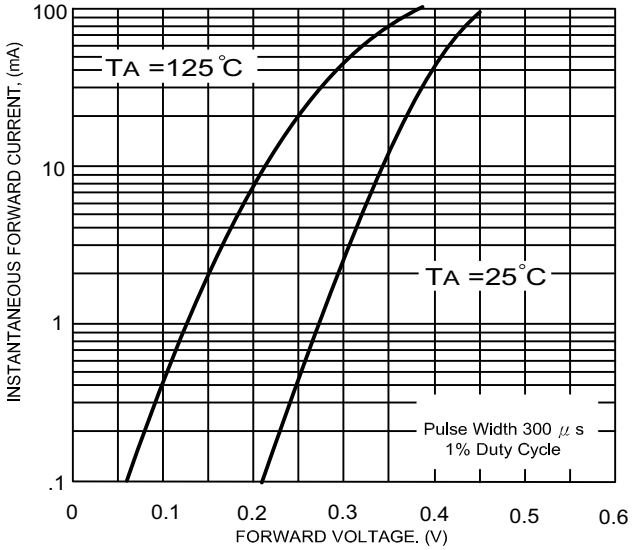
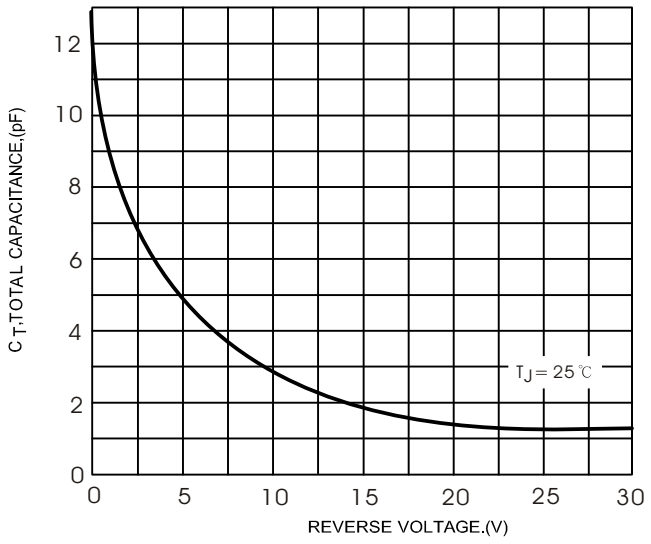
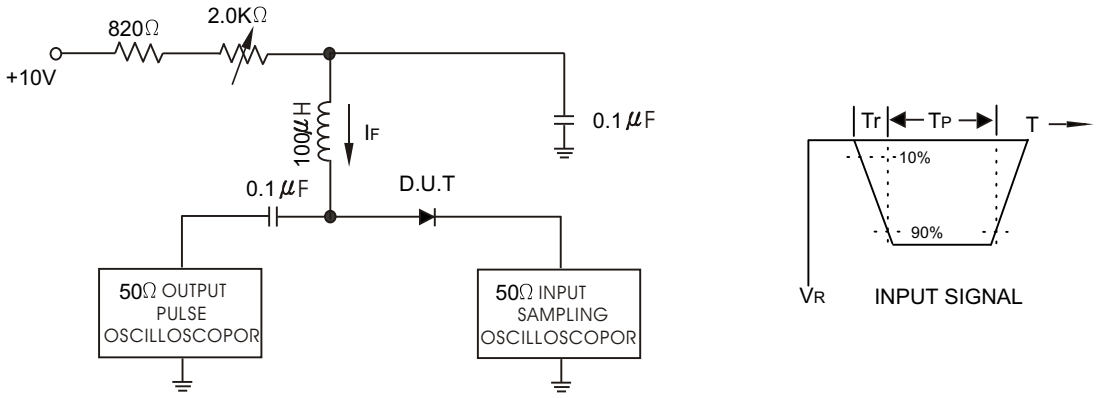


FIG.3 - TYPICAL CAPACITANCE

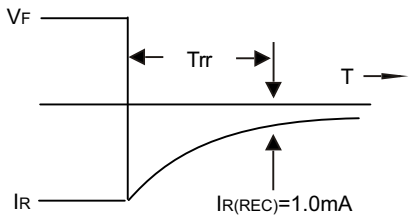


RATINGS AND CHARACTERISTIC CURVES

Figure 4 Recovery Test equivalent Circuit



NOTES : 1.A 2.0K Variable resistor for forward current (I_F) of 10mA
2.Input pules is adjusted so $I_{R(peak)}$ is equal to 10mA
3.tp" trr



OUTPUT PULSE

(I_F=I_R=10mA, MEASURED at I_R(REC)=1.0mA)

Disclaimer

DACO Semiconductor reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to this document and any product described herein.

DACO Semiconductor makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does DACO Semiconductor assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.

Purchasers is responsible for its products and applications using DACO Semiconductor products, including compliance with all laws, regulations and safety requirements or standards, regardless of any support or applications information provided by DACO Semiconductor. “Typical” parameters which may be provided in DACO Semiconductor data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including “Typicals” must be validated for each customer application by customer’s technical experts.

DACO Semiconductor products are not designed, authorized or warranted to be suitable for use in life support, life-critical or safety-critical systems or equipment, nor in applications where failure or malfunction of DACO Semiconductor’s product can reasonably be expected to result in personal injury, death or severe property or environmental damage. DACO Semiconductor accept no liability for inclusion and/or use of DACO Semiconductor’s products in such equipment or applications and therefore such inclusion and/or use is at the customer’s own risk.

Purchasers buy or use DACO Semiconductor products for any such unintended or unauthorized application, Purchasers shall indemnify and hold DACO Semiconductor and its suppliers and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that DACO Semiconductor was negligent regarding the design or manufacture of the part.