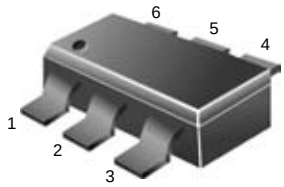
YEA SHIN TECHNOLOGY CO., LTD

BAT54DW

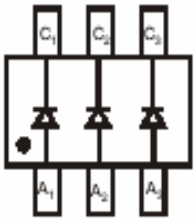
SURFACE MOUNT SCHOTTKY BARRIER DIODE ARRAY



SOT-363 / SC-88

These Schottky barrier diodes are designed for high speed switching applications, circuit protection, and voltage clamping. Extremely low forward voltage reduces conduction loss. Miniature surface mount package is excellent for hand held and portable applications where space is limited.

- Extremely Fast Switching Speed
- Low Forward Voltage — 0.35 Volts (Typ) @ I_F = 10 mAdc
- We declare that the material of product compliance with RoHS requirements.



TOP VIEW

DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
BAT54DW	KLA	3000/Tape&Reel

MAXIMUM RATINGS (T_J = 125°C unless otherwise noted)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	30	Volts
Forward Power Dissipation @ T_A = 25°C Derate above 25°C	P_D	 225 2.0	 mW mW/°C
Forward Current (DC)	I_F	200 Max	mA
Junction Temperature	T_J	125 Max	°C
Storage Temperature Range	T_{stg}	–55 to +150	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (I_R = 10 µA)	$V_{(BR)R}$	30	—	—	Volts
Total Capacitance (V_R = 1.0 V, f = 1.0 MHz)	C_T	—	7.6	10	pF
Reverse Leakage (V_R = 25 V)	I_R	—	0.5	2.0	µAdc
Forward Voltage (I_F = 0.1 mAdc)	V_F	—	0.22	0.24	Vdc
Forward Voltage (I_F = 30 mAdc)	V_F	—	0.41	0.5	Vdc
Forward Voltage (I_F = 100 mAdc)	V_F	—	0.52	1.0	Vdc
Reverse Recovery Time (I_F = I_R = 10 mAdc, $I_{R(REC)}$ = 1.0 mAdc) Figure 1	t_{rr}	—	—	5.0	ns
Forward Voltage (I_F = 1.0 mAdc)	V_F	—	0.29	0.32	Vdc
Forward Voltage (I_F = 10 mAdc)	V_F	—	0.35	0.40	Vdc
Forward Current (DC)	I_F	—	—	200	mAdc
Repetitive Peak Forward Current	I_{FRM}	—	—	300	mAdc
Non–Repetitive Peak Forward Current (t < 1.0 s)	I_{FSM}	—	—	600	mAdc

DEVICE CHARACTERISTICS

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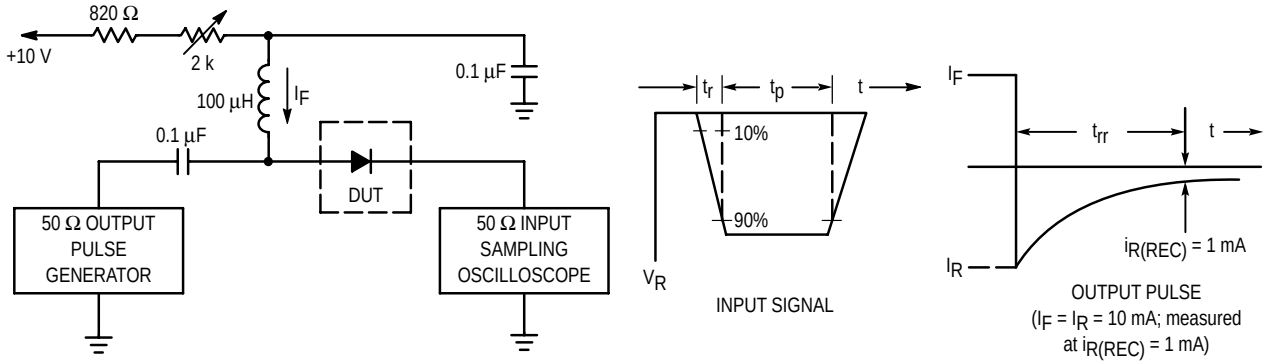

Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10 mA.
3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

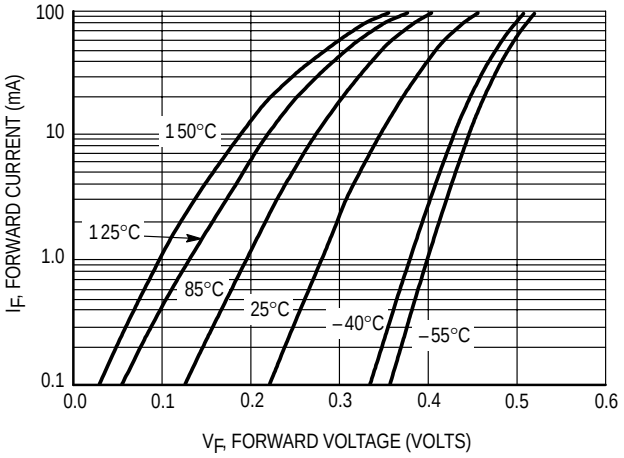

Figure 2. Forward Voltage

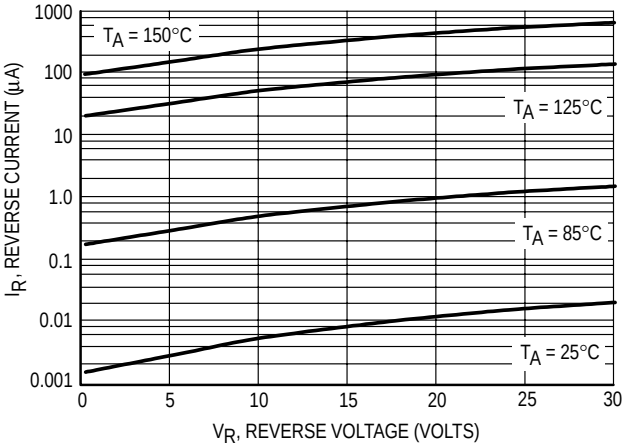

Figure 3. Leakage Current

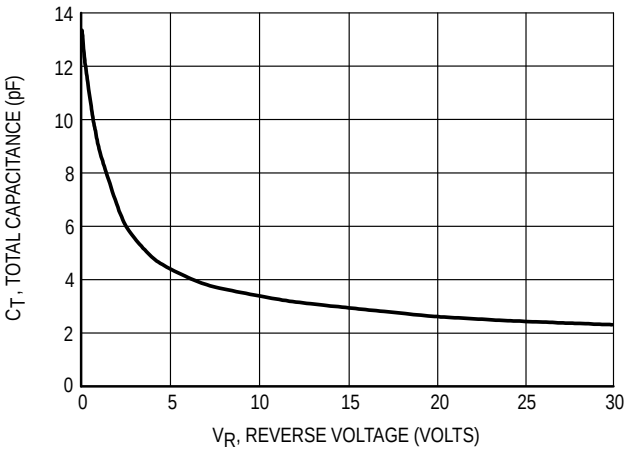

Figure 4. Total Capacitance

PACKAGE OUTLINE AND DIMENSIONS

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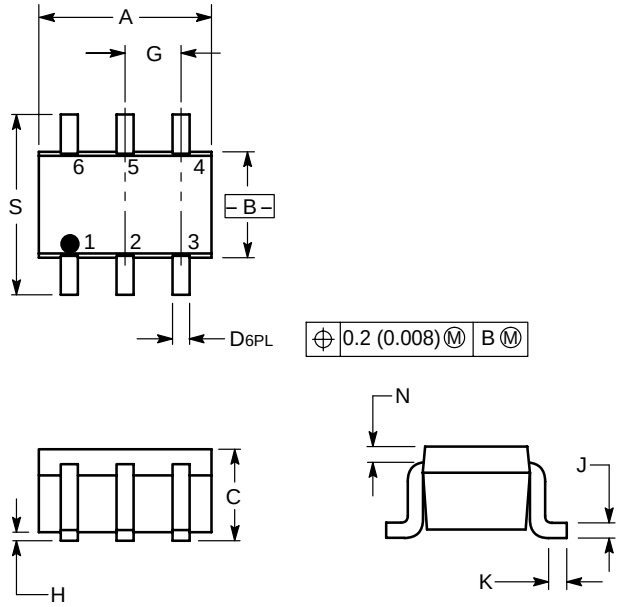

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.031	0.043	0.80	1.10
D	0.004	0.012	0.10	0.30
G	0.026 BSC		0.65 BSC	
H	---	0.004	---	0.10
J	0.004	0.010	0.10	0.25
K	0.004	0.012	0.10	0.30
N	0.008 REF		0.20 REF	
S	0.079	0.087	2.00	2.20

PIN 1. EMITTER 2
2. BASE 2
3. COLLECTOR 1
4.EMITTER 1
5. BASE 1
6.COLLECTOR 2