



BAT54TW / ADW / CDW / SDW / DW / BRW / TWP

SURFACE MOUNT SCHOTTKY DIODE ARRAYS

VOLTAGE 30 Volt **POWER** 225mWatt

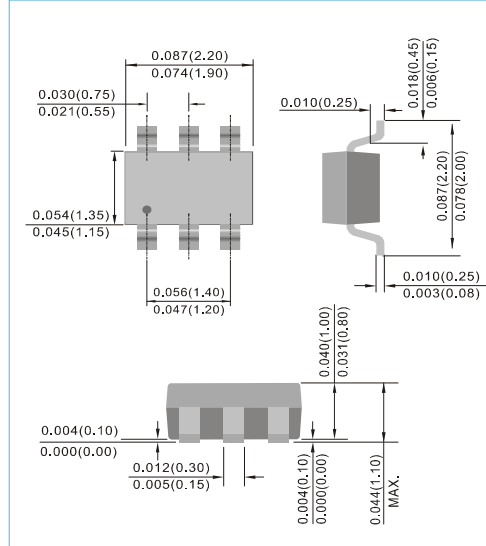
SOT-363 Unit : inch(mm)

FEATURES

- Isolated diode arrays for significant board space savings
- Surface mount package ideally suited for automatic insertion
- Extremely Fast Switching Speed
- Very Low V_F : 0.347V (Typ) at $I_F = 10\text{mA}$
- Lead free in compliance with EU RoHS2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: SOT-363 plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0002 ounces, 0.006 grams



ABSOLUTE RATINGS (each diode)

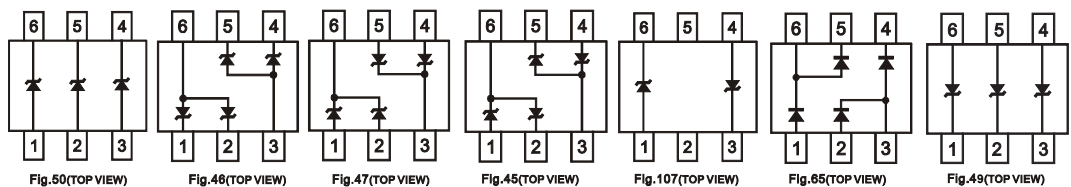
Parameter	Symbol	BAT54TW	BAT54ADW	BAT54CDW	BAT54SDW	BAT54DW	BAT54BRW	BAT54TWP	Units
Maximum Reverse Voltage	V_R				30				V
Peak Reverse Voltage	V_{RRM}				30				V
Continuous Forward Current	I_F				0.2				A
Peak Forward Surge Current: 8.3ms single half sine-wave superimposed on rated load per diode	I_{FSM}				1				A
Circuit Figure	-	Fig 50	Fig 46	Fig 47	Fig 45	Fig 107	Fig 65	Fig 49	-

THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Power Dissipation (Note 1)	P_{TOT}	225	mW
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	550	$^{\circ}\text{C}/\text{W}$
Typical Thermal Resistance, Junction to Lead (Note 2)	$R_{\theta JL}$	220	$^{\circ}\text{C}/\text{W}$
Junction Temperature Range	T_J	-55 to 125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^{\circ}\text{C}$

NOTE: 1. FR-4 Board Minimum pad.

2. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area





BAT54TW / ADW / CDW / SDW / DW / BRW / TWP

ELECTRICAL CHARACTERISTICS (each diode) (TA=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\mu A$	30	-	-	V
Reverse Current	I_R	$V_R=25 V$	-	-	2	μA
Forward Voltage	V_F	$I_F=0.1mA$	-	-	0.24	V
		$I_F=1mA$	-	-	0.32	
		$I_F=10mA$	-	-	0.4	
		$I_F=30mA$	-	-	0.5	
		$I_F=100mA$	-	-	0.6	
Total Capacitance	C_T	$V_R=1V, f=1MHz$	-	-	10	pF

TYPICAL CHARACTERISTIC CURVES

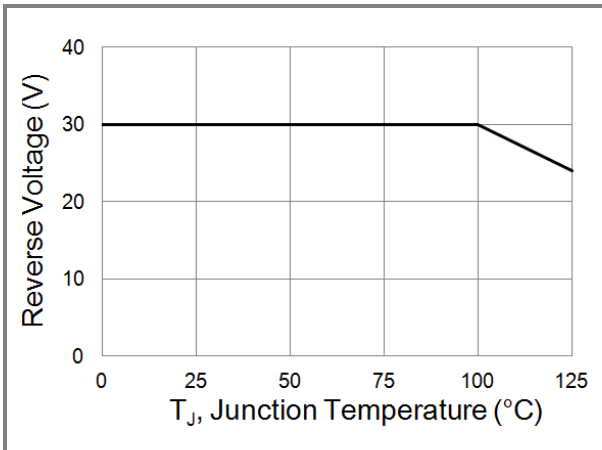


Fig.1 Operating Temperature Derating Curve

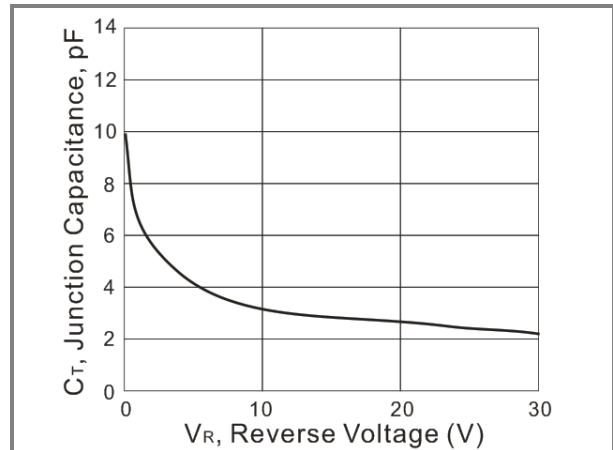


Fig.2 Typical Junction Capacitance

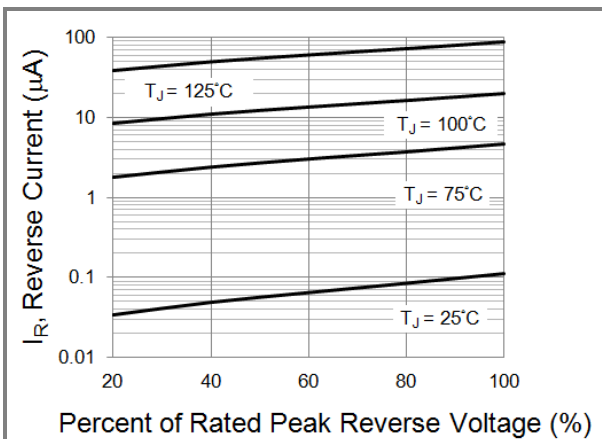


Fig.3 Typical Reverse Characteristics

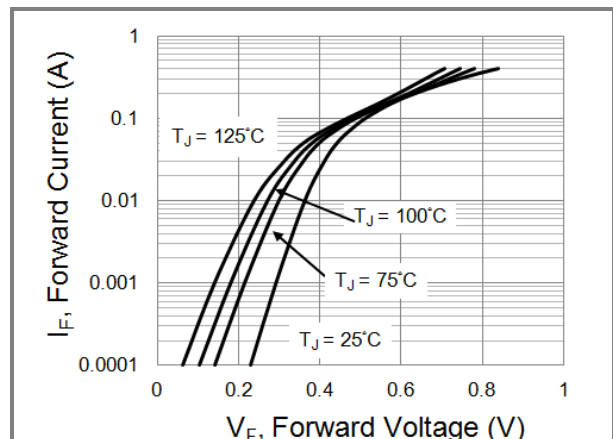


Fig.4 Typical Forward Characteristics

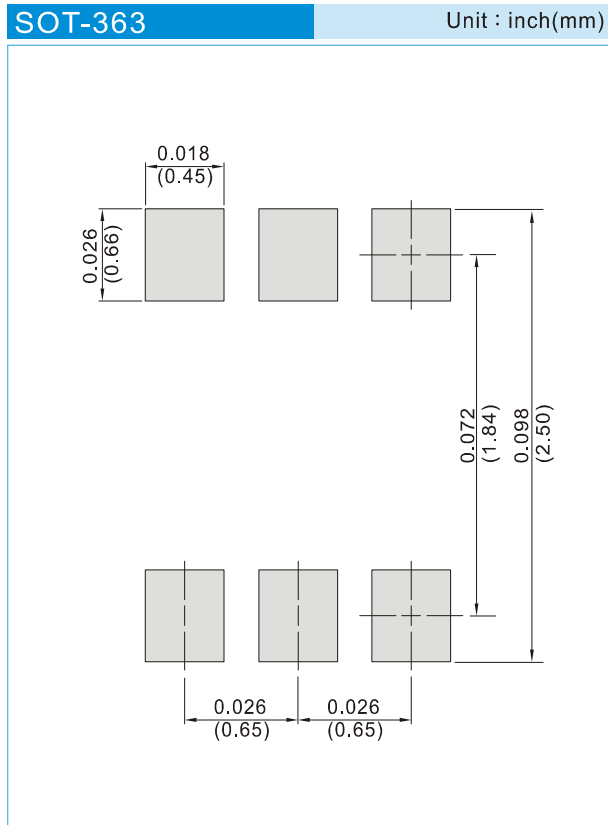


BAT54TW / ADW / CDW / SDW / DW / BRW / TWP

PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing Type	Marking	Version
BAT54TW_R1_00001	SOT-363	3K / 7" Reel	L4	Halogen free
BAT54ADW_R1_00001	SOT-363	3K / 7" Reel	L42	Halogen free
BAT54CDW_R1_00001	SOT-363	3K / 7" Reel	L43	Halogen free
BAT54SDW_R1_00001	SOT-363	3K / 7" Reel	L44	Halogen free
BAT54DW_R1_00001	SOT-363	3K / 7" Reel	L41	Halogen free
BAT54BRW_R1_00001	SOT-363	3K / 7" Reel	PN	Halogen free
BAT54TWP_R1_00001	SOT-363	3K / 7" Reel	L4P	Halogen free

MOUNTING PAD LAYOUT





BAT54TW / ADW / CDW / SDW / DW / BRW / TWP

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.