

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

SURFACE MOUNT SCHOTTKY DIODE ARRAYS

VOLTAGE	30 Volt	POWER	225mWatt
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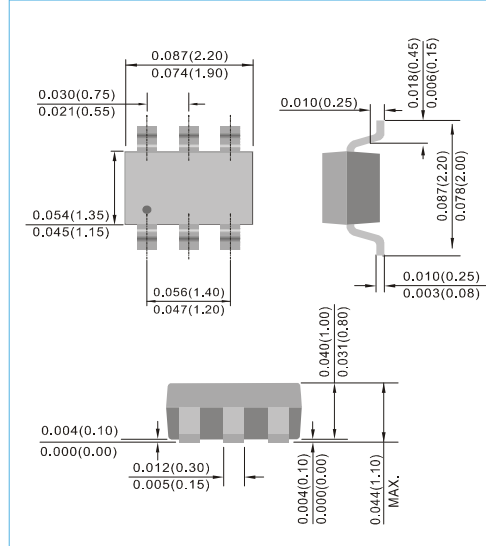
SOT-363 Unit : inch(mm)

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)

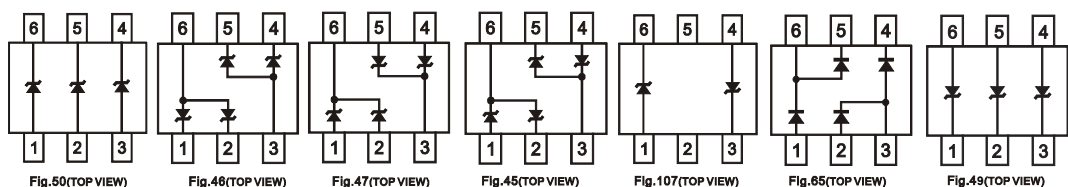
Parameter	Symbol	BAT54TW	BAT54ADW	BAT54CDW	BAT54SDW	BAT54DW	BAT54BRW	BAT54TWP	Units
Maximum Reverse Voltage	V_R				30				V
Peak Reverse Voltage	V_{RRM}				30				V
Continuous Forward Current	I_F				0.2				A
Peak Forward Surge Current: 8.3ms single half sine-wave superimposed on rated load per diode	I_{FSM}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



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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

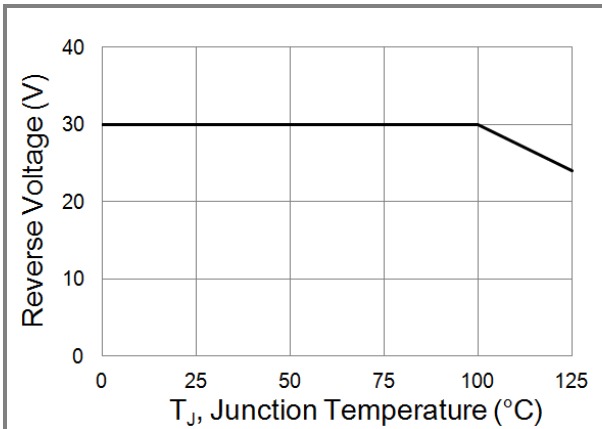


Fig.1 Operating Temperature Derating Curve

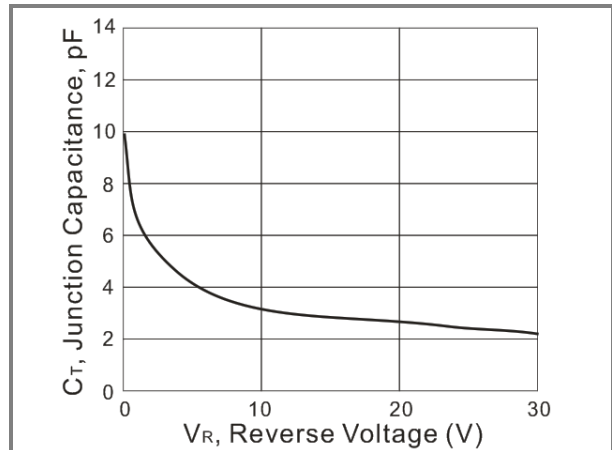


Fig.2 Typical Junction Capacitance

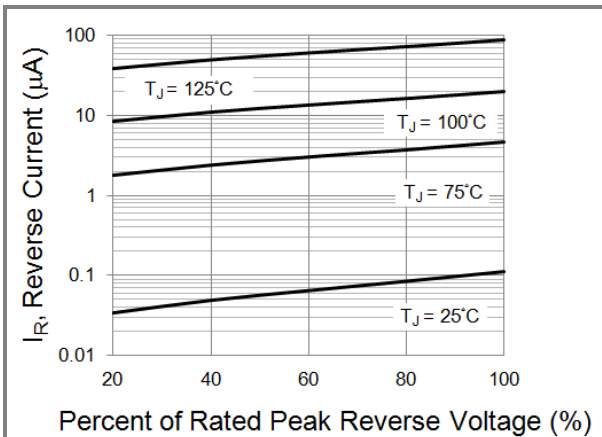


Fig.3 Typical Reverse Characteristics

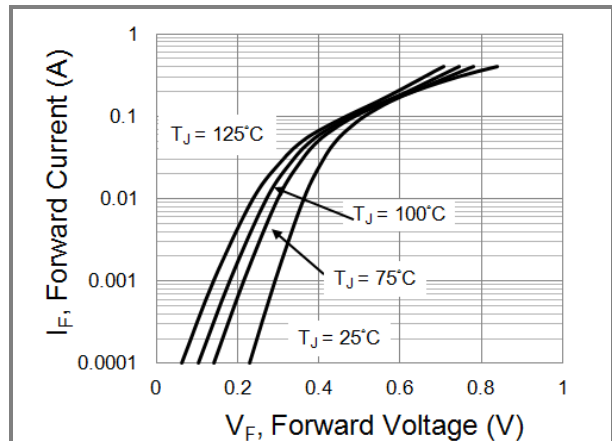


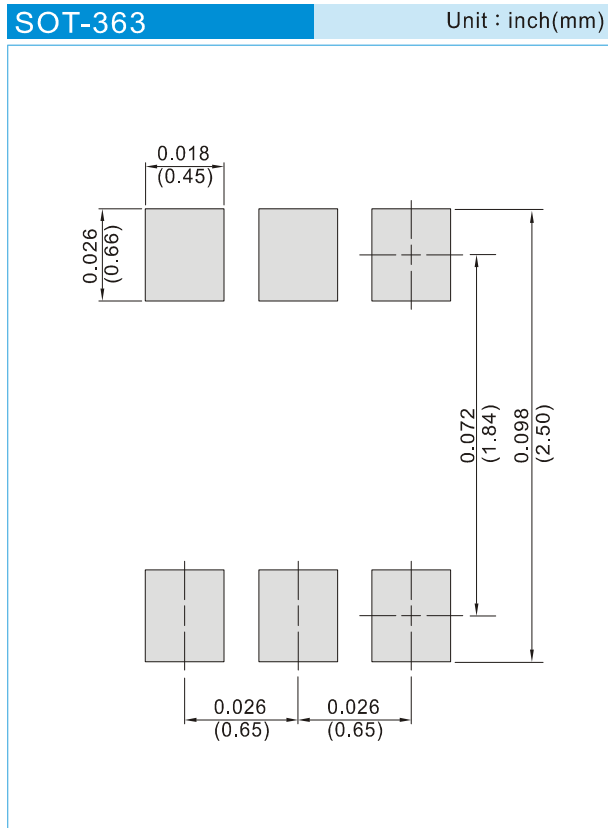
Fig.4 Typical Forward Characteristics

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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



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