

BAS70TW/ADW/CDW/SDW

SURFACE MOUNT SCHOTTKY DIODES ARRAYS

These devices feature electrically-isolated Schottky diodes connected in various configurations housed in a very small SOT-363

FEATURES

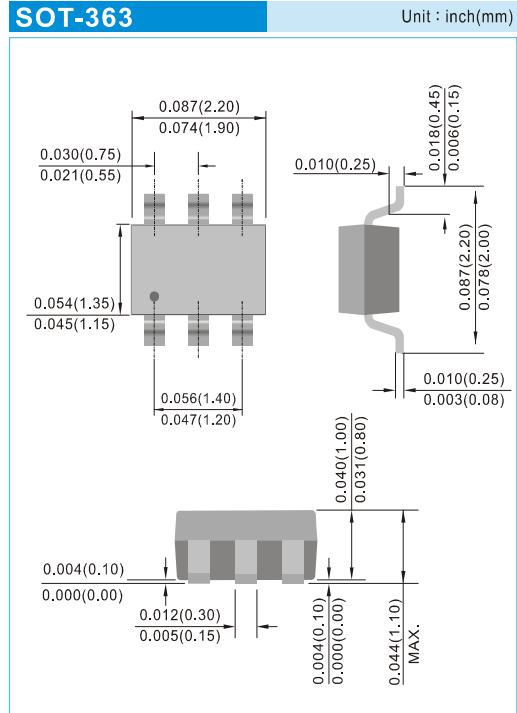
- Maximum forward voltage @ 1mA of 0.41V
- Maximum leakage current @ 50V of 100nA
- Reverse voltage rating of 70V
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case: SOT-363, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx weight: 0.0002 ounces, 0.006 grams
- Marking: BAS70TW: A70, BAS70ADW:A72, BAS70CDW: A73, BAS70SDW:A74

APPLICATIONS

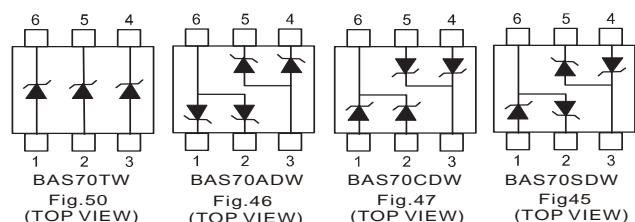
- Rail-to rail ESD protection
- Overshoot and undershoot switching control
- Mobile phones and accessories
- Video game consoles connector ports



MAXIMUM RATING (Per Diode) $T_J=25^{\circ}\text{C}$ Unless otherwise noted

Parameter	Symbol	Value	Units
Repetitive Peak Reverse Voltage	V_{RRM}	70	V
Continuous Reverse Voltage	V_R	70	V
Continuous Forward Current	I_F	200	mA
Non-repetitive Peak Forward Surge Current, $t=1\text{s}$, Square Wave	I_{FSM}	0.6	A
Total Power Dissipation (Note 1)	P_{TOT}	225	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +125	$^{\circ}\text{C}$

Note : 1.FR-5 Board 1 x 0.75 x 0.062 in.

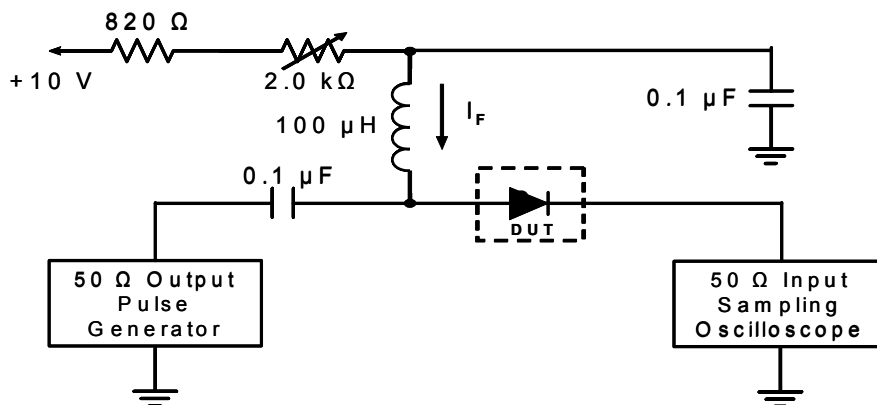


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ELECTRICAL CHARACTERISTICS (Per Diode) $T_J=25^\circ\text{C}$ Unless otherwise noted

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Units
Breakdown Voltage (Note 2)	V_{BR}	$I_{BR}=100\mu\text{A}$	70	--	--	V
Forward Voltage (Note 2)	V_F	$I_F=1\text{mA}$ $I_F=10\text{mA}$ $I_F=15\text{mA}$	--	--	0.41 0.75 1	V
Reverse Leakage Current (Note 2)	I_R	$V_R=50\text{V}$	--	--	100	nA
Junction Capacitance	C_D	$V_R=0\text{V}$, $f=1\text{MHz}$	--	1.25	2	pF
Reverse Recovery Time (See Figure 1)	T_{RR}	$I_F=10\text{mA}$, $I_R=10\text{mA}$ $R_L=100\Omega$ measured at $I_{R\text{rec}}=1\text{mA}$	--	--	5	ns

Note : 1.Short duration (< 300 μs) test pulse to minimize self heating



- Notes: 1. A 2.0k Ω variable resistor adjusted for a forward current (I_F) to 10mA
2. Input pulse is adjusted to $I_{R(\text{peak})}$ is equal to 10mA

Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT

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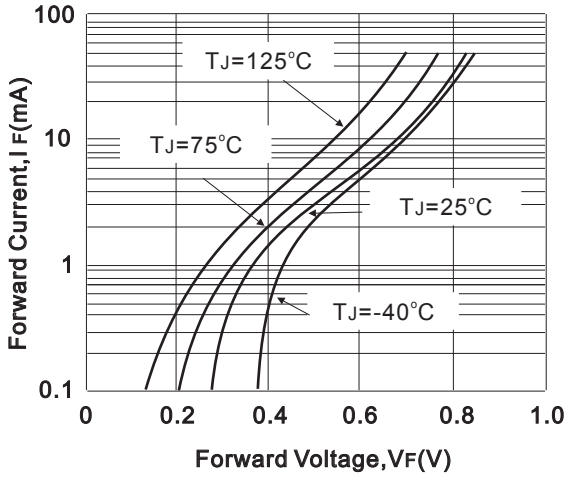


Fig.2 Typical Forward Characteristics

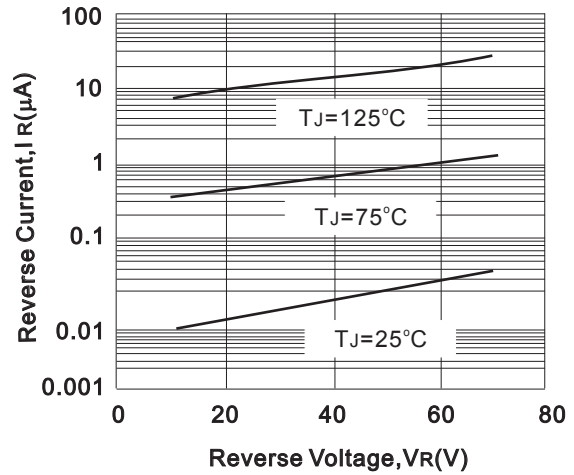


Fig.3 Typical Reverse Characteristics

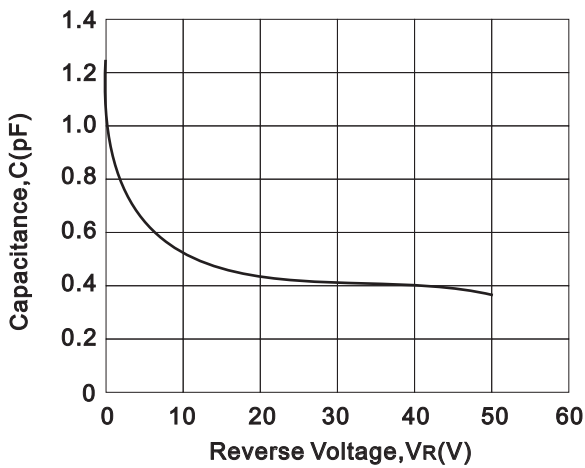


Fig.4 Typical Reverse Characteristics

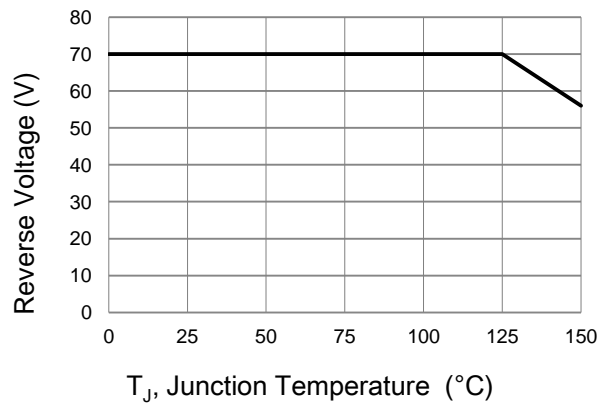
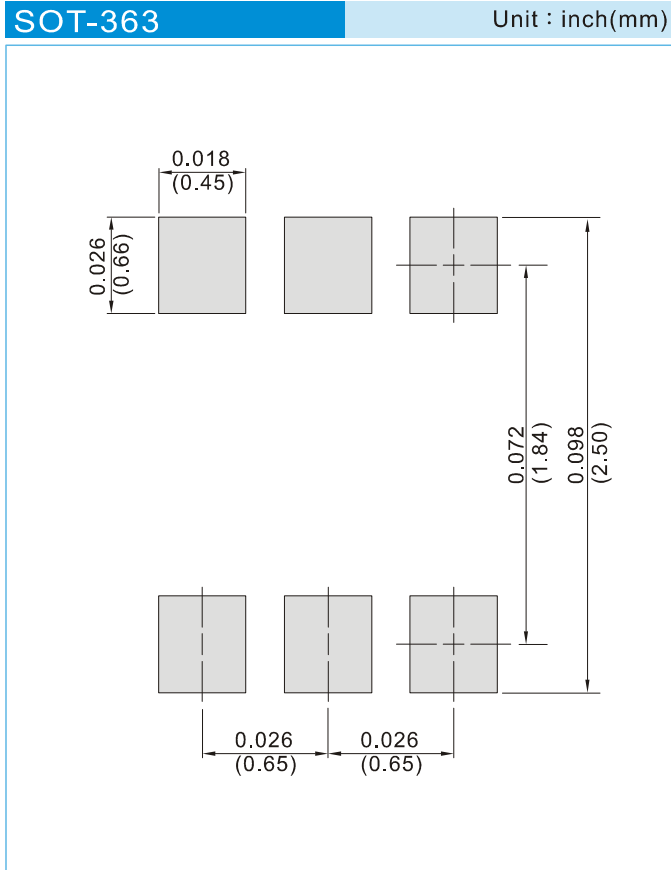


Fig.5 Operating Temperature Derating Curve

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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 10K per 13" plastic Reel
T/R - 3K per 7" plastic Reel

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