



# 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

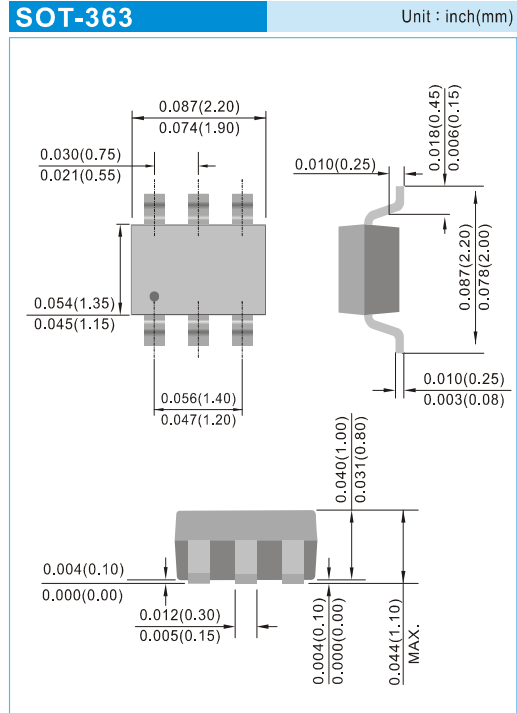
- Maximum forward voltage @ 1mA of 0.41V
- Maximum leakage current @ 50V of 100nA
- Reverse voltage rating of 70V
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### 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

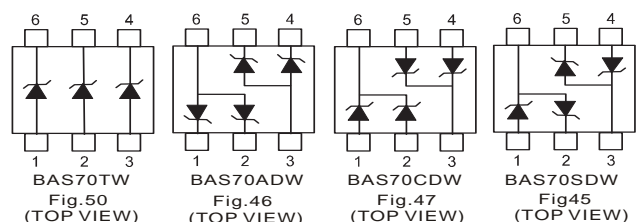
- Rail-to rail ESD protection
- Overshoot and undershoot switching control
- Mobile phones and accessories
- Video game consoles connector ports



### 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.



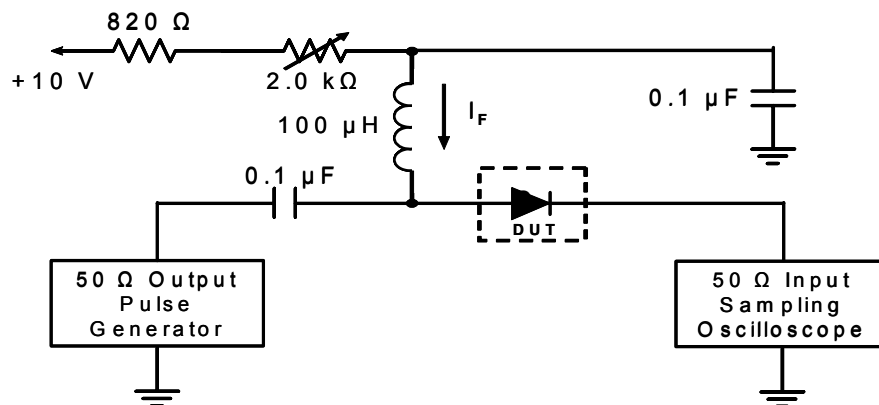


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## ELECTRICAL CHARACTERISTICS (Per Diode) $T_J=25^\circ\text{C}$ Unless otherwise noted

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 $\mu\text{s}$ ) test pulse to minimize self heating



- Notes: 1. A 2.0k $\Omega$  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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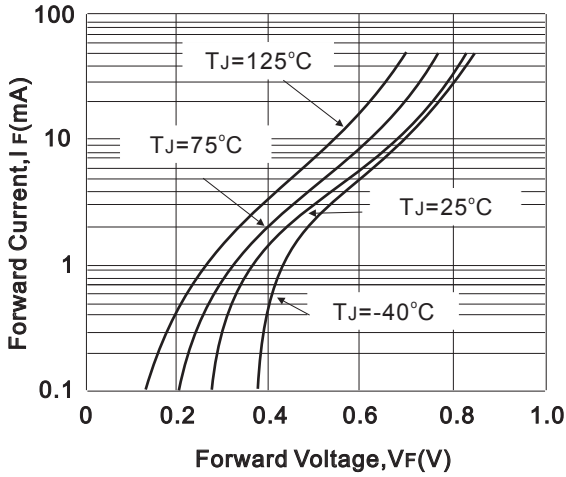


Fig.2 Typical Forward Characteristics

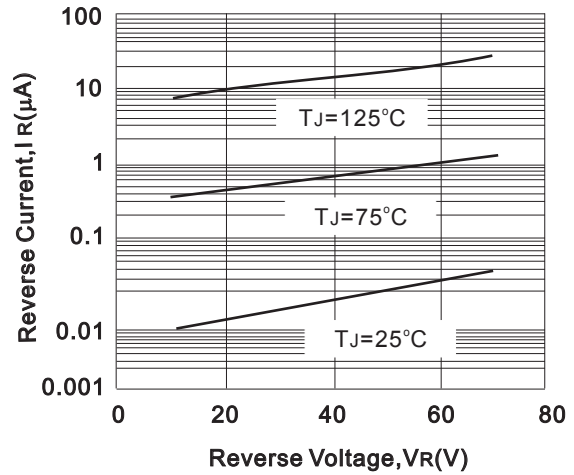


Fig.3 Typical Reverse Characteristics

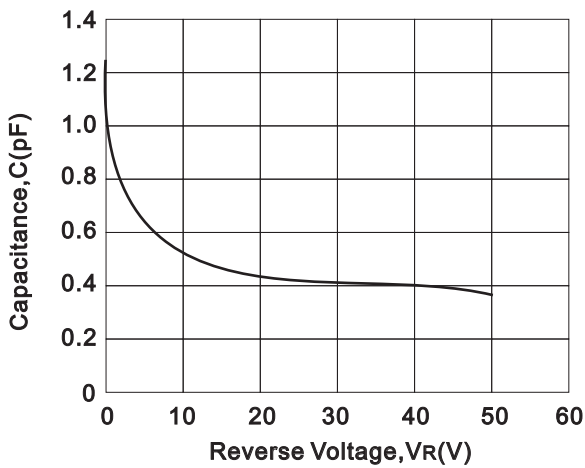


Fig.4 Typical Reverse Characteristics

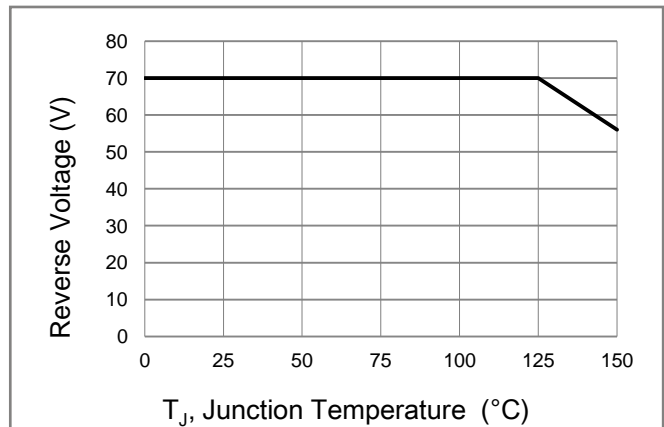
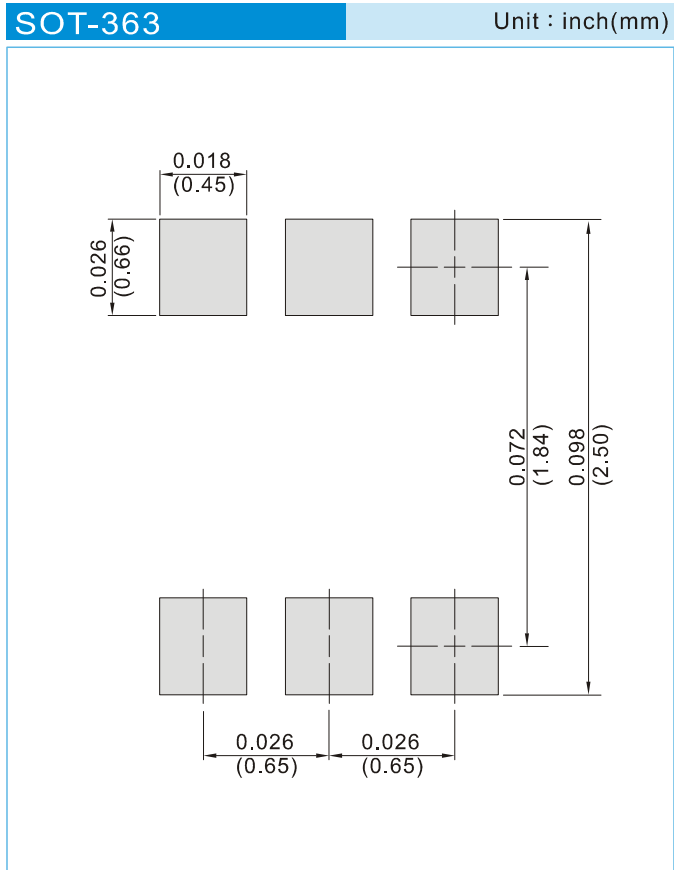


Fig.5 Operating Temperature Derating Curve



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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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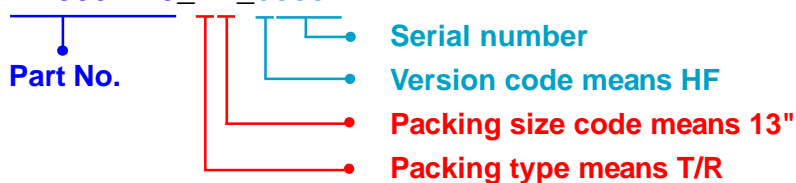
## Part No\_packing code\_Version

BAS70TW\_R1\_00001

BAS70TW\_R2\_00001

For example :

**RB500V-40** **R2** **00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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