



## SURFACE MOUNT SCHOTTKY DIODE ARRAYS

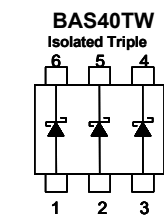
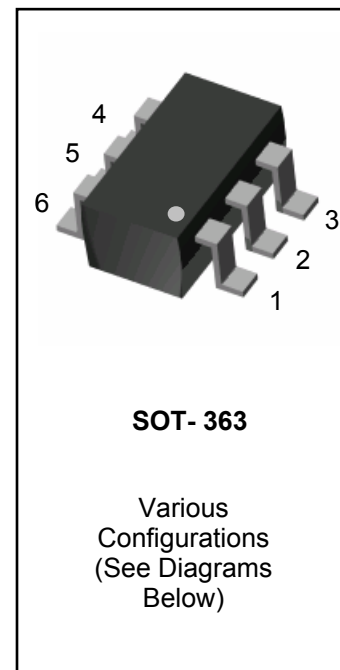
These devices feature electrically-isolated Schottky diodes connected in various configurations housed in a very small SOT-363 (SC70-6L)

### FEATURES

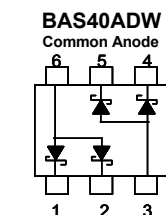
- Maximum forward voltage @ 10mA of 0.5V
- Maximum leakage current @ 25V of 1.0uA
- Reverse voltage rating of 40V
- Also available in lead-free plating (100% matte tin finish)

### APPLICATIONS

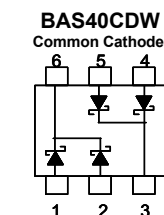
- Rail-to-rail ESD protection
- Overshoot and undershoot switching control
- Mobile phones and accessories
- Video game consoles connector ports



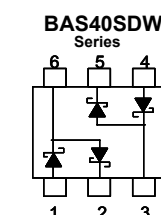
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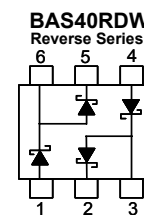
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Marking Code: S43



Marking Code: S44



Marking Code: S45

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

Rating	Symbol	Value	Units
Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Continuous Reverse Voltage	$V_R$	40	V
Continuous Forward Current	$I_F$	200	mA
Non-repetitive Peak Forward Current, $t = 1\text{sec}$ , Square Wave	$I_{FSM}$	600	mA
Total Power Dissipation (Note 1)	$P_{tot}$	225	mW
Operating Junction Temperature Range	$T_J$	-55 to 125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-65 to 125	$^\circ\text{C}$

Note 1. FR-5 Board 1.0 x 0.75 x 0.062 in.

### THERMAL CHARACTERISTICS

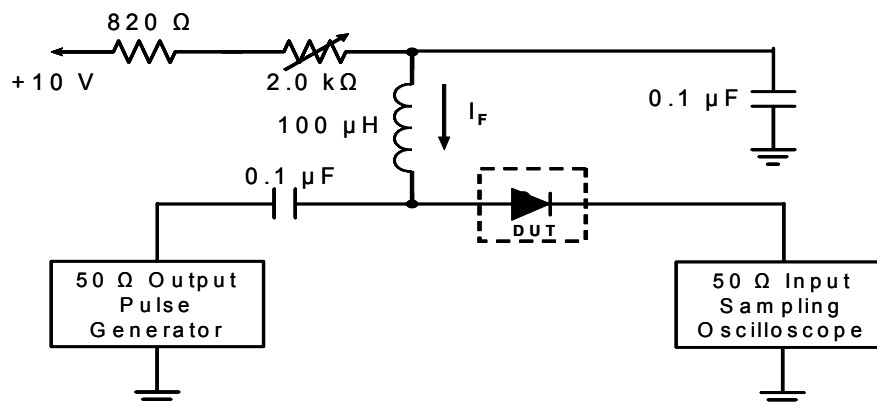
Characteristic	Symbol	Value	Units
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$



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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Breakdown Voltage (Note 1)	$V_{BR}$	$I_{BR} = 10\mu\text{A}$	40	-	-	V
Forward Voltage (Note 1)	$V_F$	$I_F = 1.0\text{mA}$	-	-	380	mV
		$I_F = 10\text{mA}$	-	-	500	
		$I_F = 40\text{mA}$	-	-	1000	
Reverse Leakage Current (Note 1)	$I_R$	$V_R = 25\text{V}$	-	-	1.0	$\mu\text{A}$
Total Capacitance	$C_T$	0Vdc Bias, $f = 1\text{ MHz}$	-	-	5.0	pF
Reverse Recovery Time (See Figure 1)	$t_{rr}$	$I_F = 10\text{mA}$ , $I_R = 10\text{mA}$ $R_L = 100\text{ Ohms}$ ; measured at $I_{R\text{rec}} = 1\text{mA}$	-	-	5.0	ns

Note 1. Short duration pulse to minimize self-heating effect

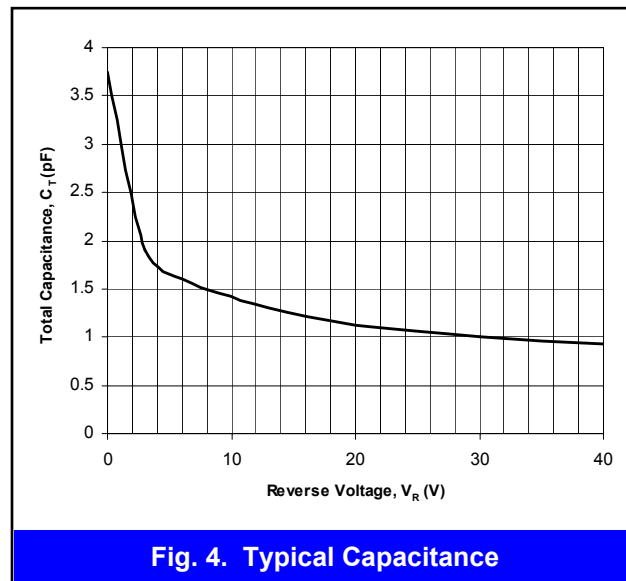
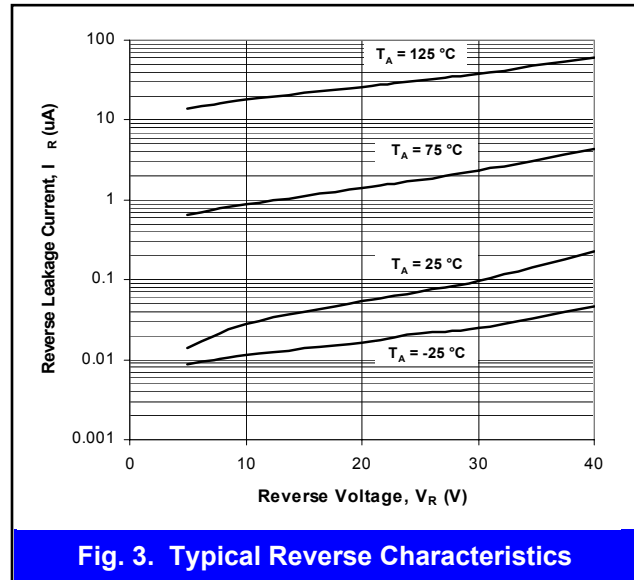
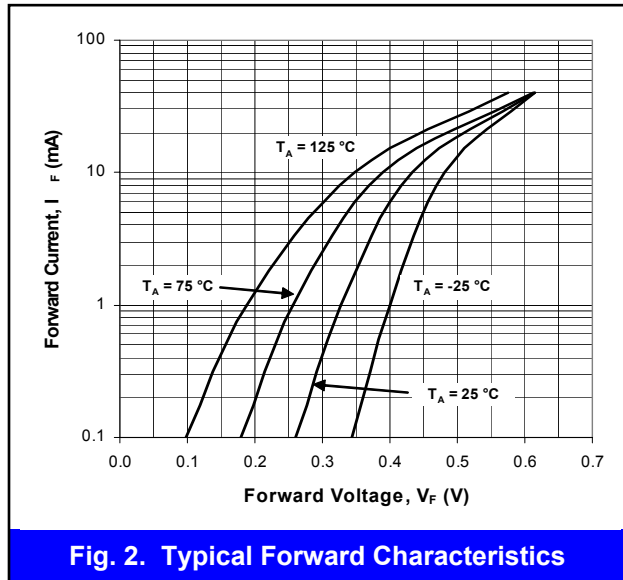


- Notes: 1. A 2.0k $\Omega$  variable resistor adjusted for a forward current ( $I_F$ ) to 10mA  
2. Input pulse is adjusted to  $I_{R(\text{peak})}$  is equal to 10mA

**Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT**

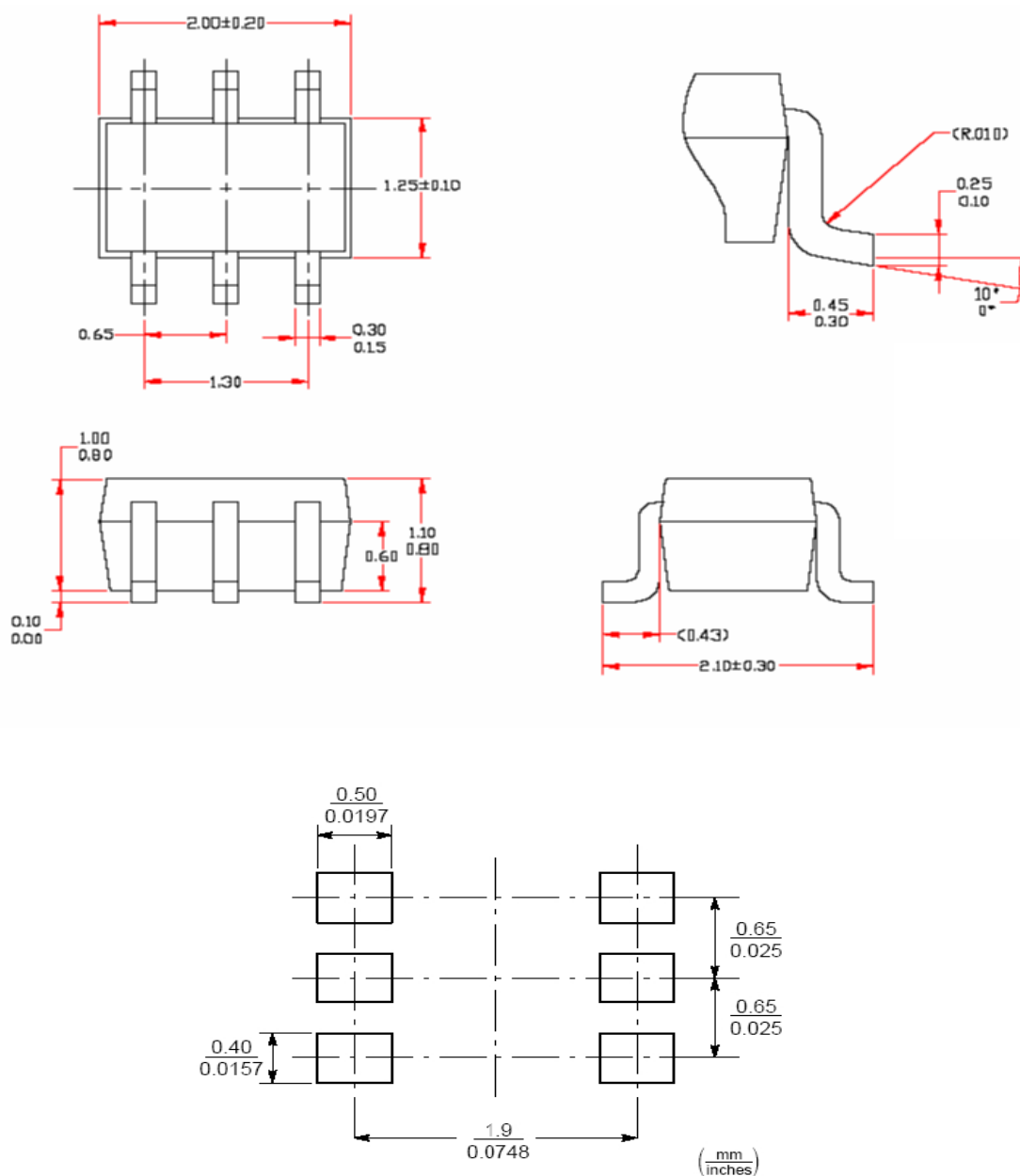


## TYPICAL CHARACTERISTIC CURVES (Per Diode)





## PACKAGE LAYOUT AND SUGGESTED PAD DIMENSIONS



## ORDERING INFORMATION

BAS40xxx T/R7 - 7" reel, 3K units per reel

BAS40xxx T/R13 - 13" reel, 10K units per reel

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