



SURFACE MOUNT SCHOTTKY DIODE ARRAYS

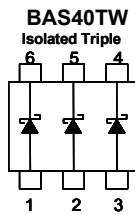
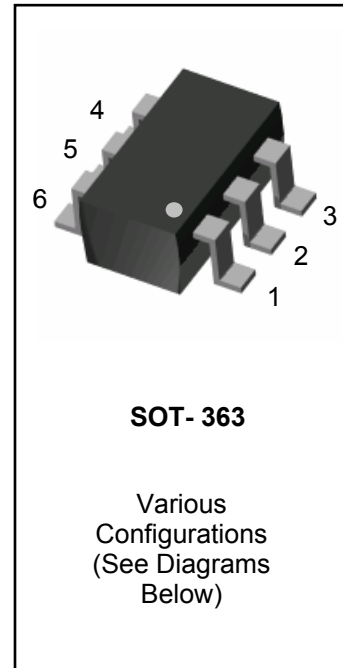
These devices feature electrically-isolated Schottky diodes connected in various configurations housed in a very small SOT-363 (SC70-6L)

FEATURES

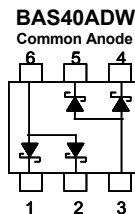
- Maximum forward voltage @ 10mA of 0.5V
- Maximum leakage current @ 25V of 1.0uA
- Reverse voltage rating of 40V
- Also available in lead-free plating (100% matte tin finish)

APPLICATIONS

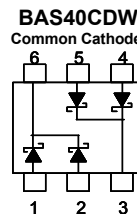
- Rail-to-rail ESD protection
- Overshoot and undershoot switching control
- Mobile phones and accessories
- Video game consoles connector ports



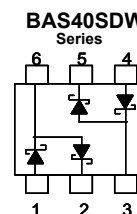
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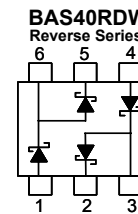
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Marking Code: S43



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

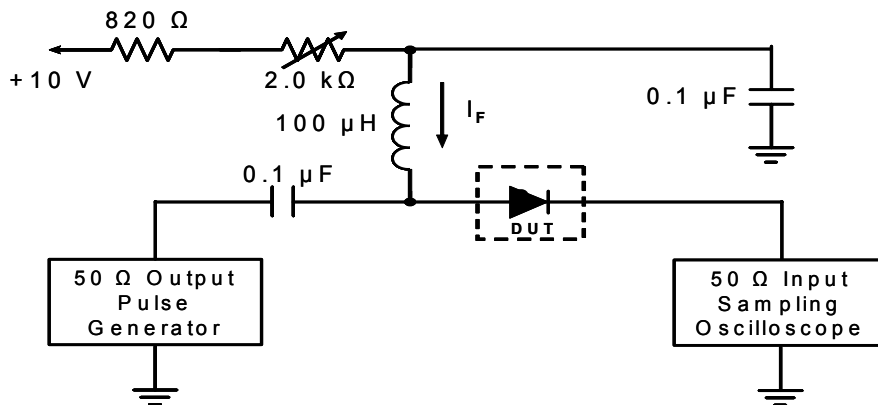
Characteristic	Symbol	Value	Units
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$



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	μA
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

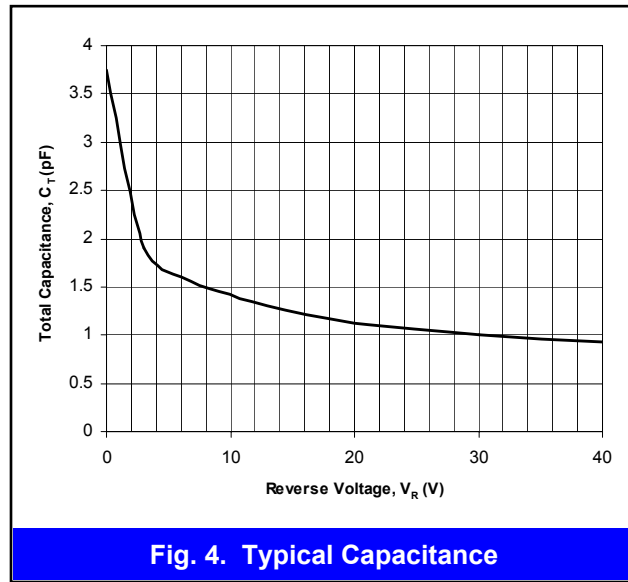
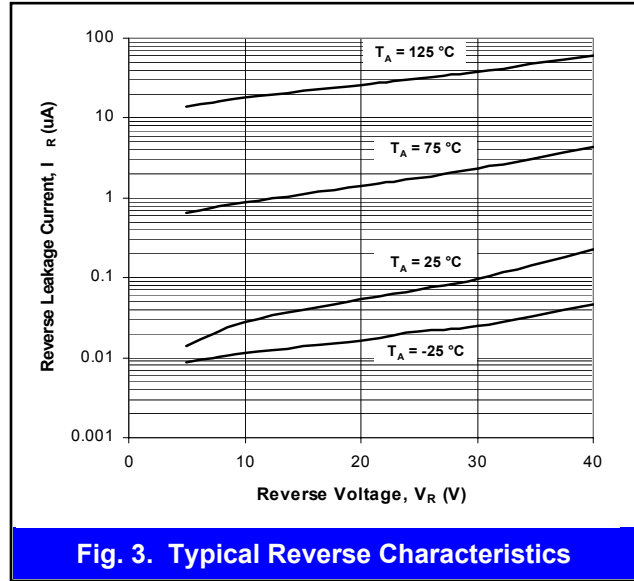
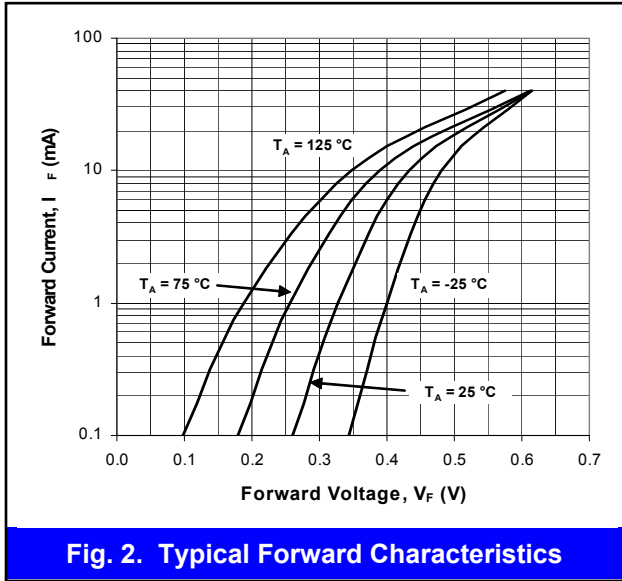


- Notes: 1. A 2.0k Ω variable resistor adjusted for a forward current (I_F) to 10mA
2. Input pulse is adjusted to $I_{R(\text{peak})}$ is equal to 10mA

Figure 1. REVERSE RECOVERY TIME EQUIVALENT TEST CIRCUIT

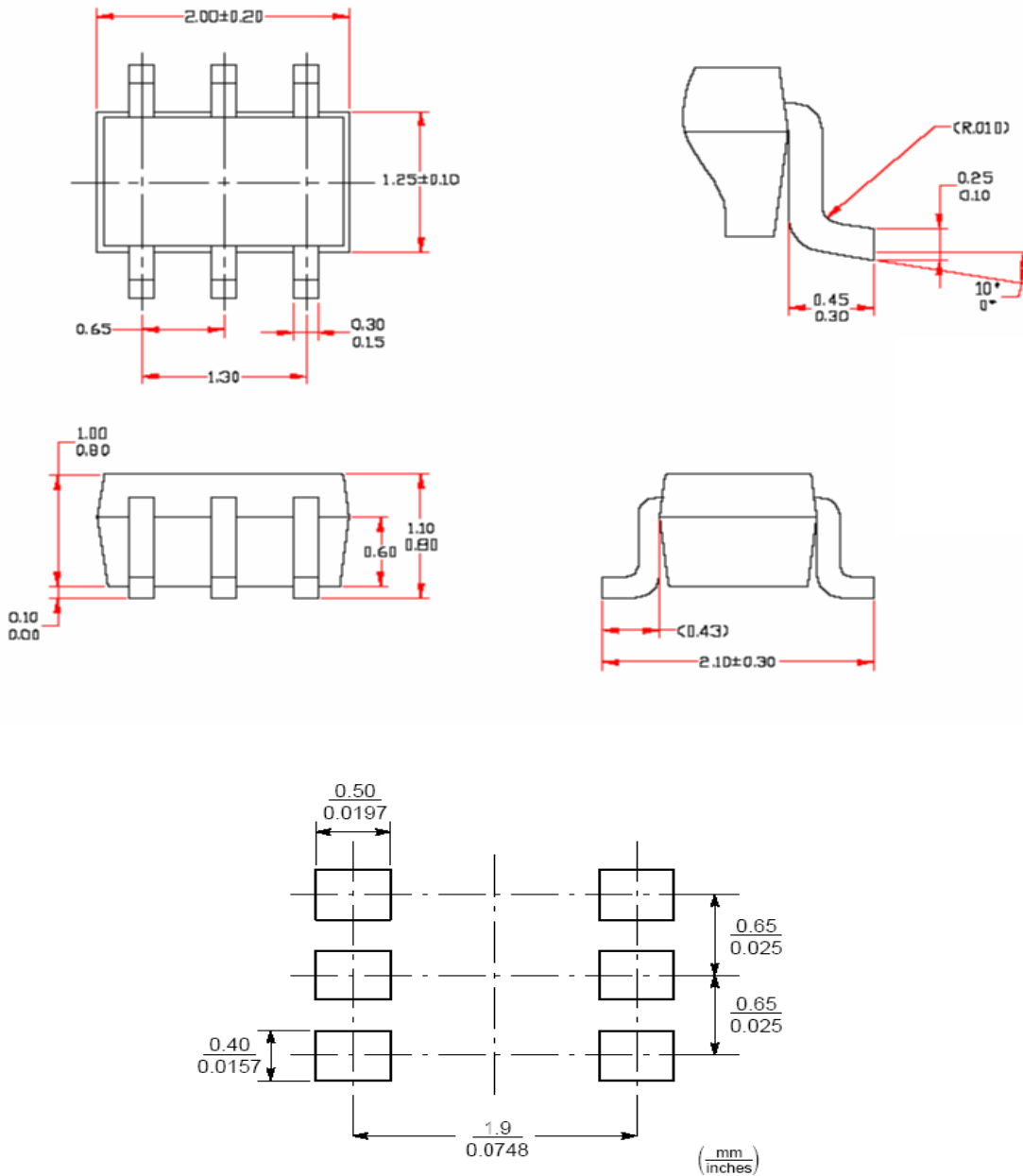


TYPICAL CHARACTERISTIC CURVES (Per Diode)





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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