

SURFACE MOUNT SCHOTTKY DIODE ARRAYS

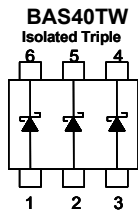
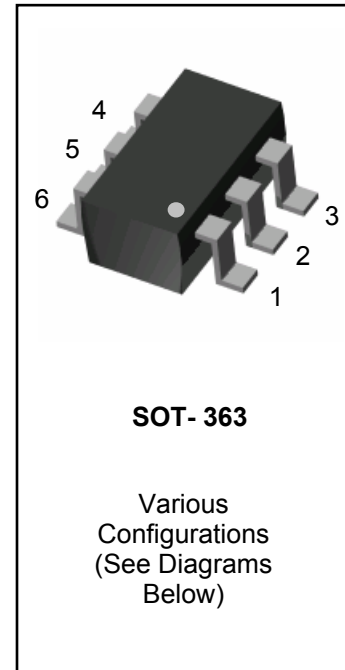
These devices feature electrically-isolated Schottky diodes connected in various configurations housed in a very small SOT-363 (SC70-6L)

FEATURES

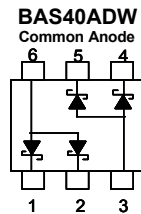
- Maximum forward voltage @ 10mA of 0.5V
- Maximum leakage current @ 25V of 1.0uA
- Reverse voltage rating of 40V
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

APPLICATIONS

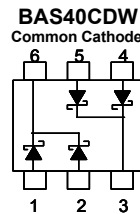
- Rail-to-rail ESD protection
- Overshoot and undershoot switching control
- Mobile phones and accessories
- Video game consoles connector ports



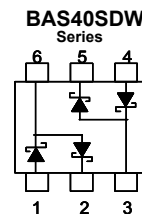
Marking Code: S40



Marking Code: S42



Marking Code: S43



Marking Code: S44

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.

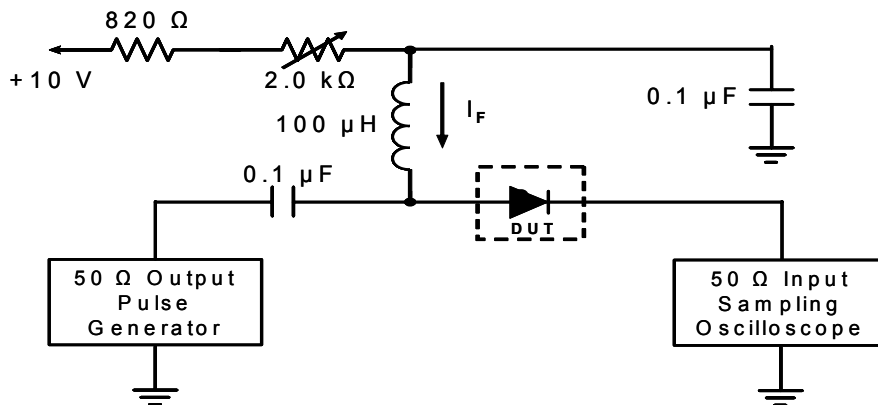
THERMAL CHARACTERISTICS

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 2.0kΩ 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

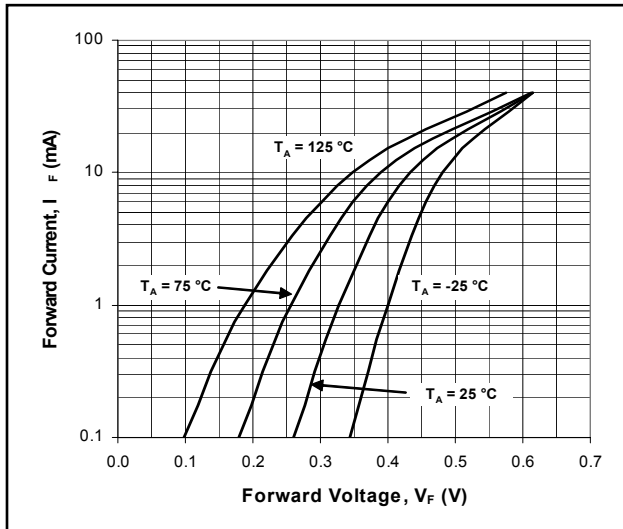


Fig. 2. Typical Forward Characteristics

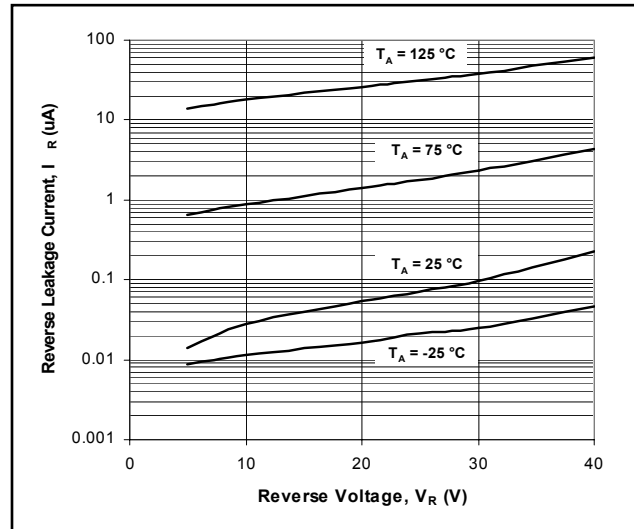


Fig. 3. Typical Reverse Characteristics

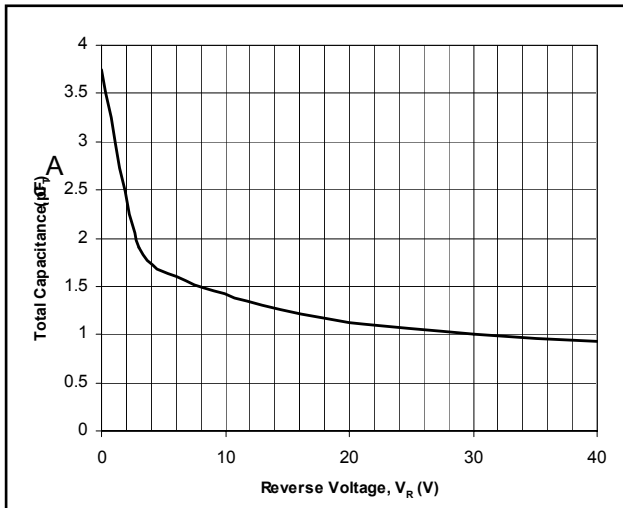


Fig. 4. Typical Capacitance

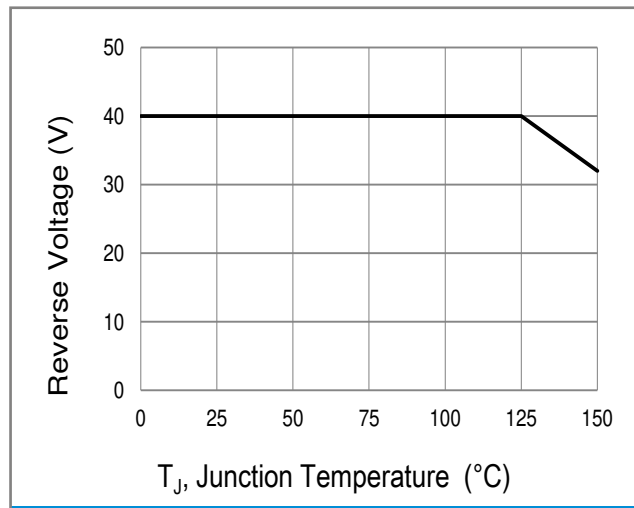


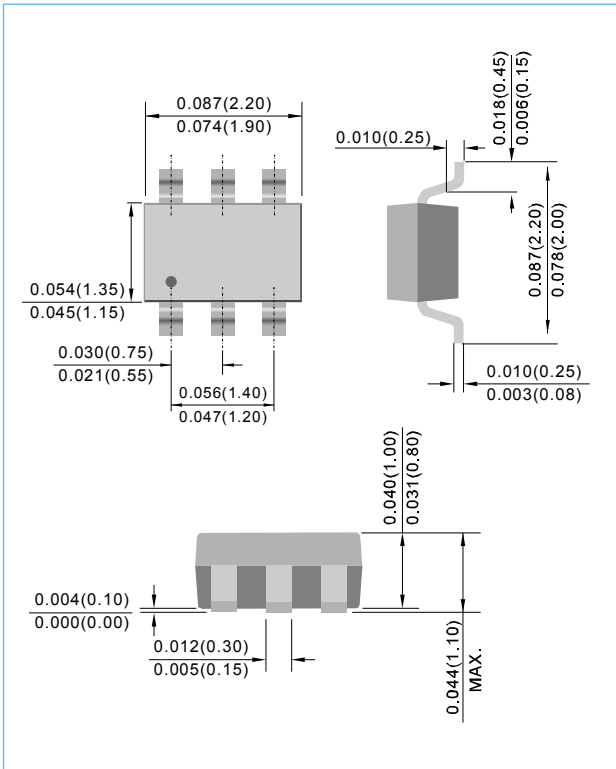
Fig.5 Operating Temperature Derating Curve



PACKAGE LAYOUT AND SUGGESTED PAD DIMENSIONS

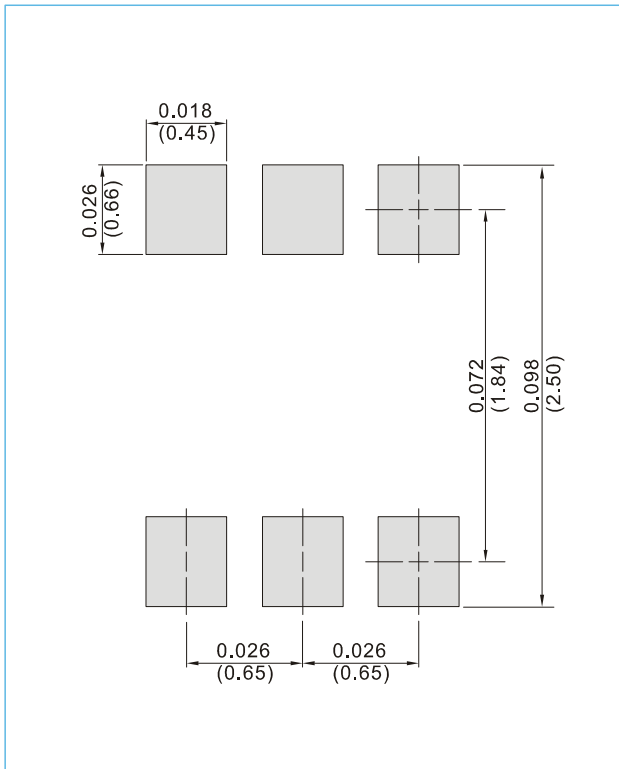
SOT-363

Unit : inch(mm)



SOT-363

Unit : inch(mm)



ORDERING INFORMATION

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

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



BAS40TW/ADW/CDW/SDW

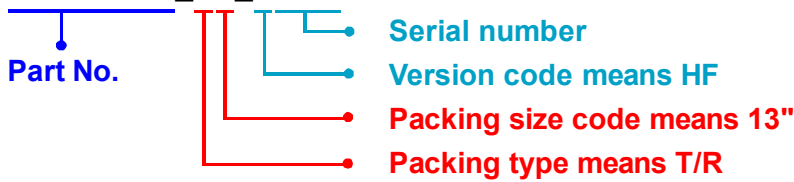
Part No_packing code_Version

BAS40TW_R1_00001

BAS40TW_R2_00001

For example :

RB500V-40_R2_00001



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



BAS40TW/ADW/CDW/SDW

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