



## SURFACE MOUNT TRIPLE SCHOTTKY DIODES

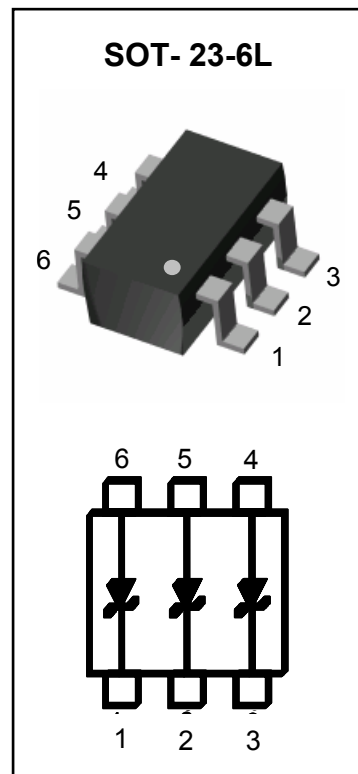
This device features three electrically-isolated Schottky diodes housed in a very small SOT-23-6L package. It is ideal for applications where board space is at a premium.

### FEATURES

- Low reverse leakage current (guaranteed <math><0.98\mu\text{A}</math> @ 25V)
- Reverse voltage rating of 40V
- Lead-free plating (100% matte tin finish)

### APPLICATIONS

- Mobile phones and accessories
- Video game consoles connector ports
- PDA's



Device Marking: 731

### 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
Average Rectified Forward Current	$I_O$	30	mA
Non-repetitive Peak Forward Current (60Hz, 1 cycle)	$I_{FSM}$	200	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 150	$^\circ\text{C}$

Note 1. FR-4 Board 70 x 60 x 1mm.

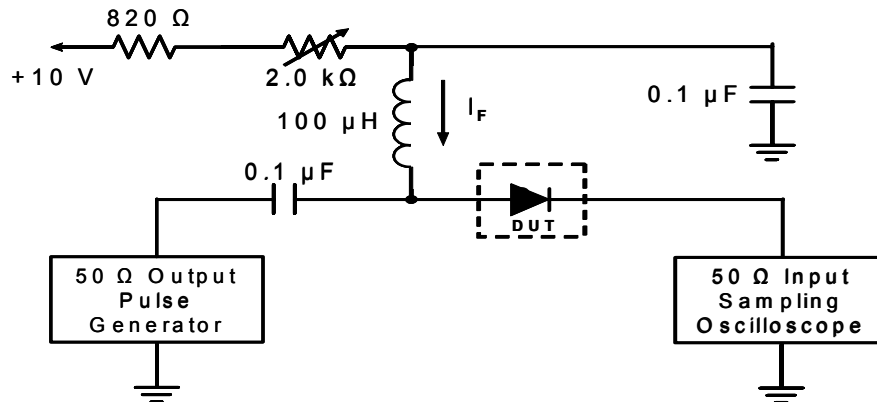
### THERMAL CHARACTERISTICS

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)	$V_F$	$I_F = 1\text{mA}$	-	-	370	mV
Reverse Leakage Current (Note 1)	$I_R$	$V_R = 25\text{V}$	-	-	0.98	$\mu\text{A}$
Total Capacitance	$C_T$	1Vdc Bias, $f = 1\text{MHz}$	-	2.0	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

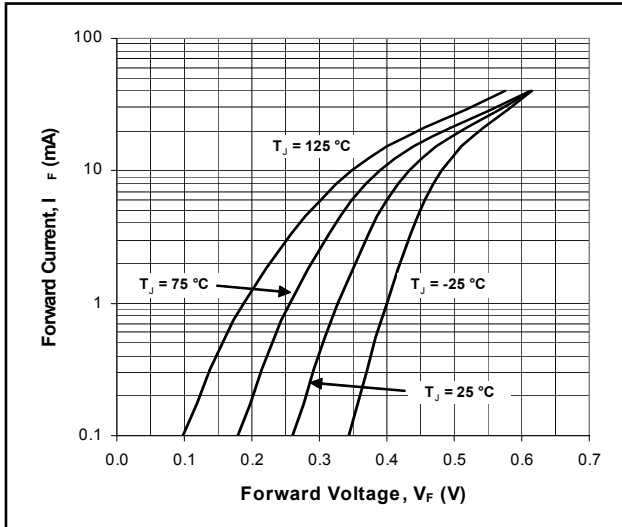
Note 1. Short duration pulse to minimize self-heating effect



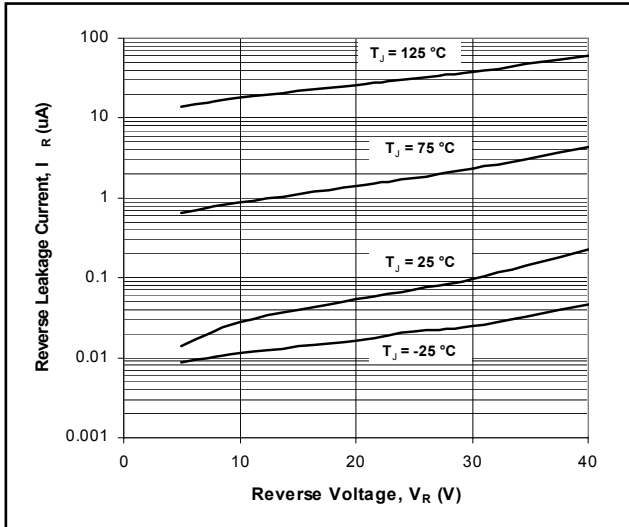
- Notes: 1. A 2.0k $\Omega$  variable resistor adjusted for a forward current ( $I_F$ ) to 10mA  
 2. Input pulse is adjusted to  $I_{R(\text{peak})}$  is equal to 10mA

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

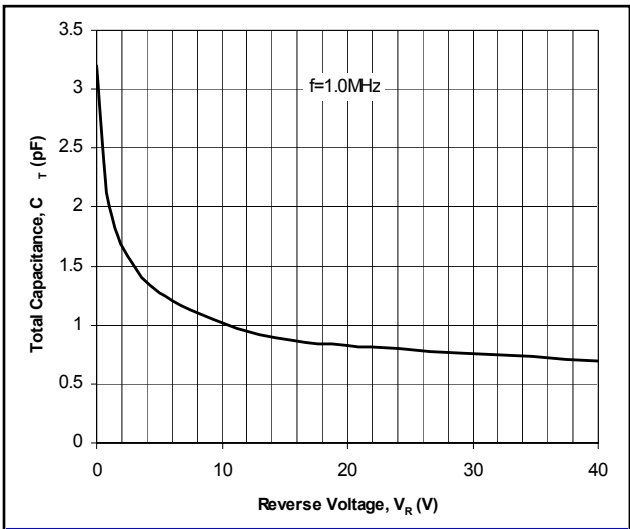
**TYPICAL CHARACTERISTIC CURVES (Per Diode)**



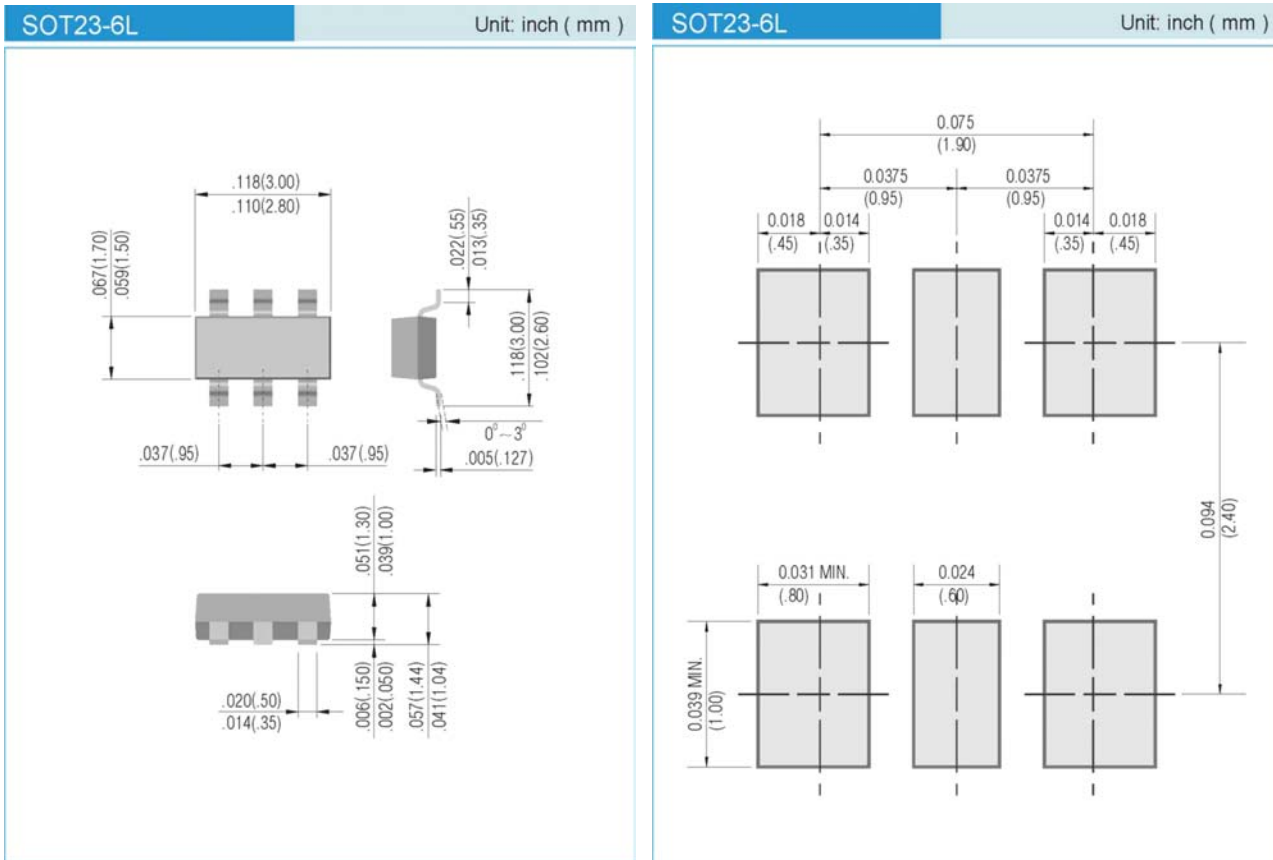
**Fig. 2. Typical Forward Characteristics**



**Fig. 3. Typical Reverse Characteristics**



**Fig. 4. Typical Capacitance**

**PACKAGE LAYOUT AND SUGGESTED PAD DIMENSIONS**

**ORDERING INFORMATION**

RB731U T/R7 - 7" reel, 3K units per reel

RB731U T/R13 - 13" reel, 10K units per reel

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