



## SURFACE MOUNT TRIPLE SCHOTTKY DIODES

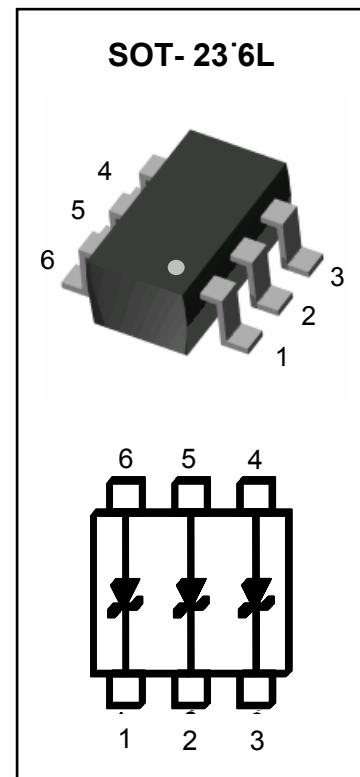
This device features three electrically-isolated Schottky diodes housed in a very small SOT-23 6L package. It is ideal for applications where board space is at a premium.

### FEATURES

- Low reverse leakage current (guaranteed <0.98uA @ 25V)
- Reverse voltage rating of 40V
- Lead-free plating (100% matte tin finish)
- ~~Low forward voltage drop (typically 0.2V at 30mA)~~
- ~~Low reverse leakage current (guaranteed <0.98uA @ 25V)~~

### 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.

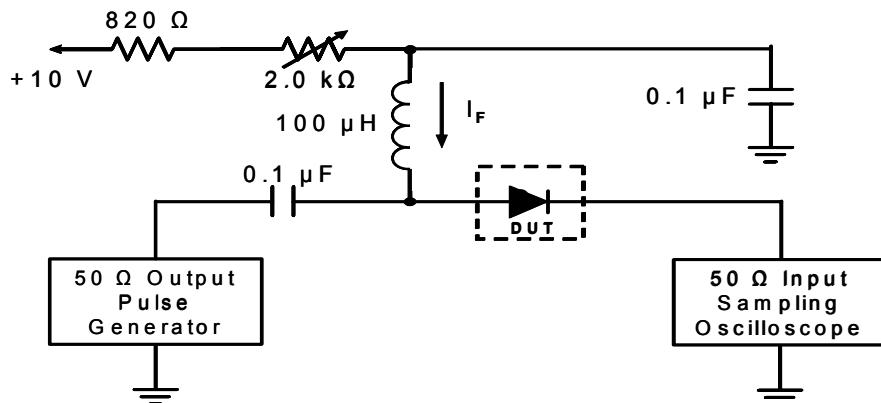
### THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Units
Thermal Resistance, Junction to Ambient	$R_{\text{thetaJA}}$	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 $I_{R(\text{peak})} = 1\text{mA}$	-	-	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)

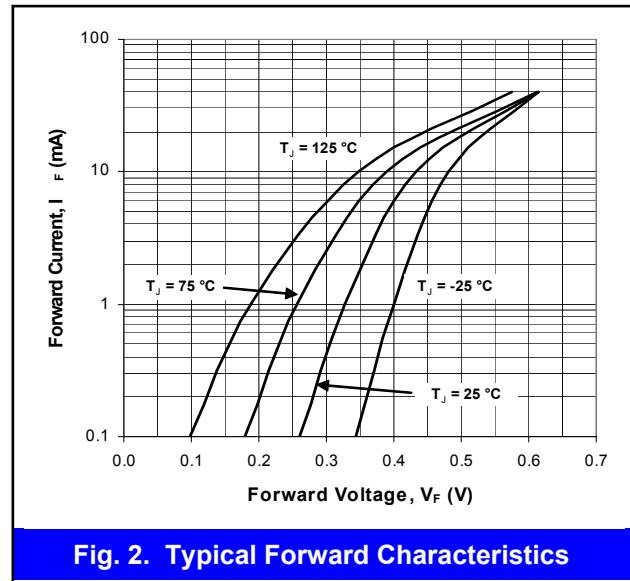


Fig. 2. Typical Forward Characteristics

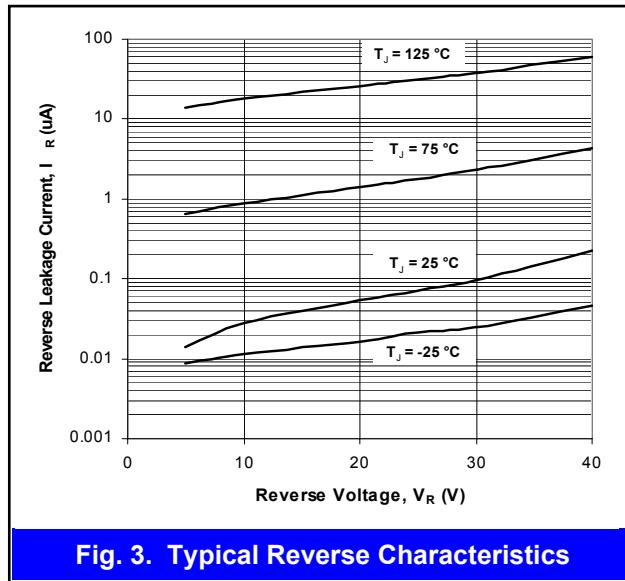


Fig. 3. Typical Reverse Characteristics

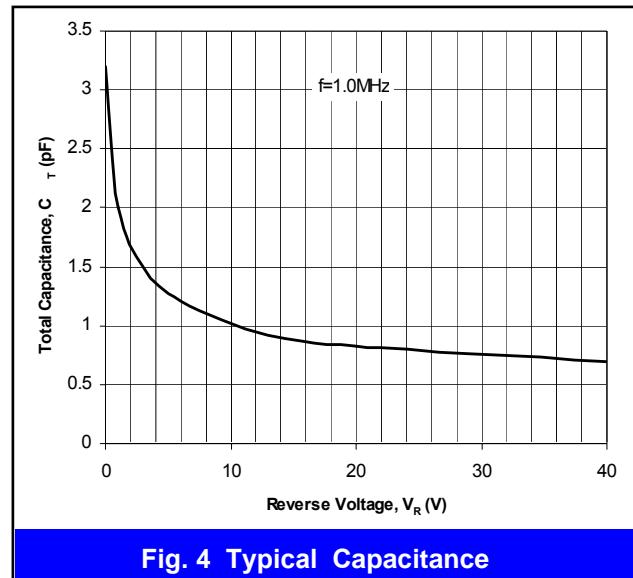


Fig. 4 Typical Capacitance

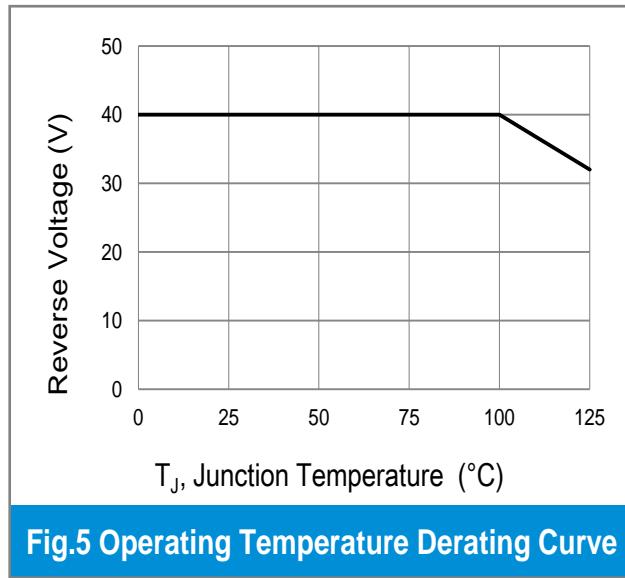
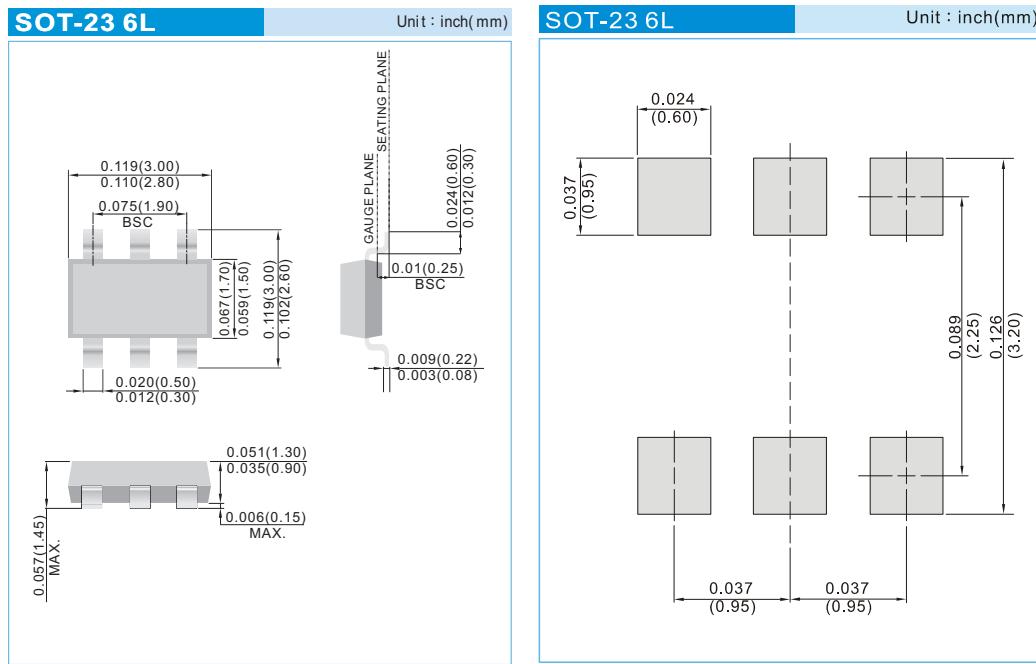


Fig. 5 Operating Temperature Derating Curve

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## PACKAGE LAYOUT AND SUGGESTED PAD DIMENSIONS

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## ORDERING INFORMATION

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

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



**F6 +' %**

**Part No\_packing code\_Version**

RB731U\_R1\_00001

RB731U\_R2\_00001

**For example :**

**RB500V-40\_R2\_00001**

Part No.      Serial number  
 Version code means HF  
 Packing size code means 13"  
 Packing type means T/R

Packing Code XX				Version Code XXXXX		
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)	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			

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