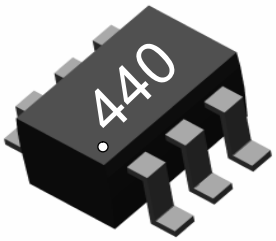
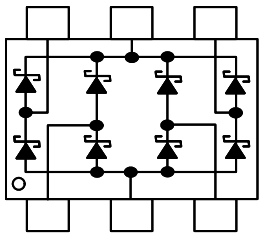
PJ4L40

QUAD SCHOTTKY DATA LINE BUS TERMINATOR

This highly integrated device is designed as rail to rail overvoltage protection clamp for up to four high frequency data lines. It is ideal in portable applications where small form factors are required.

SOT-363





FEATURES

- **Low Forward Voltage Drop for Improved Voltage Protection**
- **Very Fast Switching**
- **Ultra Small SOT-363 Package Utilizing Minimal Board Space**
- **Lead free in compliance with EU RoHS 2011/65/EU directive**
- **Green molding compound as per IEC61249 Std. . (Halogen Free)**

APPLICATIONS

- **PDAs**
- **Portable Computers**

MAXIMUM RATINGS T_A = 25°C, unless otherwise noted

Rating	Symbol	Value	Units
Marking Code		440	
Reverse Voltage	V_R	30	V
Continuous Forward Current	I_F	200	mA
Non-Repetitive Surge Current, t=1s	I_{FSM}	600	mA
Power Dissipation (Note 1)	P_D	200	mW
Operating Junction Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{STG}	-65 to +125	°C

Note 1: Device mounted on FR-4 board 1.0 inch x 0.85 inch x 0.062 inch, with minimum pad layout

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Units
Thermal Resistance, Junction to Ambient	R_{thja}	625	°C/W

ELECTRICAL CHARACTERISTICS (Each Diode)

T_J = 25°C, unless otherwise noted

Characteristic		Symbol	Min	Typ	Max	Units
Reverse Breakdown Voltage (Note 2)	IR = 100uA	V_{BR}	30	-	-	V
Forward Voltage (Note 2)	IF = 0.1mA	V_F	-	0.225	0.280	V
	IF = 1.0mA		-	0.280	0.350	
	IF = 10mA		-	0.350	0.450	
	IF = 30mA		-	0.390	0.550	
	IF = 100mA		-	0.460	1.0	
Reverse Leakage Current (Note 2)	VR = 25V	I_R	-	-	2.0	uA
Total Capacitance VR = 0V, f = 1.0 MHz	Data Line to Ground	C_T	-	19	-	pF
	Between Data Lines		-	12	-	
Reverse Recovery Time	IF = IR = 10mA Irr = 1.0mA, RL = 100 Ohm	t_{rr}	-	-	5.0	ns

Note 2: Short duration test pulse to minimize self heating

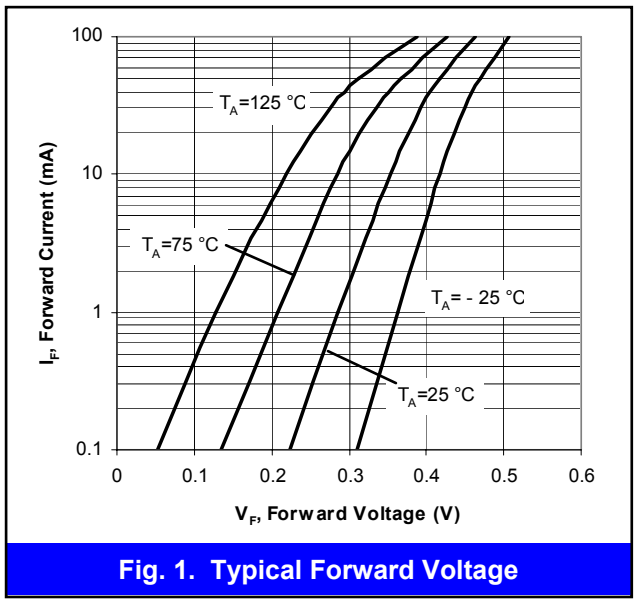


Fig. 1. Typical Forward Voltage

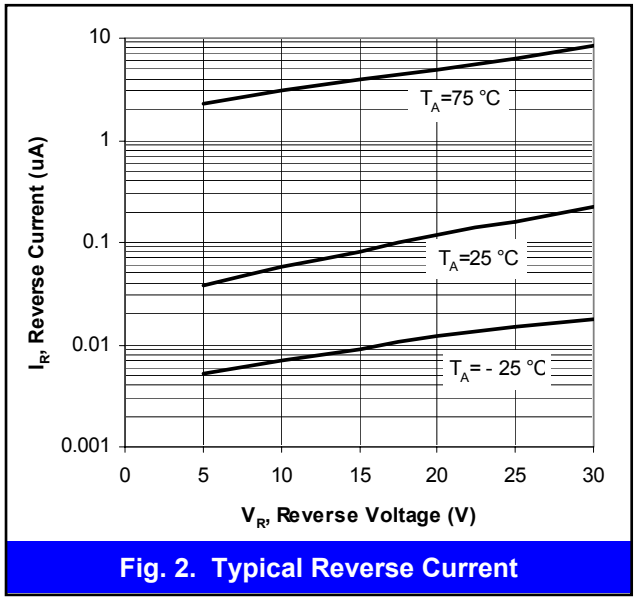


Fig. 2. Typical Reverse Current

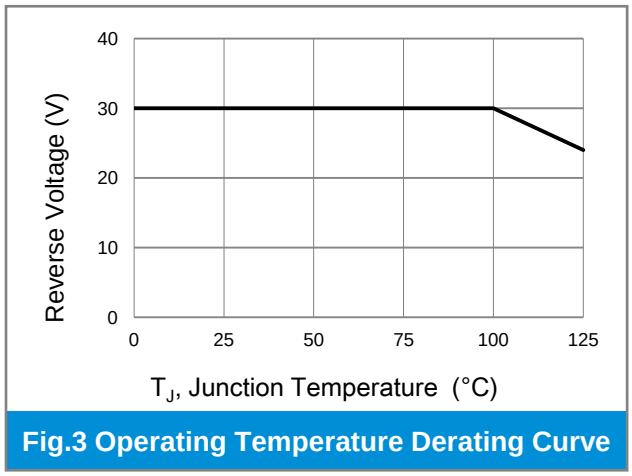
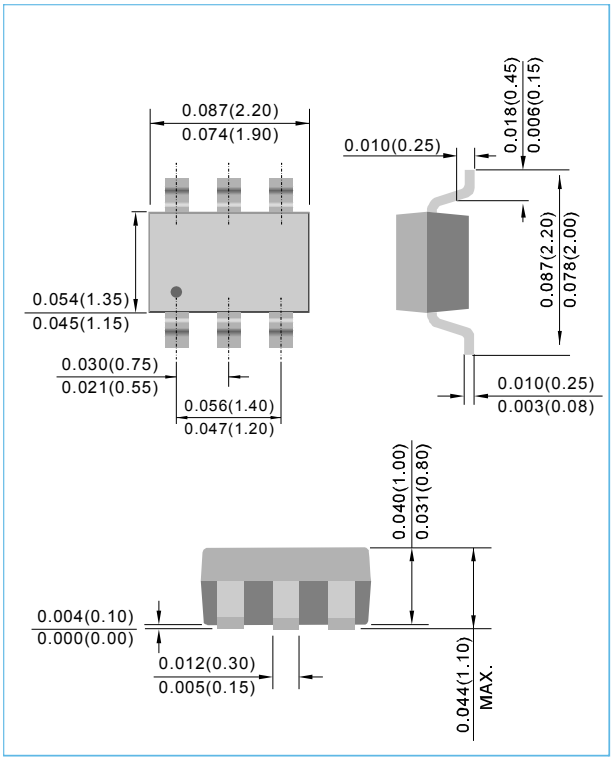


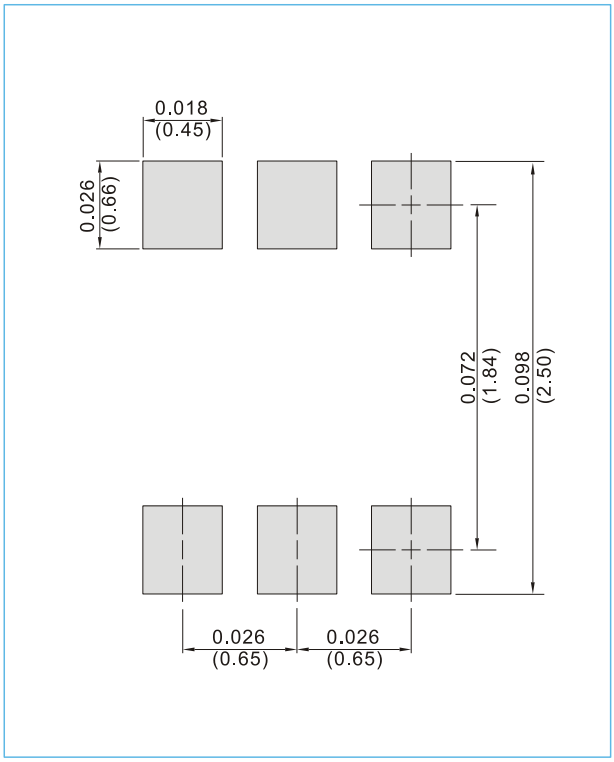
Fig.3 Operating Temperature Derating Curve

PACKAGE LAYOUT AND SUGGESTED PAD DIMENSIONS

SOT-363 Unit : inch(mm)



SOT-363 Unit : inch(mm)



ORDERING INFORMATION

PJ4L40 T/R7 - 7 inch reel, 3K units per reel

PJ4L40 T/R13 - 13 inch reel, 10K units per reel

Note :

1.To protect data lines and the power line, connect pins 2 and 3 directly to the positive supply rail (V_{CC}).In this configuration the data lines are referenced to the supply voltage. An external TVS diode may be added between the supply rail and ground in order to prevent over-voltage on the supply rail.

2.In applications where no positive supply referenceis available, or complete supply isolation is desired, an external TVS diode may be used as the reference.The steering diodes will begin to conductwhen the voltage on the protected line exceeds theworking voltage of the TVS (plus one diode drop).

PJ4L40

Part No_packing code_Version

PJ4L40_R1_00001
PJ4L40_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	1st Code	Packing size code	2nd Code	HF or RoHS	1st Code	2nd~5th 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			

PJ4L40

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