



**CHENMKO ENTERPRISE CO.,LTD**

**SURFACE MOUNT  
SWITCHING DIODE**

VOLTAGE 75 Volts CURRENT 0.15 Ampere

**BD4148APT**

*Lead free devices*

**APPLICATION**

\* Ultra high speed switching

**FEATURE**

- \* SmaBD surface mounting type. (SOT-23)
- \* High speed. (T<sub>RR</sub>=4.0nSec Typ.)
- \* Suitable for high packing density.
- \* Maximum total power dissipation is 300mW.

**CONSTRUCTION**

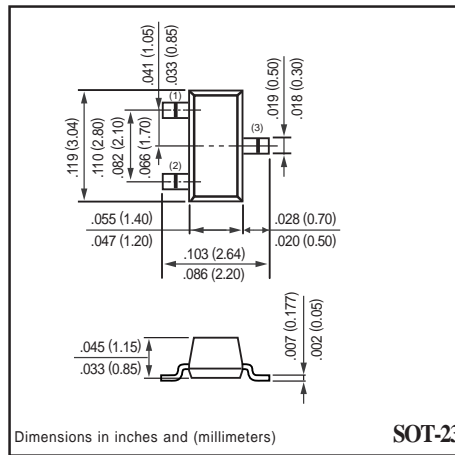
\* Silicon epitaxial planar

**MARKING**

\* 5I-

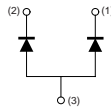


**SOT-23**



**SOT-23**

**CIRCUIT**



**MAXIMUM RATINGS** ( At TA = 25°C unless otherwise noted )

RATINGS	SYMBOL	BD4148APT	UNITS
Maximum Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	Volts
Maximum Repetitive Peak Reverse Voltage Maximum Working Peak Reverse Voltage Maximum DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>DC</sub>	75	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	53	Volts
Maximum Average Forward Rectified Current	I <sub>O</sub>	0.15	Amps
Peak Forward Surge Current at 1uSec.	@1Sec	1.0	Amps
	@1.0uSec	2.0	
Typical Junction Capacitance between Terminal (Note 1)	C <sub>J</sub>	4.0	pF
Maximum Reverse Recovery Time (Note 2)	t <sub>rr</sub>	4.0	nSec
Maximum Thermal Resistance	R <sub>θJA</sub>	350	°C/W
Maximum Operating and Storage Temperature Range	T <sub>J,TSTG</sub>	-65 to +150	°C

**ELECTRICAL CHARACTERISTICS** ( At TA = 25°C unless otherwise noted )

CHARACTERISTICS	SYMBOL	BD4148APT	UNITS
Maximum Instantaneous Forward Voltage at I <sub>F</sub> = 10 mA	V <sub>F</sub>	1.0	Volts
Maximum Average Reverse Current	V <sub>R</sub> = 20V @T <sub>J</sub> =25°C	25	nAmps
	V <sub>R</sub> = 75V @T <sub>J</sub> =25°C	50	uAmps

- NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 0 volts.  
 2. Measured at applied forward current of 10 mA, reverse current of 1.0 mA, Reverse voltage of 6.0 volts and R<sub>L</sub>= 100 ohms.  
 3. ESD sensitive product handling required.

2002-5

## RATING CHARACTERISTIC CURVES ( BD4148APT )

FIG. 1 - FORWARD CHARACTERISTICS

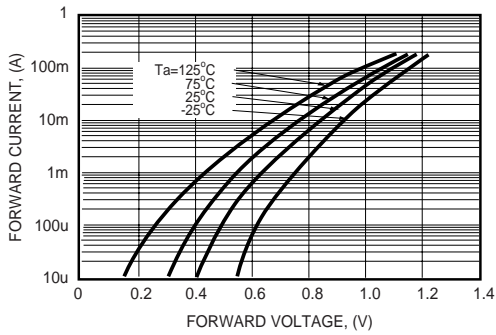


FIG. 2 - REVERSE CHARACTERISTICS

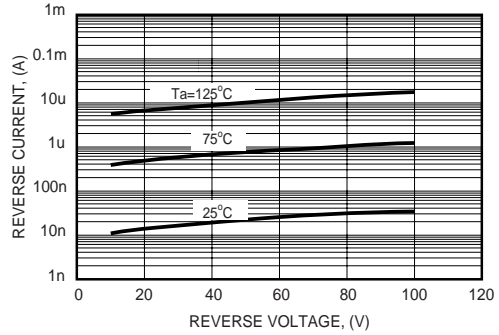


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

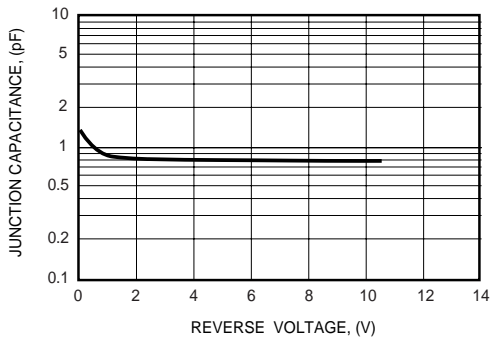


FIG. 4 - REVERSE RECOVERY TIME CHARACTERISTICS

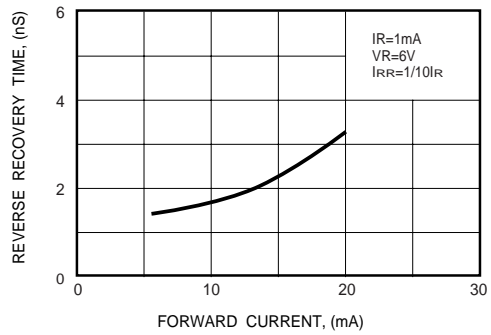


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

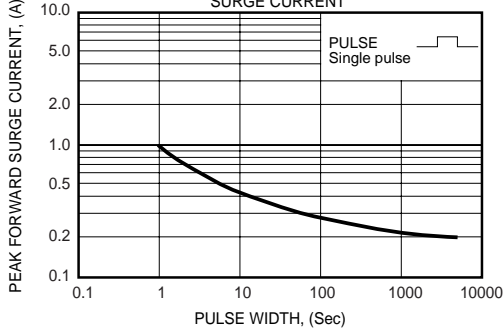


FIG. 6 - REVERSE RECOVERY TIME MEASUREMENT CIRCUIT

