CHENMKO ENTERPRISE CO.,LTD

BD4148SPT

Lead free devices

SURFACE MOUNT
SWITCHING DIODE

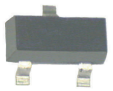
VOLTAGE 75 Volts CURRENT 0.15 Ampere

APPLICATION
* Ultra high speed switching

FEATURE
* SmaBD surface mounting type. (SOT-23)
* High speed. (T_{RR}=4.0nSec Typ.)
* Suitable for high packing density.
* Maximum total power disspation is 300mW.

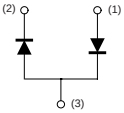
CONSTRUCTION
* Silicon epitaxial planar

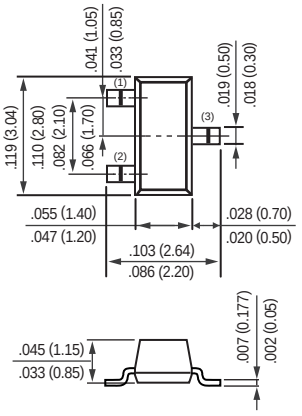
MARKING
* 5K-



SOT-23

CIRCUIT





Dimensions in inches and (millimeters)

SOT-23

MAXIMUM RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS		SYMBOL	BD4148SPT	UNITS
Maximum Non-Repetitive Peak Reverse Voltage		V_{RM}	100	Volts
Maximum Repetitive Peak Reverse Voltage Maximum Working Peak Reverse Voltage Maximum DC Blocking Voltage		V_{RRM} V_{RWM} V_{DC}	75	Volts
Maximum RMS Voltage		V_{RMS}	53	Volts
Maximum Average Forward Rectified Current		I_O	0.15	Amps
Peak Forward Surge Current at 1uSec.	@1Sec	I_{FSM}	1.0	Amps
	@1.0uSec		2.0	
Typical Junction Capacitance between Terminal (Note 1)		C_J	4.0	pF
Maximum Reverse Recovery Time (Note 2)		trr	4.0	nSec
Maximum Thermal Resistance		$R_{\theta JA}$	350	°C/W
Maximum Operating and Storage Temperaturd Range		T_J,T_{STG}	-65 to +150	°C

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

CHARACTERISTICS		SYMBOL	BD4148SPT	UNITS
Maximum Instantaneous Forward Voltage at I_F= 10 mA		V_F	1.0	Volts
Maximum Average Reverse Current	V_R= 20V @TJ=25°C	I_R	25	nAmps
	V_R= 75V @TJ=25°C		50	uAmps

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 0 volts.
2. Measured at applied froward current of 10 mA, reverse current of 1.0 mA, Reverse voltage of 6.0 volts and R_L= 100 ohms.
3. ESD sensitive product handling required.

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RATING CHARACTERISTIC CURVES (BD4148SPT)

FIG. 1 - FORWARD CHARACTERISTICS

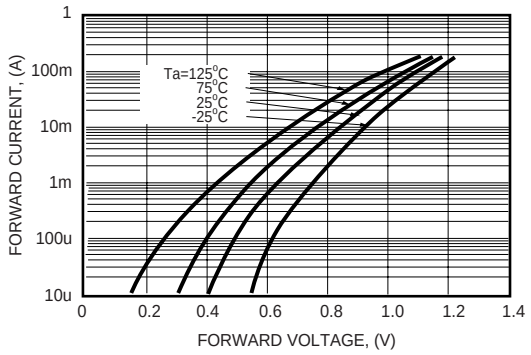

FIG. 2 - REVERSE CHARACTERISTICS

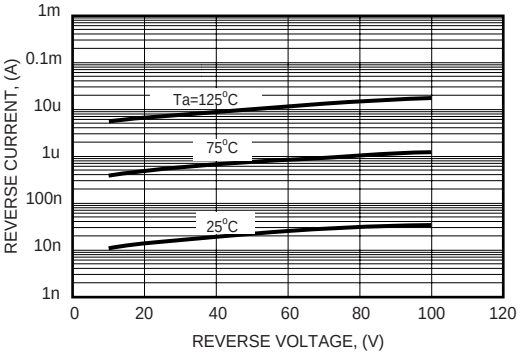

FIG. 3 - TYPICAL JUNCTION CAPACITANCE

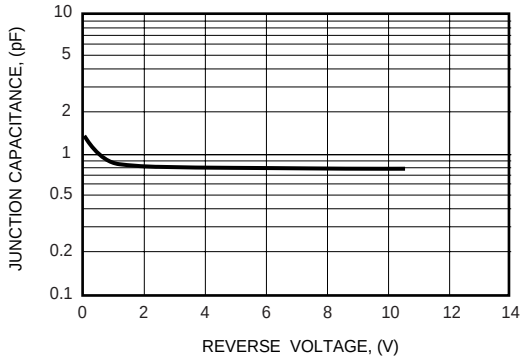

FIG. 4 - REVERSE RECOVERY TIME CHARATERISTICS

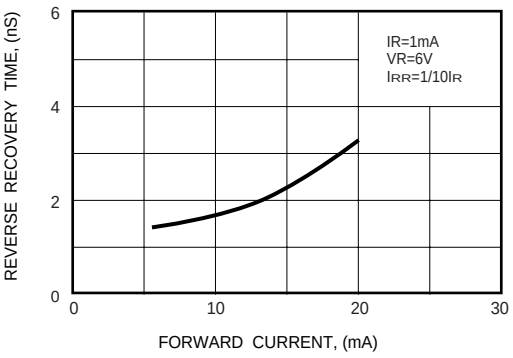

FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

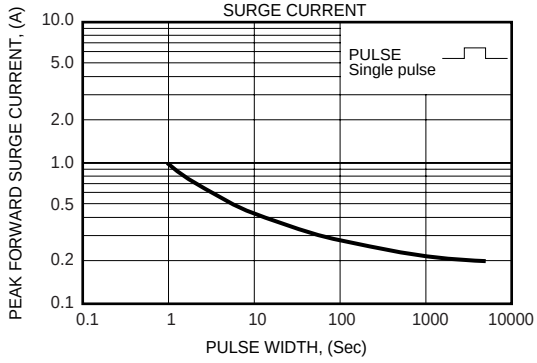

FIG. 6 - REVERSE RECOVERY TIME MEASUREMENT CIRCUIT

