



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

SURFACE MOUNT
SWITCHING DIODE

VOLTAGE 75 Volts CURRENT 0.15 Ampere

BD4148FPT

APPLICATION

- * Ultra high speed switching

FEATURE

- * Small surface mounting type. (SC-79/SOD-523)
- * High speed. ($T_{RR}=4.0\text{nSec}$ Typ.)
- * Suitable for high packing density.
- * Maximum total power dissipation is 300mW.

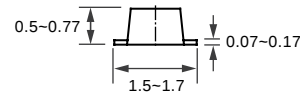
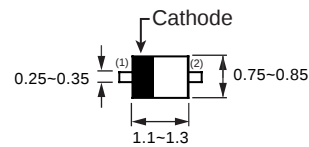
CONSTRUCTION

- * Silicon epitaxial planar



SC-79/SOD-523

CIRCUIT



Dimensions in millimeters

SC-79/SOD-523

MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS		SYMBOL	BD4148FPT	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	@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)		t_{rr}	4.0	nSec
Maximum Thermal Resistance		$R_{\theta JA}$	350	$^\circ\text{C/W}$
Maximum Operating and Storage Temperature Range		T_J, T_{STG}	-65 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

CHARACTERISTICS		SYMBOL	BD4148FPT	UNITS
Maximum Instantaneous Forward Voltage at $I_F = 10\text{ mA}$		V_F	1.0	Volts
Maximum Average Reverse Current	$V_R = 20\text{V}$ @ $T_J = 25^\circ\text{C}$	I_R	25	nAmps
	$V_R = 75\text{V}$ @ $T_J = 25^\circ\text{C}$		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 $R_L = 100\text{ ohms}$.

3. ESD sensitive product handling required.

2004-10

RATING CHARACTERISTIC CURVES (BD4148FPT)

FIG. 1 - FORWARD CHARACTERISTICS

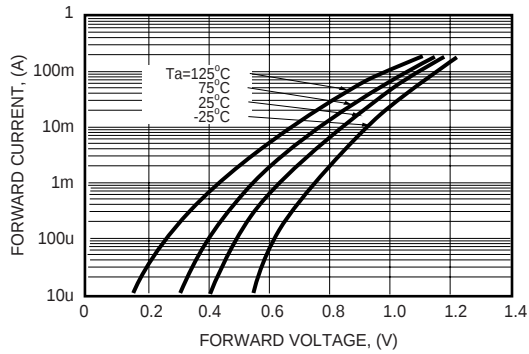


FIG. 2 - REVERSE CHARACTERISTICS

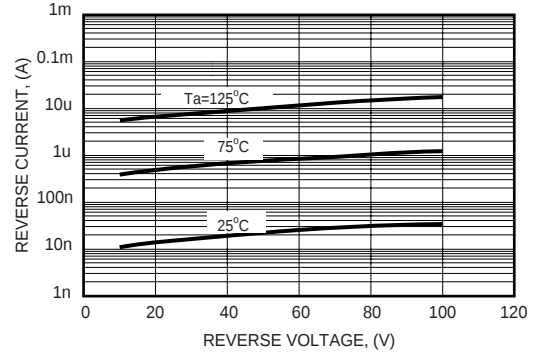


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

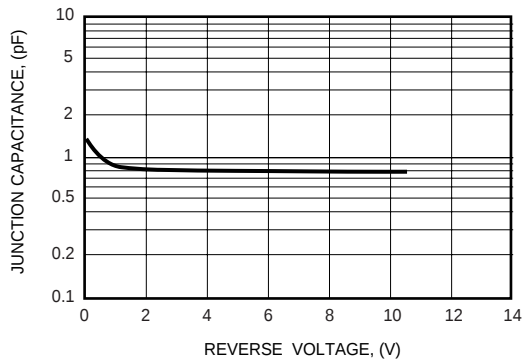


FIG. 4 - REVERSE RECOVERY TIME CHARACTERISTICS

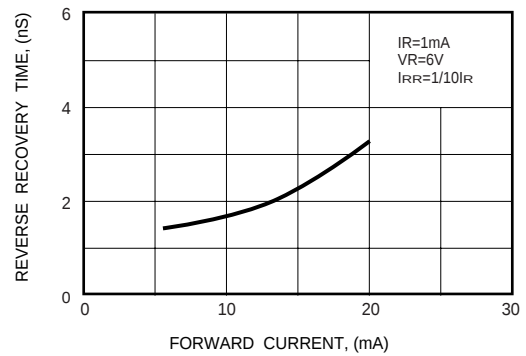


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

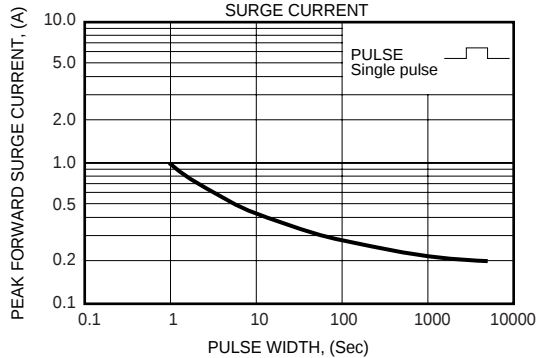


FIG. 6 - REVERSE RECOVERY TIME MEASUREMENT CIRCUIT

