



**CHENMKO ENTERPRISE CO.,LTD**

**1N4148PT**

**SURFACE MOUNT  
SWITCHING DIODE**

VOLTAGE 75 Volts CURRENT 0.15 Ampere

Lead free devices

**APPLICATION**

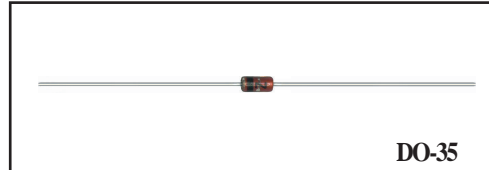
\* Ultra high speed switching

**FEATURE**

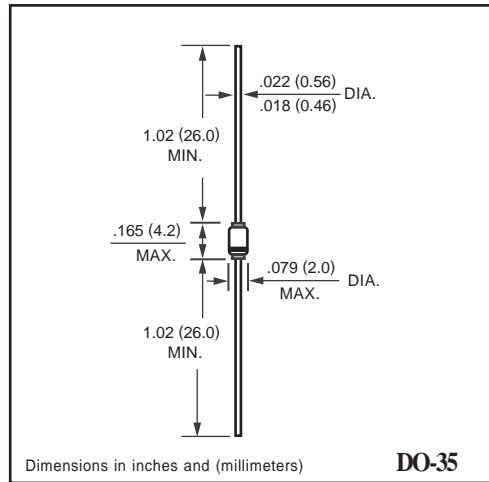
- \* Small surface mounting type. (DO-35)
- \* High speed. (TRR=4.0nSec Typ.)
- \* Suitable for high packing density.
- \* Maximum total power dissipation is 500mW.
- \* Peak forward current is 500mA.

**CONSTRUCTION**

\* Silicon epitaxial planar



DO-35



DO-35

**CIRCUIT**



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

RATINGS		SYMBOL	1N4148PT	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>R</sub>	75	Volts
Maximum DC Blocking Voltage Maximum RMS Voltage		V <sub>DC</sub>	53	Volts
Maximum Average Forward Rectified Current		I <sub>O</sub>	0.15	Amps
Peak Forward Surge Current at 1uSec.	@1Sec	I <sub>FSM</sub>	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 (Note 4)		R <sub>θJA</sub>	350	°C/W
Maximum Operating and Storage Temperature Range		T <sub>J</sub> ,T <sub>STG</sub>	-65 to +175	°C

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

CHARACTERISTICS		SYMBOL	1N4148PT	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	I <sub>R</sub>	5.0	uAmps
	V <sub>R</sub> = 75V @T <sub>J</sub> =25°C		25	
	V <sub>R</sub> = 20V @T <sub>J</sub> =150°C		30	
	V <sub>R</sub> = 70V @T <sub>J</sub> =150°C		50	

- 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.  
 4. Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

## RATING CHARACTERISTIC CURVES ( 1N4148PT )

FIG. 1 - FORWARD CHARACTERISTICS

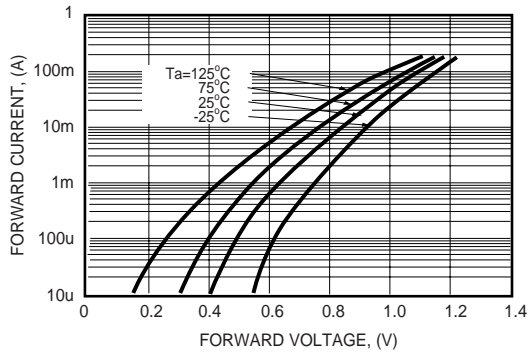


FIG. 2 - REVERSE CHARACTERISTICS

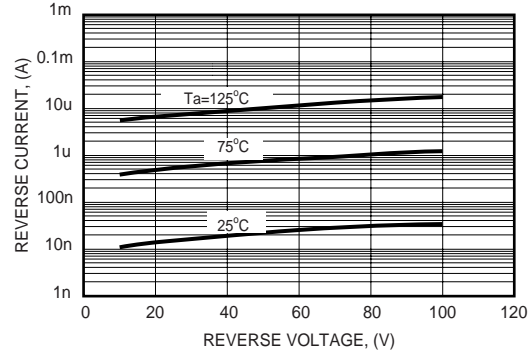


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

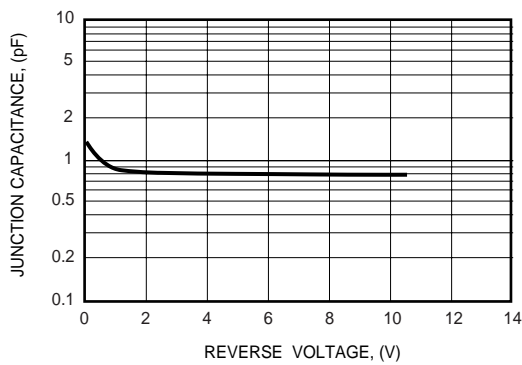


FIG. 4 - REVERSE RECOVERY TIME CHARACTERISTICS

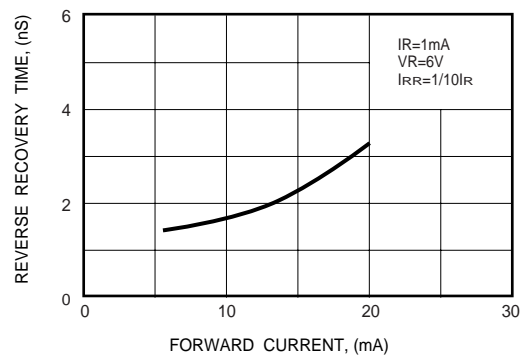


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

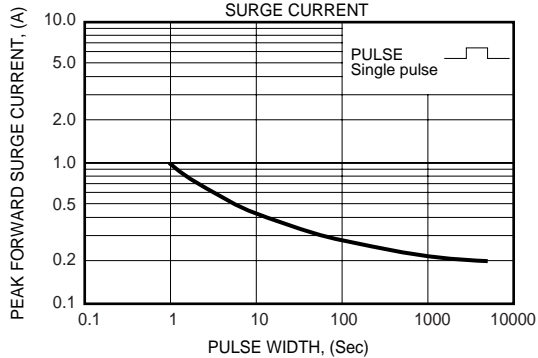


FIG. 6 - REVERSE RECOVERY TIME MEASUREMENT CIRCUIT

