



# CHENMKO ENTERPRISE CO.,LTD

Lead free devices

## SUPER FAST RECOVERY RECTIFIER

VOLTAGE RANGE 100 - 400 Volts CURRENT 16 Amperes

**U16U10PT  
THRU  
U16U40PT**

### FEATURES

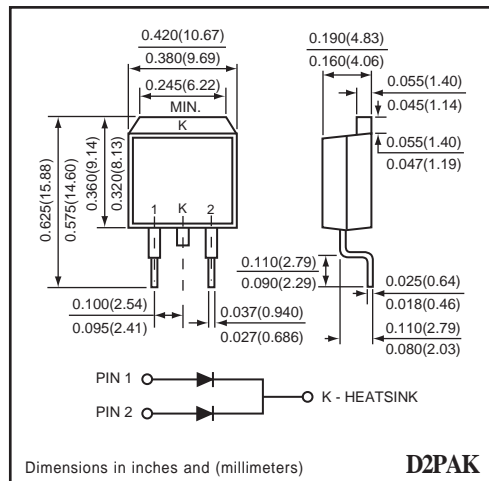
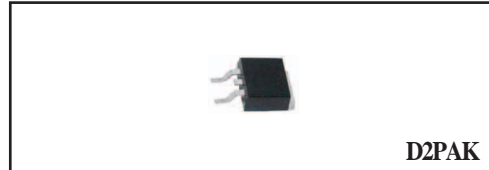
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Dual rectifier construction, positive centertap
- \* Glass passivated chip junctions
- \* Low power loss
- \* Low forward voltage, high current capability
- \* High surge current capability
- \* Superfast recovery times for high efficiency
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC D2PAK molded plastic  
**Terminals:** Lead solderable per MIL-STD-750, Method 2026  
**Polarity:** As marked  
**Weight:** 0.08 ounces, 2.24 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.



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

RATINGS	SYMBOL	U16U10PT	U16U20PT	U16U30PT	U16U40PT	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	100	200	300	400	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	70	140	210	280	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	200	300	400	Volts
Maximum Average Forward Rectified Current	I <sub>O</sub>	16.0				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	200				Amps
Typical Junction capacitance per leg ( NOTE 1 )	C <sub>J</sub>	85				pF
Typical thermal resistance ( NOTE 2 )	R <sub>θJC</sub>	2.2				°C / W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150				°C

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

CHARACTERISTICS	SYMBOL	U16U10PT	U16U20PT	U16U30PT	U16U40PT	UNITS
Maximum Instantaneous Forward Voltage at 8.0 A DC	V <sub>F</sub>	0.975		1.30		Volts
Maximum DC reverse current at rated DC blocking voltage per leg	I <sub>R</sub>	5.0				uAmps
		150				
Maximum reverse recovery time ( NOTE 3 ) per leg	t <sub>rr</sub>	35		50		nS

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts  
 2. Thermal resistance from junction to case per leg mounted on heatsink  
 3. Reverse recovery test conditions : I<sub>F</sub> = 0.5 A, I<sub>r</sub> = -1.0 A, I<sub>rr</sub> = -0.25 A.

# RATING CHARACTERISTIC CURVES ( U16U10PT THRU U16U40PT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

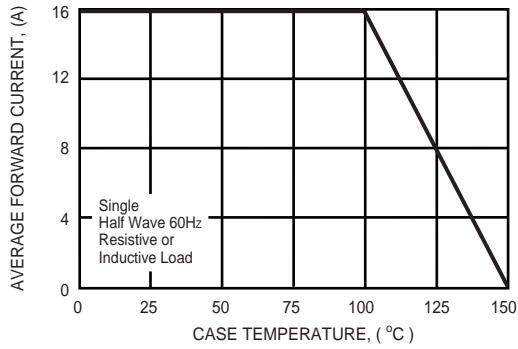


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

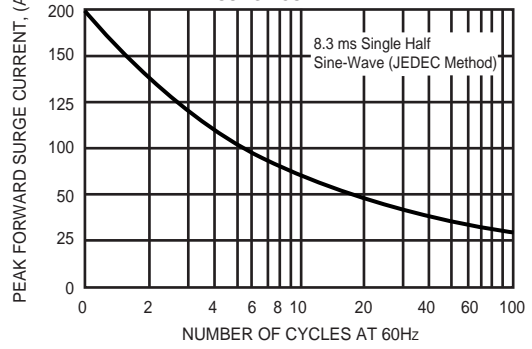


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

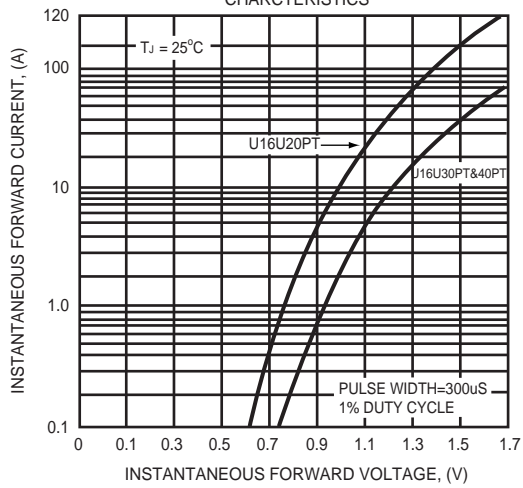


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

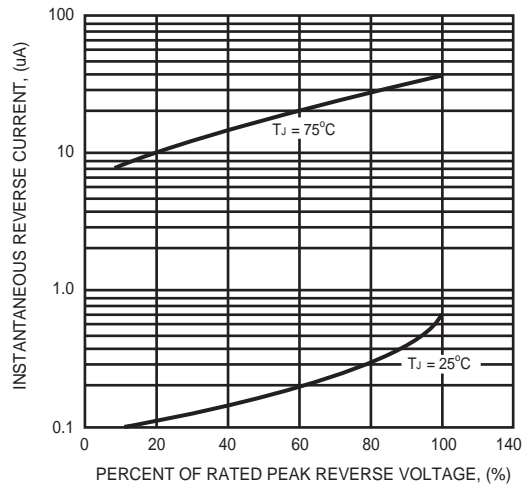


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

