



**CHENMKO ENTERPRISE CO.,LTD**

*Lead free devices*

**ULTRA FSAT RECTIFIER**

VOLTAGE RANGE 50 - 600 Volts CURRENT 16 Amperes

**U16D05PT  
THRU  
U16D60PT**

**FEATURES**

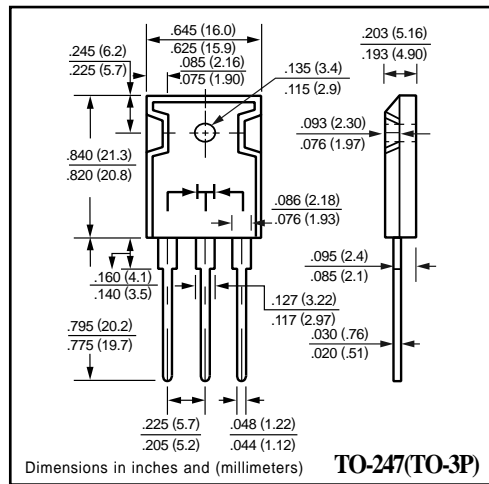
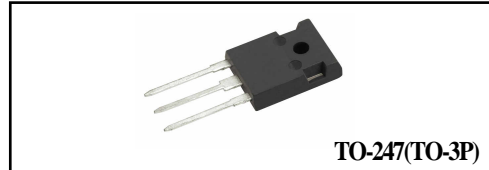
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- \* Dual rectifier construction, positive centertap
- \* Glass passivated chip junctions
- \* Low power loss
- \* Low forward voltage, high current capability
- \* High surge current capability
- \* Ultra fast recovery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

**MECHANICAL DATA**

**Case:** JEDEC TO-247 molded plastic  
**Terminals:** Lead solderable per MIL-STD-750, Method 2026  
**Polarity:** As marked  
**Weight:** 5.6 grams ( Approximately )

**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	U16D05PT	U16D10PT	U16D15PT	U16D20PT	U16D30PT	U16D40PT	U16D50PT	U16D60PT	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current	Io	16.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	200								Amps
Typical Junction capacitance per leg ( NOTE 1 )	CJ	120				70				pF
Typical thermal resistance ( NOTE 2 )	R θJC	2.5								°C / W
Operating and Storage Temperature Range	TJ, TSTG	-65 to +150								°C

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

CHARACTERISTICS	SYMBOL	U16D05PT	U16D10PT	U16D15PT	U16D20PT	U16D30PT	U16D40PT	U16D50PT	U16D60PT	UNITS
Maximum Instantaneous Forward Voltage at 8.0 A DC	VF	0.975				1.30		1.50		Volts
Maximum DC reverse current at rated DC blocking voltage per leg	IR	10.0								uAmps
		500								
Maximum reverse recovery time ( NOTE 3 ) per leg	trr	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 : IF = 0.5 A, IR = -1.0 A, IRR = -0.25 A.  
 4. Suffix " C " = Common Cathod, Suffix " A " = Common Anode, Suffix " D " = Double.

## RATING CHARACTERISTIC CURVES ( U16D05PT THRU U16D60PT )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

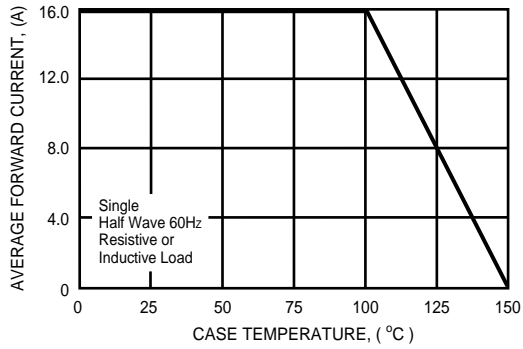


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

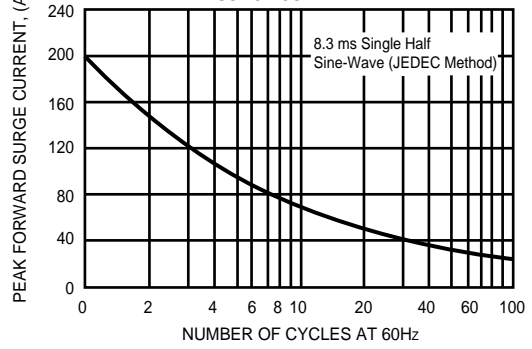


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

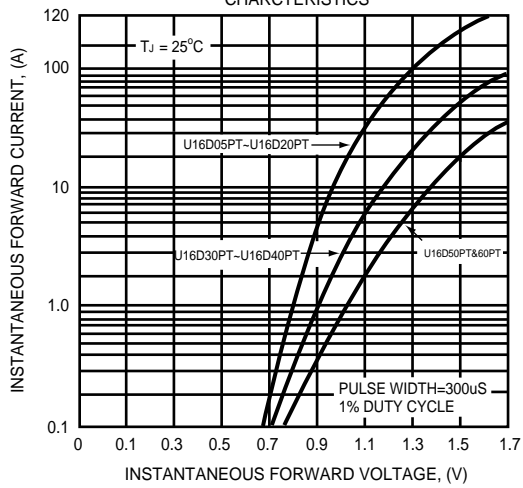


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

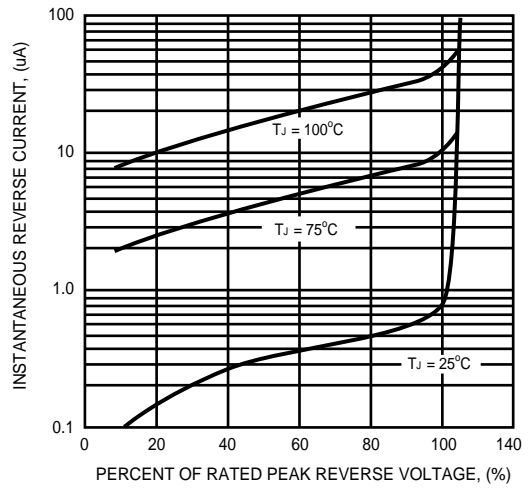


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

