

Pb Free Plating Product

## U16C05 thru U16C60



16.0 Ampere Glass Passivated Junction Ultrafast Recovery Rectifiers

**Features**

- \* Fast switching for high efficiency
- \* Low forward voltage drop
- \* High current capability
- \* Low reverse leakage current
- \* High surge current capability

**Application**

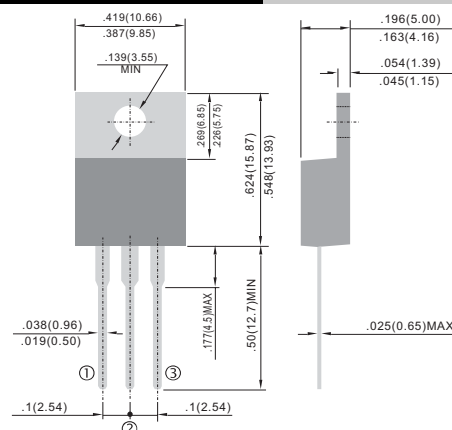
- \* Automotive Environment|DC Motor Control
- \* Plating Power Supply|UPS
- \* Amplifier and Sound Device System etc..

**Mechanical Data**

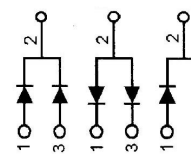
- \* Case: Molded plastic TO-220AB Heatsink
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solderable per MIL-STD-202 method 208
- \* Polarity: Color band denotes cathode
- \* Mounting position: Any
- \* Weight: 2.03 grams

**TO-220AB**

Unit : inch (mm)



- \* Positive Suffix "C"
- \* Negative Suffix "A"
- \* Doubler/Series Connection Suffix "D"

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Common Cathode Suffix "C" Common Anode Suffix "A" Anode and Cathode Coexistence Suffix "D"	SYMBOL	U16C05C U16C05A U16C05D	U16C10C U16C10A U16C10D	U16C20C U16C20A U16C20D	U16C30C U16C30A U16C30D	U16C40C U16C40A U16C40D	U16C60C U16C60A U16C60D	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	V
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	V
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	600	V
Maximum Average Forward Rectified Current Tc=100°C	IF(AV)	16.0						A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	IFSM	175			150			A
Maximum Instantaneous Forward Voltage @ 8.0 A	VF	0.98			1.3	1.7		V
Maximum DC Reverse Current @TJ=25°C At Rated DC Blocking Voltage @TJ=125°C	IR				10.0 250			uA uA
Maximum Reverse Recovery Time (Note 1)	Trr				35			nS
Typical junction Capacitance (Note 2)	CJ				90			pF
Typical Thermal Resistance (Note 3)	RθJC				2.2			°CW
Operating Junction and Storage Temperature Range	TJ, TSTG				-55 to + 150			°C

NOTES : (1) Reverse recovery test conditions IF= 0.5A, R= 1.0A, Irr = 0.25A.

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

(3) Thermal Resistance junction to case.

FIG.1 - FORWARD CURRENT DERATING CURVE

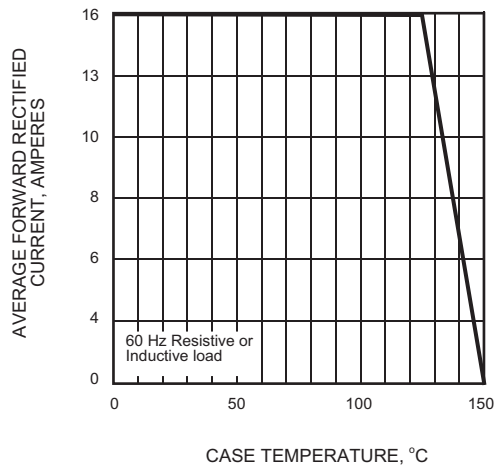


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

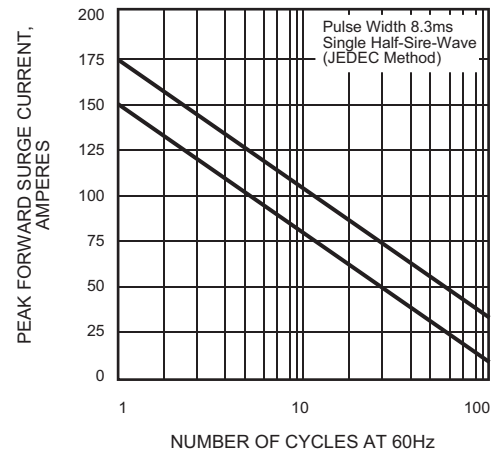


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

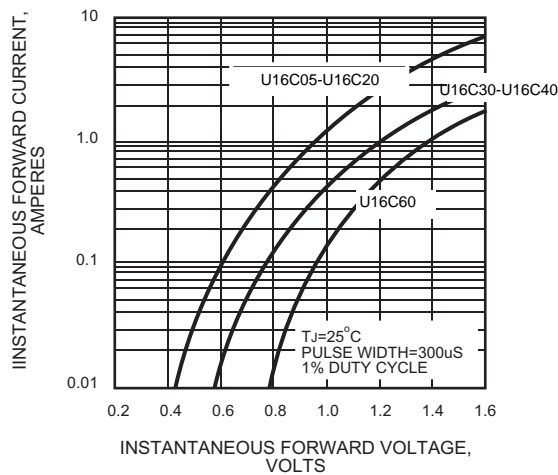


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

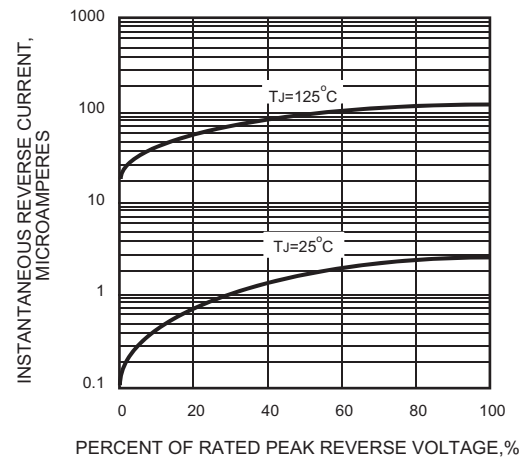


FIG.5 - TYPICAL JUNCTION CAPACITANCE

