

Pb Free Plating Product

U30C20S/U30C40S/U30C60S



30 Ampere Heatsink Dual Series Connection Ultra Fast Recovery Rectifiers

Features

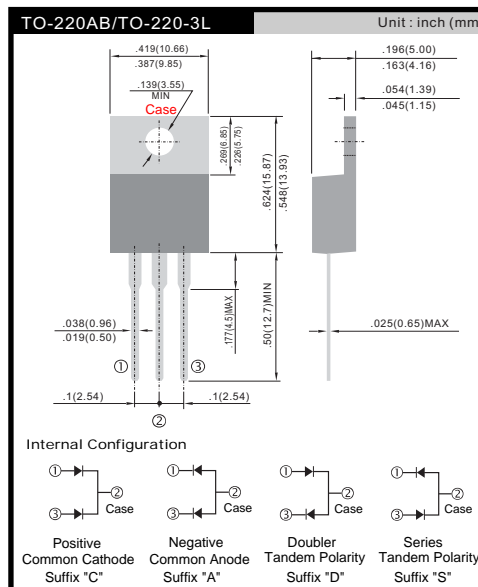
- ★ ThinkiSemi P/G technology with ultra fast recovery time
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

Application

- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS, Motor Control and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- ★ Case: Heatsink TO-220AB/TO-220-3L
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Terminals: Solderable per MIL-STD-202 method 208
- ★ Polarity: As marked on diode body
- ★ Mounting position: Any
- ★ Weight: 2.2 gram approximately



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%.

	SYMBOL	U30C20S	U30C40S	U30C60S	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	200	400	600	V
Maximum RMS Voltage	V _{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V _{DC}	200	400	600	V
Maximum Average Forward Rectified Current T _c =125°C (Total Device 2x15A=30A)	I _{F(AV)}	30.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	450			A
Maximum Instantaneous Forward Voltage @ 15.0 A (Per Diode/Per Leg)	V _F	0.98	1.3	1.7	V
Maximum DC Reverse Current @T _J =25°C At Rated DC Blocking Voltage @T _J =125°C	I _R	5			uA
		50			uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	25-50			nS
Typical junction Capacitance (Note 2)	C _J	150			pF
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to +175			°C

NOTES : (1) Reverse recovery test conditions I_F = 0.5A I_R = 1.0A I_{rr} = 0.25A.

(2) Thermal Resistance junction to terminal.

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

FIG.1 - FORWARD CURRENT DERATING CURVE

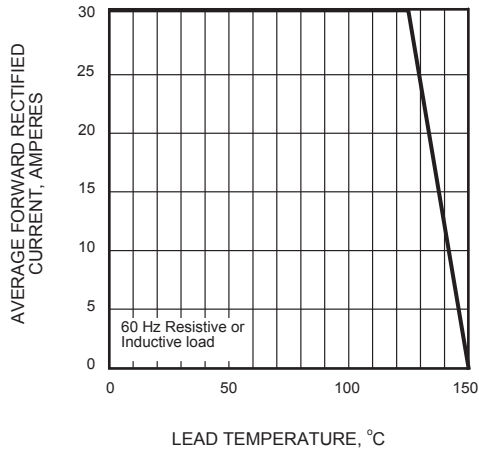


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

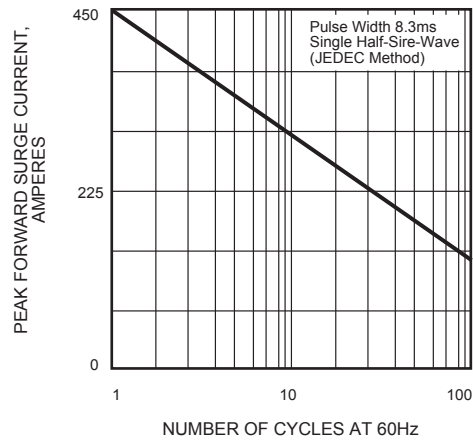


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

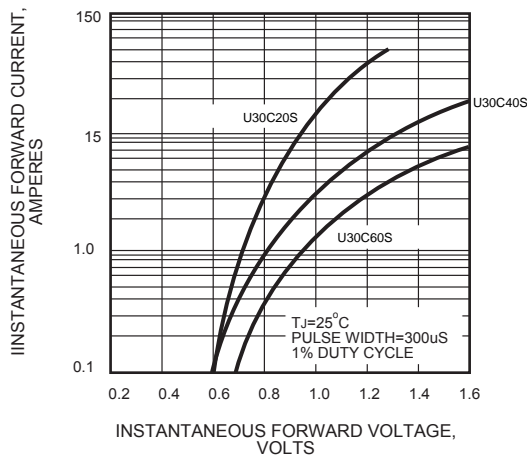


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

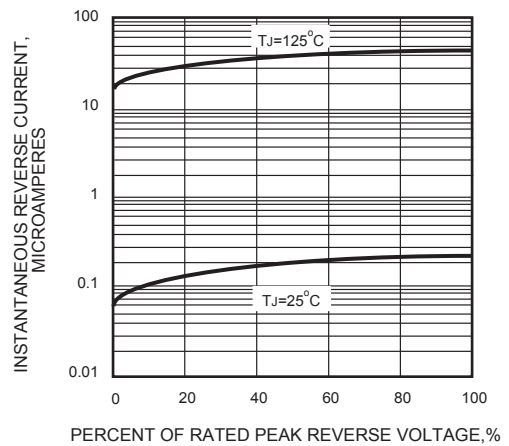


FIG.5 - TYPICAL JUNCTION CAPACITANCE

