

FRED Super Fast Recovery Rectifiers

Reverse Voltage - 1200 V

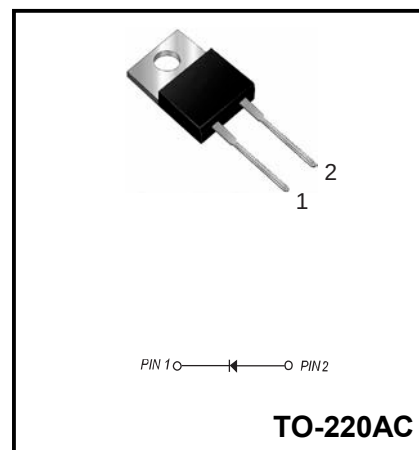
Forward Current - 30.0A

Features

- ♦ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ♦ Construction utilizes void-free molded plastic technique
- ♦ Low reverse leakage
- ♦ High forward surge current capability
- ♦ High temperature soldering guaranteed
260°C/10 seconds at terminals

Mechanical Data

- ♦ Case : Molded plastic body
- ♦ Solder plated, solderable per MIL-STD-750, Method 2026
- ♦ Polarity : Polarity symbol marking on body
- ♦ Mounting Position : Any



Maximum Ratings (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOLS	MUR30120AC	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	1200	V
Maximum RMS voltage	V_{RMS}	840	V
Maximum DC blocking voltage	V_{DC}	1200	V
Maximum average forward rectified current at $T_c=120^\circ\text{C}$	$I_{(AV)}$	30.0	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	350	A
Typical thermal resistance	R_{qJC}	2.0	$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics (Ta=25°C unless otherwise specified)

PARAMETER	SYMBOLS	TYPE	MAX	UNITS
Maximum instantaneous forward voltage per diode at 30.0A	V_F	3.0	3.5	V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 125^\circ\text{C}$	I_R	50 500	50 2000	μA μA
Maximum reverse recovery time	T_{rr}	50	60	ns

Note: Reverse recovery time test condition: $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{rr}=0.25\text{A}$

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

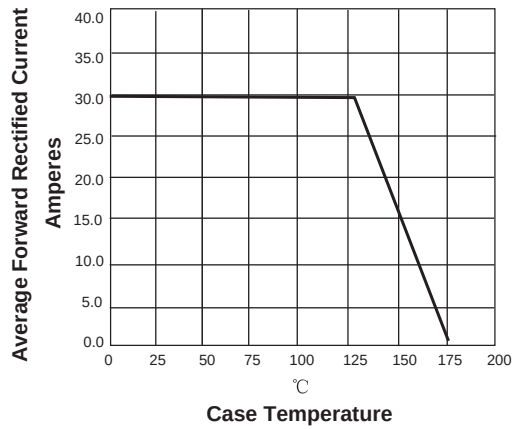


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

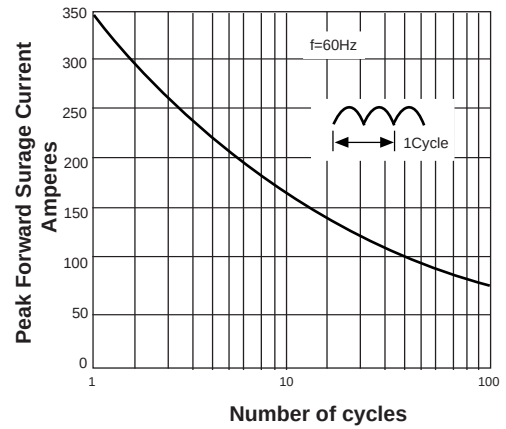


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

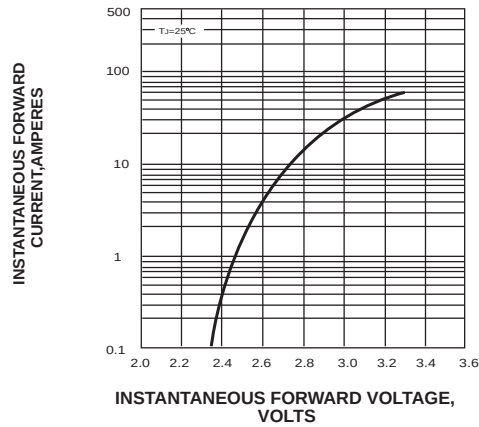
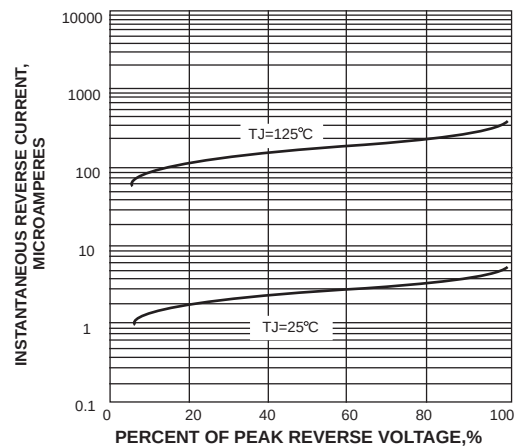
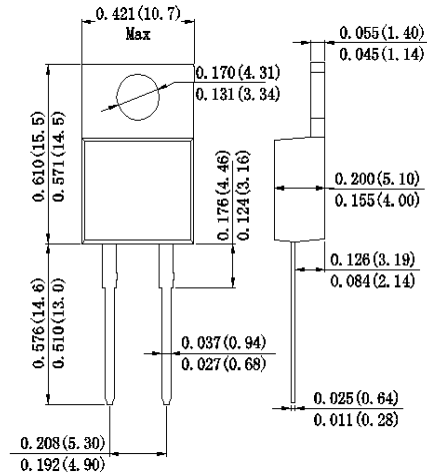


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Package Outline Dimensions Millimeters

TO-220AC



Product Specification Classification

Part Number	Package	Marking	Pack
MUR30120AC	TO-220AC	MUR30120AC XXXXX	1000pcs/box