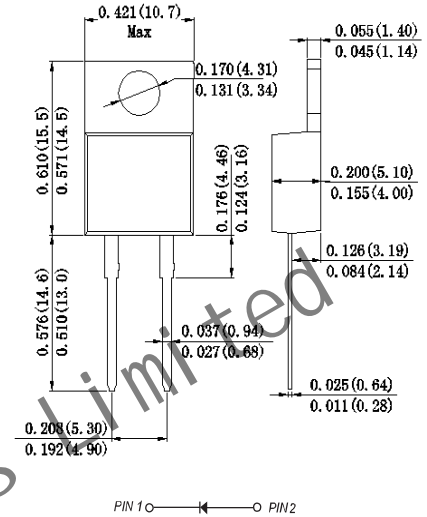


20.0Amp Super Fast Recovery Rectifiers
Features

- 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

TO-220AC


Dimensions in inches and (millimeters)

Mechanical Data
Case : Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Maximum Ratings And Electrical Characteristics

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

Parameter	SYMBOLS	ASFMUR 2005QX0	ASFMUR 2010QX0	ASFMUR 2020QX0	ASFMUR 2040QX0	ASFMUR 2050QX0	ASFMUR 2060QX0	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	500	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	500	600	V
Maximum average forward rectified current at $T_c=110^\circ\text{C}$	$I_{(AV)}$	20.0						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	300						A
Maximum instantaneous forward voltage per diode at 20.0A	V_F	1.0		1.5		2.5		V
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$		10				u A
		$T_A=125^\circ\text{C}$		500				
Maximum reverse recovery time	T_{rr}	35			50			ns
Typical thermal resistance	$R_{\theta JC}$	3.5						$^\circ\text{C/W}$
Operating junction temperature range	T_J	-55 to +150						$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150						$^\circ\text{C}$

Note: 1.Reverse recovery time test condition: $I_F=0.5A$ $I_R=1.0A$ $I_{rr}=0.25A$

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

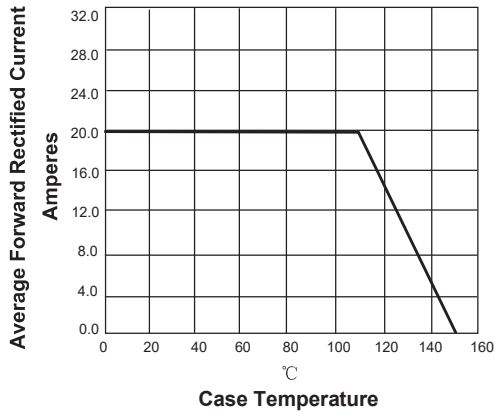


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

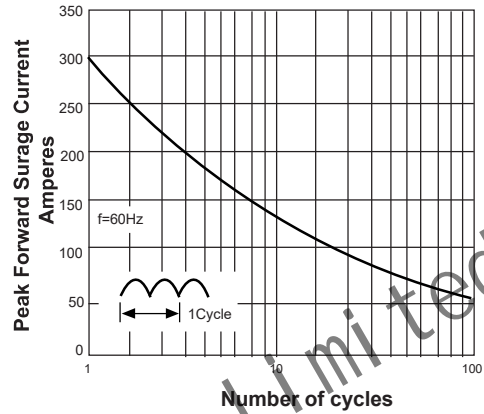


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

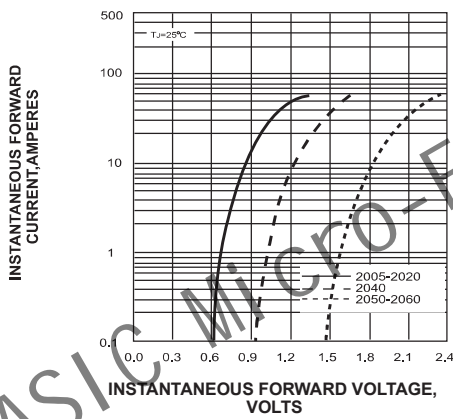
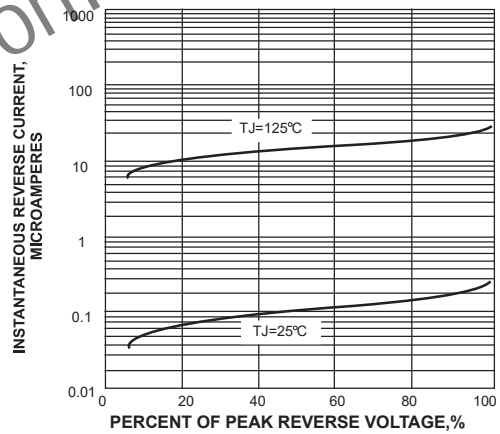
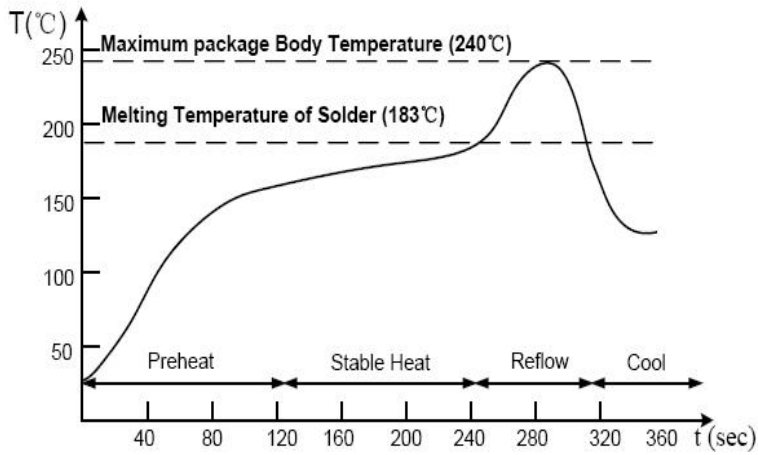


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Suggested Soldering Temperature Profile



Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Tube Package

Package	Tube (mm)	Q'TY/Tube (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
TO	525*31.9*6.4	0.05	545*150*45	1.0	575*245*170	5.0