

FRED 30.0Amp 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

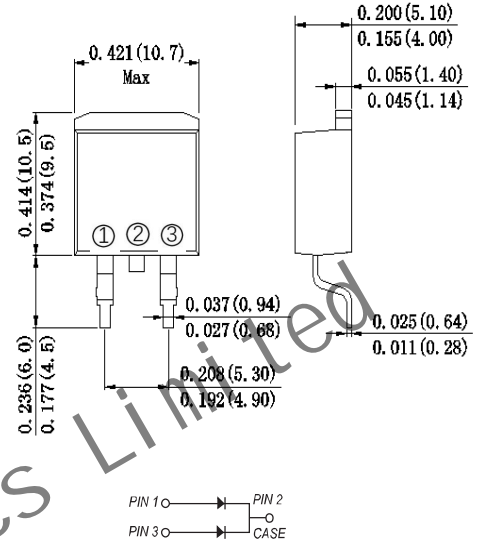
Mechanical Data

Case : Molded plastic body

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

Polarity : Polarity symbol marking on body

Mounting Position : Any

TO-263


Dimensions in inches and (millimeters)

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	ASFMUR3005CTPX0	ASFMUR3010CTPX0	ASFMUR3020CTPX0	ASFMUR3040CTPX0	ASFMUR3050CTPX0	ASFMUR3060CTPX0	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 $T_c=110^\circ\text{C}$ per device per diode	$I_{(AV)}$				30.0 15.0			A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}				200.0			A
Maximum instantaneous forward voltage per diode at 15.0A	V_F	1.0			1.3	1.5		V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R				2 200			u A
Maximum reverse recovery time	T_{rr}	35				50		ns
Typical thermal resistance	R_{qjC}				3.5			°C/W
Operating junction temperature range	T_J				-55 to +150			°C
Storage temperature range	T_{STG}				-55 to +150			°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

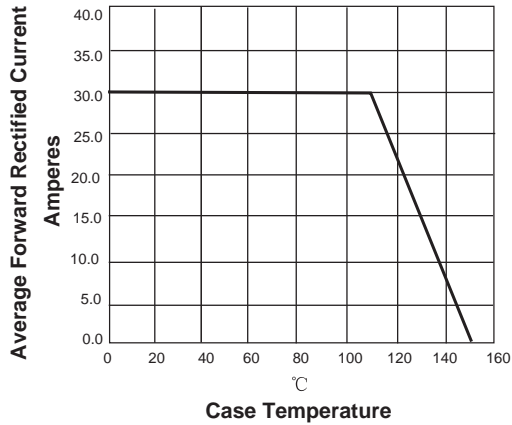


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

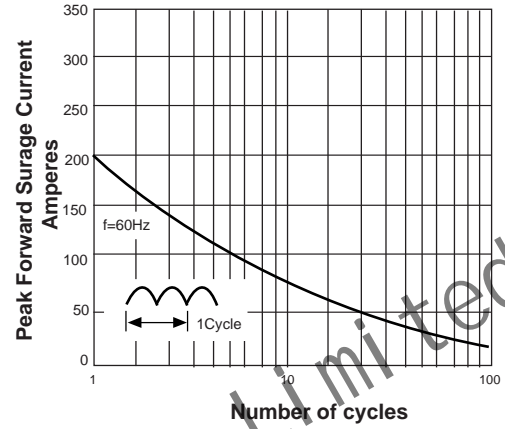


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

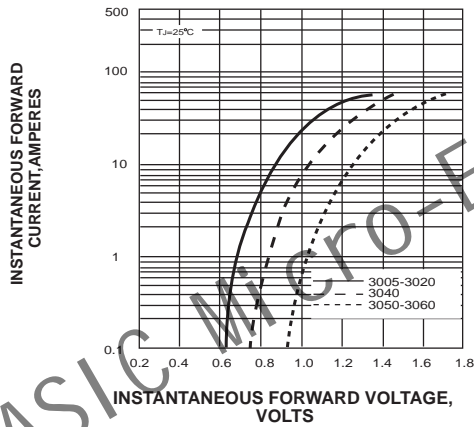
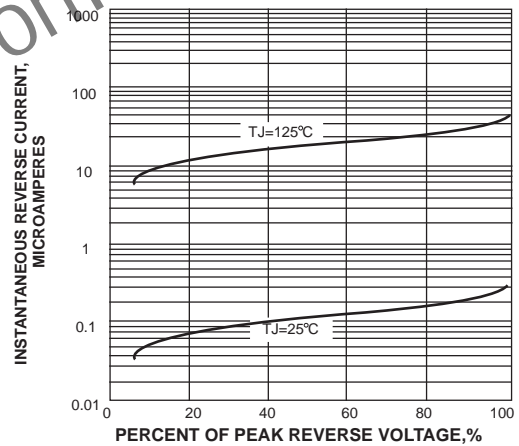
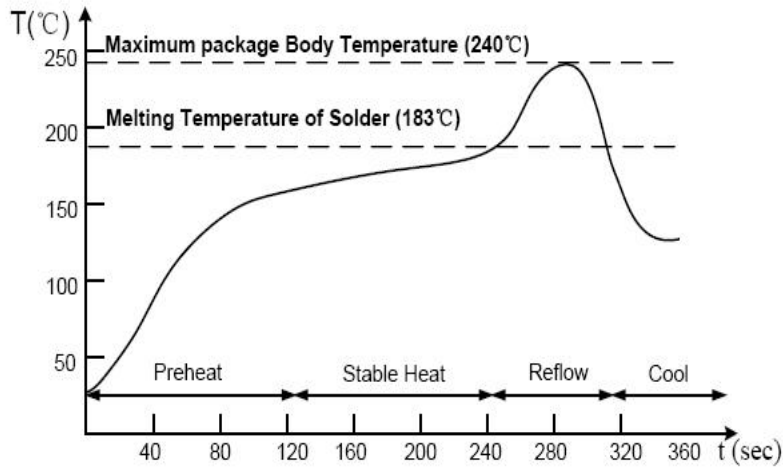


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Suggested Soldering Temperature Profile

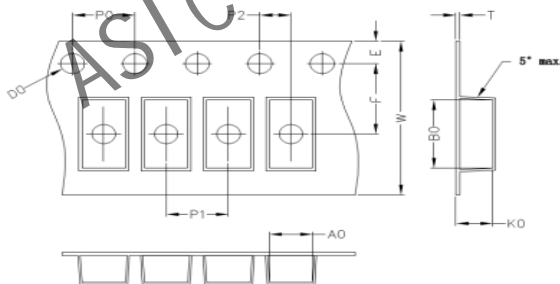


Note

- 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

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
10.5	15.55	4.90	1.50	1.75	11.5
P0	P1	P2	T	W	Tolerance
4.0	16.0	2.0	0.4	24	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
TO-263	13'	330	0.8	340	0.8	360*360*360	6.4