THINKI SEMICONDUCTOR ®

Pb Free Plating Product

10F20HF3/10F40HF3/10F60HF3

RoHS Pb

10.0 Ampere Insulated Dual Common Cathode Ultra Fast Recovery Rectifiers

Features

※ ThinkiSemi latest&matured process FRD/FRED
※ Fast switching for high efficiency
※ Low forward voltage drop
※ High current capability
※ Low reverse leakage current
※ High surge current capability

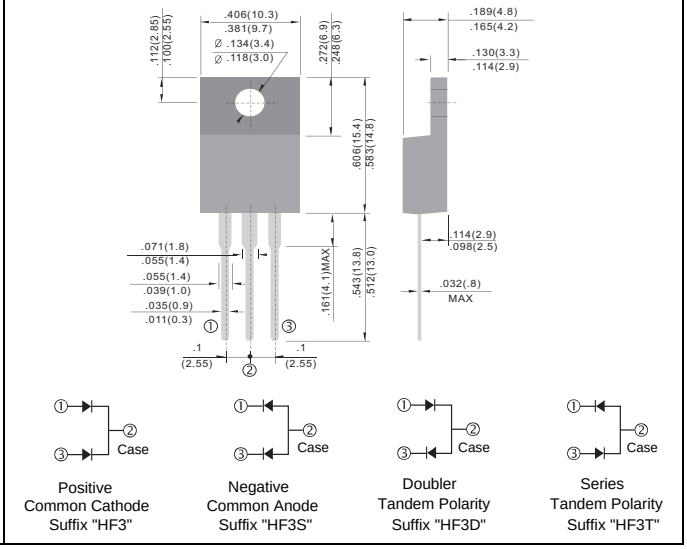
Application

※ Automotive Inverters and Solar Inverters
※ Car Audio Amplifiers and Sound Device Systems
※ Plating Power Supply,Motor Control,UPS and SMPS etc.

Mechanical Data

※ Case: Full Plastic Isolated Package ITO-220AB
※ 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: 2.0 gram approximately

ITO-220AB(TO-220F-3L) Unit:inch(mm)



Positive Common Cathode Suffix "HF3"

Negative Common Anode Suffix "HF3S"

Doubler Tandem Polarity Suffix "HF3D"

Series Tandem Polarity Suffix "HF3T"

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified.
Single phase,half wave,60Hz,resistive or inductive load.
For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	10F20HF3	10F40HF3	10F60HF3	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	200	400	600	V
Maximum RMS Voltage	VRMS	140	280	420	V
Maximum DC Blocking Voltage	VDC	200	400	600	V
Maximum Average Forward Rectified Current Tc=100°C (Total Device 2x5.0A=10.0A)	IF(AV)	10.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	IFSM	125			A
Maximum Instantaneous Forward Voltage @5.0A (Per Diode/Per Leg)	VF	0.85-0.95	1.00-1.25	1.25-1.50	V
Maximum DC Reverse Current @TJ=25°C At Rated DC Blocking Voltage @TJ=125°C	IR	1.0 5.0			μA μA
Maximum Reverse Recovery Time (Note1)	Trr	25-35			nS
Typical Junction Capacitance (Note 2)	CJ	65			pF
Typical Thermal Resistance (Note 3)	RθJC	3.0			°C/W
Operating Junction and Storage Temperature Range	TJ,TSTG	-55 to +175			°C

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

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

Note:(3)Thermal Resistance junction to case.

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FIG.1 - FORWARD CURRENT DERATING CURVE

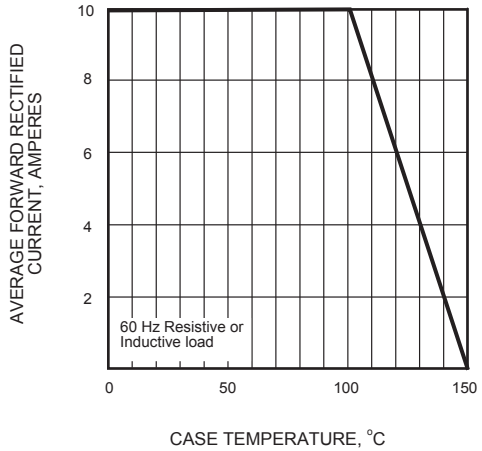


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

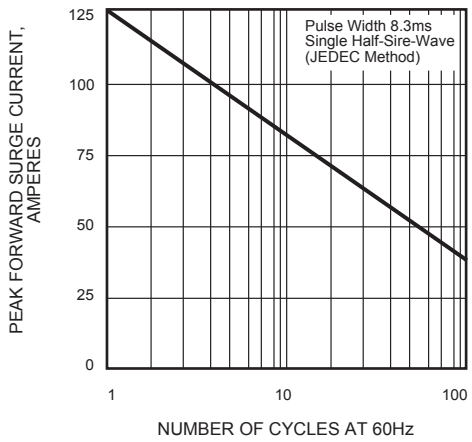


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

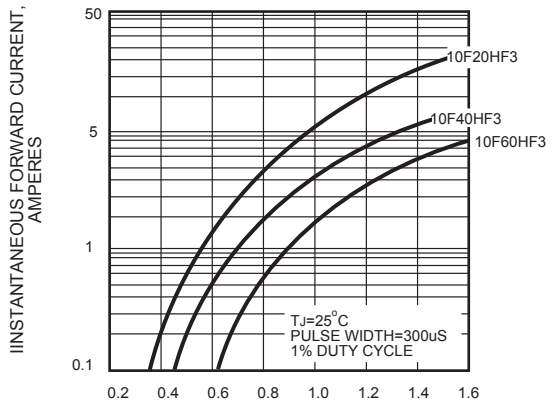


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

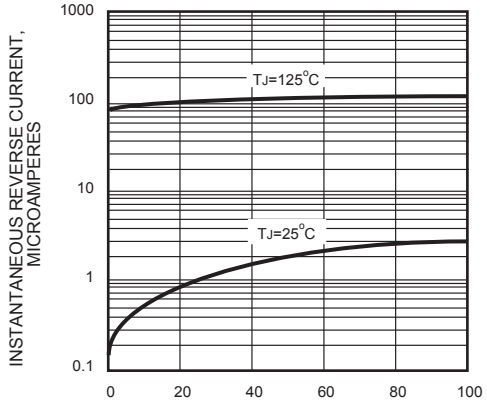
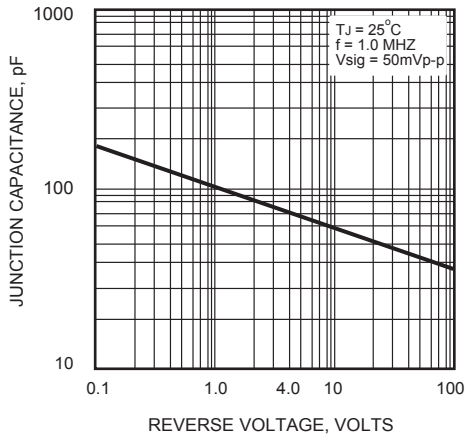


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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