Pb Free Plating Product

VF30C20A/VF30C40A/VF30C60A

30 Ampere Heatsink Dual Common Anode 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

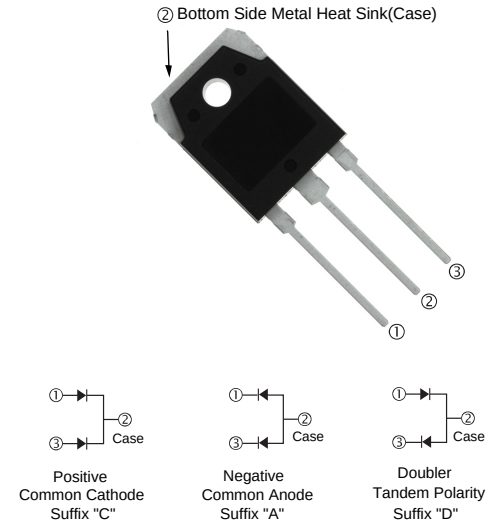
Application

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

Mechanical Data

※ Case: Open Metal Package TO-3PN/TO-3PB
※ 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: 6.0 gram approximately

TO-3PN/TO-3PB Unit:inch(mm)



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	VF30C10A VF30C20A	VF30C30A VF30C40A	VF30C50A VF30C60A	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 2x15A=30A)	IF(AV)	30			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)(Per Diode/Per Leg)	IFSM	300			A
Maximum Instantaneous Forward Voltage @15A (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	25-50			nS
Typical Junction Capacitance (Note 2)	CJ	150			pF
Typical Thermal Resistance (Note 3)	RθJC	0.8			°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

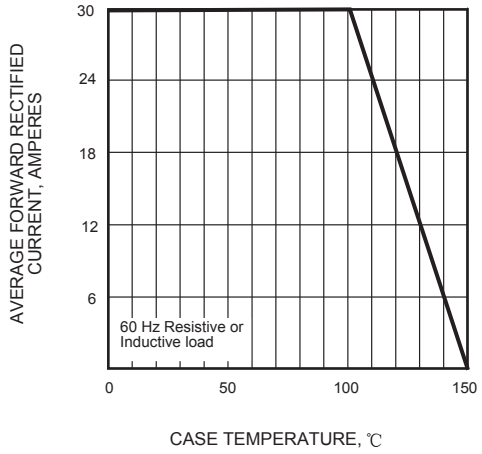


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

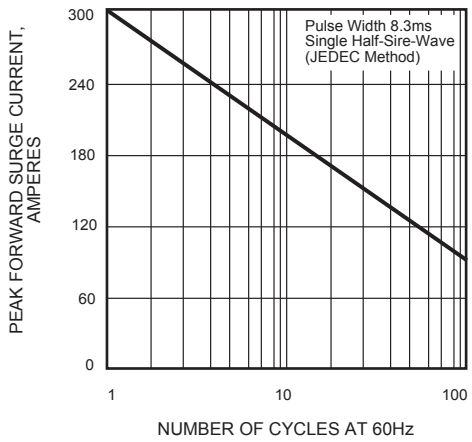


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

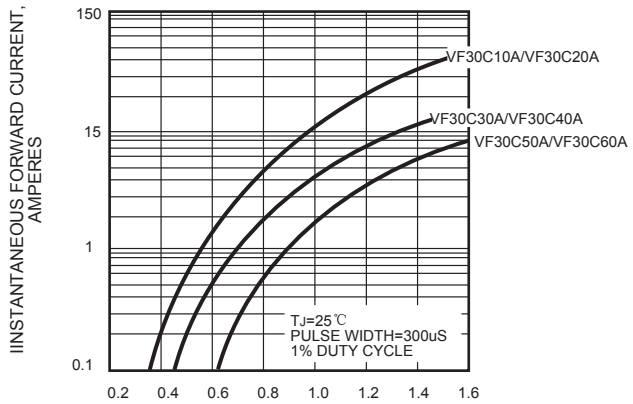


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

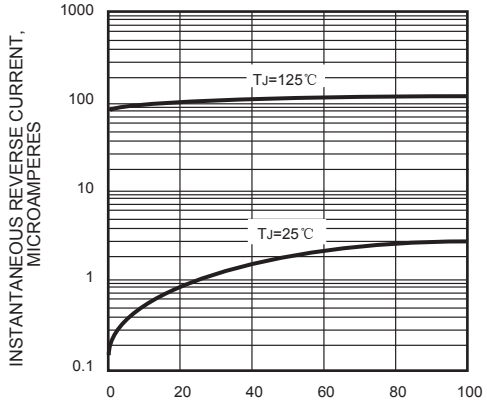
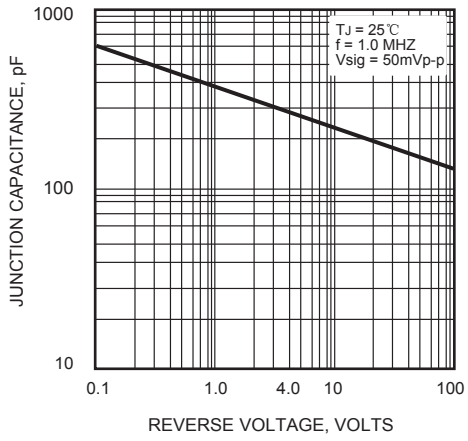


FIG.5 - TYPICAL JUNCTION CAPACITANCE



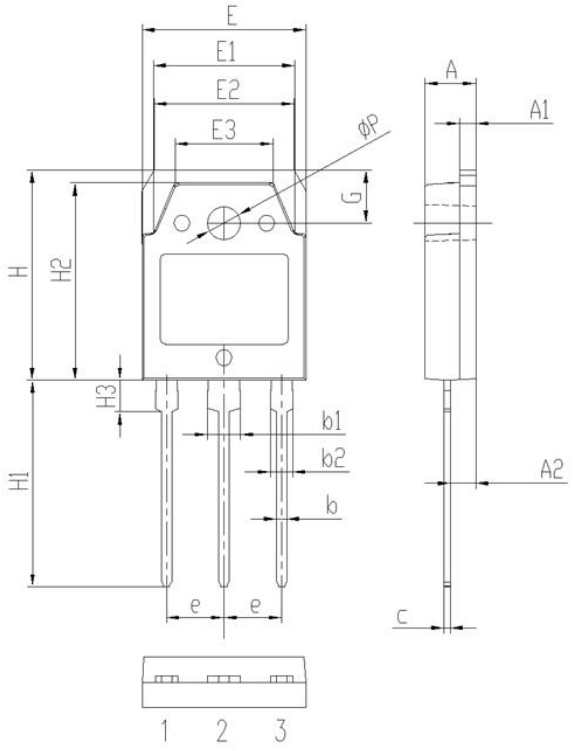
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Package Information

TO-3PN/TO-3PB Package Outline



Symbol	Dimensions(millimeters)	
	Min.	Max.
A	4.60	5.00
A1	1.50	2.00
A2	2.20	2.60
b	0.80	1.20
b1	2.90	3.30
b2	1.90	2.30
c	0.40	0.80
e	5.25	5.65
E	15.3	15.7
E1	13.2	13.6
E2	13.1	13.5
E3	9.10	9.50
H	19.7	20.1
H1	19.1	20.1
H2	18.3	18.7
H3	2.80	3.20
G	4.80	5.20
ΦP	3.00	3.40

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