Pb Free Plating Product

NFR12C20S/NFR12C40S/NFR12C60S

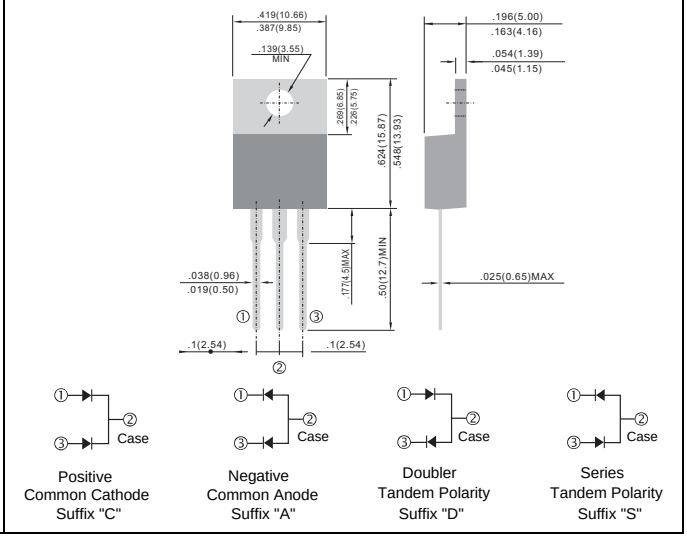
12.0 Ampere Heatsink Dual Series Connection Fast Recovery Rectifiers

Features
※ 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 Heatsink Package TO-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: 2.2 gram approximately

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



Positive Common Cathode Suffix "C" | Negative Common Anode Suffix "A" | Doubler Tandem Polarity Suffix "D" | Series Tandem Polarity Suffix "S"

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	NFR12C20S	NFR12C40S	NFR12C60S	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 ℃ (Total Device 2x6.0A=10.0A)	IF(AV)	12.0			A
Peak Forward Surge Current, 8.3ms single Half sine-wave superimposed on rated load (JEDEC method)	IFSM	125			A
Maximum Instantaneous Forward Voltage @6.0A (Per Diode/Per Leg)	VF	0.98	1.3	1.7	V
Maximum DC Reverse Current @TJ=25℃ At Rated DC Blocking Voltage @TJ=125℃	IR	5.0 100			μA μA
Maximum Reverse Recovery Time (Note1)	Trr	35			nS
Typical Junction Capacitance (Note 2)	CJ	65			pF
Typical Thermal Resistance (Note 3)	RθJC	1.5			℃/W
Operating Junction and Storage Temperature Range	TJ,TSTG	-55 to +150			℃

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.

© 1995 Thinki Semiconductor Co., Ltd.

Download from alldatasheet.com

FIG.1 - FORWARD CURRENT DERATING CURVE

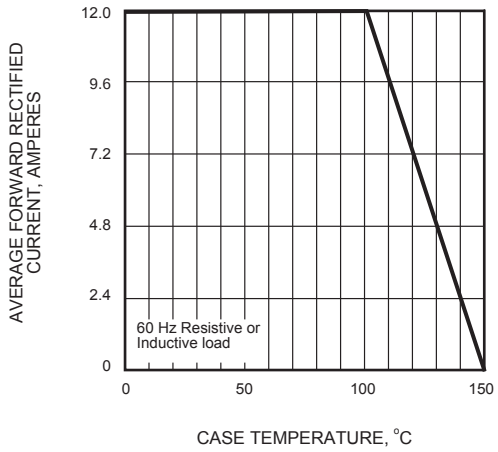


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

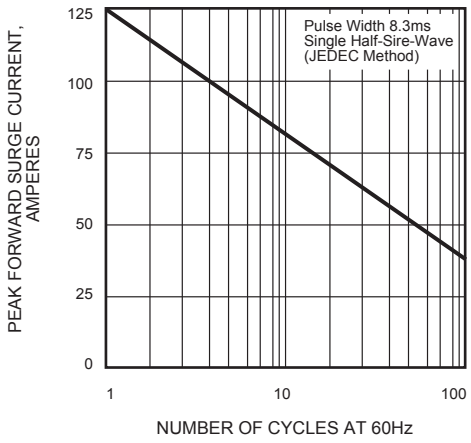


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

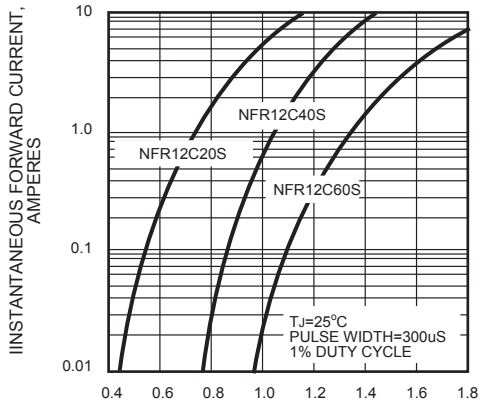


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

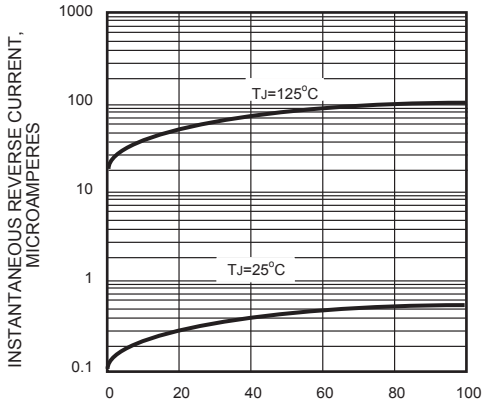
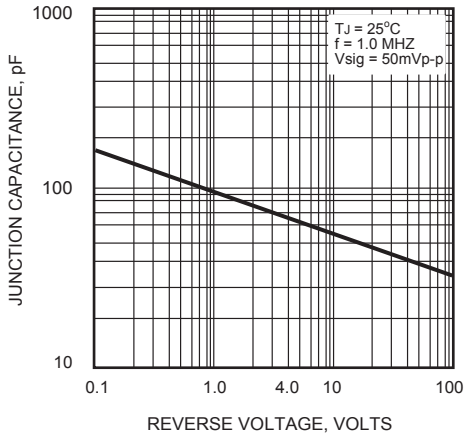


FIG.5 - TYPICAL JUNCTION CAPACITANCE



© 1995 Thinki Semiconductor Co., Ltd.

Download from alldatasheet.com