



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Product Specifications

AN7161N

Ref No.	A 1
Total Page	7
Page No.	1

Structure	Silicon Monolithic Bipolar IC
Appearance	SIL-12 Pin Plastic Package (Power Type with Fin attached)
Application	Hi-Fi and Car Stereo
Function	BTL 23W Audio Power Amplifier

A Absolute Maximum Ratings					
No.	Item	Symbol	Ratings	Unit	Note
1	Storage Temperature	Tstg	-55 ~ +150	° C	1
2	Operating Ambient Temperature	Topr	-30 ~ +75	° C	1
3	Supply Voltage	Vcc	26	V	
4	Supply Current	Icc	4.0	A	
5	Power Dissipation	PD	62.5	W	
6	Surge Voltage	V _{surge}	50	V	

Note: 1) The temperature of all items shall be Ta=25°C except storage temperature and operating ambient temperature.



Eff. Date	Eff. Date	Eff. Date	Eff. Date
12-DEC-95	11-JUL-98		

Prepared		Product Specifications AN7161N	Rev. No.	5-1
Checked			Total Page	7
Approved			Page No.	2

B Electrical Characteristics (Unless otherwise specified, the ambient temperature is 25°C ± 2°C)									
No	Item	Symbol	Test Circuit	Conditions	Limits			Unit	Note
					min	typ	max		
1	Quiescent Circuit Current	I _{CQ}	1	V _{CC} =15V, V _{in} =0V	-	45	75	mA	
Power Amplifier (V _{CC} =15V, R _L =4Ω, freq.=1kHz)									
2	Output Noise Voltage	V _N	1	f=15Hz ~ 30kHz, 12dB/oct, R _g =10kΩ	-	0.6	1.0	mV	
3	Voltage Gain	G _V	1	V _{in} =5mV	48.5	50.5	52.5	dB	
4	Total Harmonic Distortion	THD	1	V _{in} =5mV	-	0.15	0.5	%	
5	Maximum Power Output	P _O	1	THD=10%	20	23	-	W	
6	Output Offset Voltage	V _{OS}	1	R _g =0Ω	-	-	150	mV	
Headphone Amplifier (V _{CC} =15V, R _L =33Ω, freq.=1kHz)									
7	Output Noise Voltage	V _{N-H}	1	f=15Hz ~ 30kHz, 12dB/oct, R _g =10kΩ	-	0.1	0.7	mV	
8	Voltage Gain	G _{V-H}	1	V _{in} =10mV Power Amplifier mute	17.5	19.5	21.5	dB	
9	Maximum Output Power	P _{O-H}	1	THD=1% Power Amplifier mute	10	-	-	mW	

Eff. Date	Eff. Date	Eff. Date	Eff. Date
12-DEC-95	11-JUL-98		

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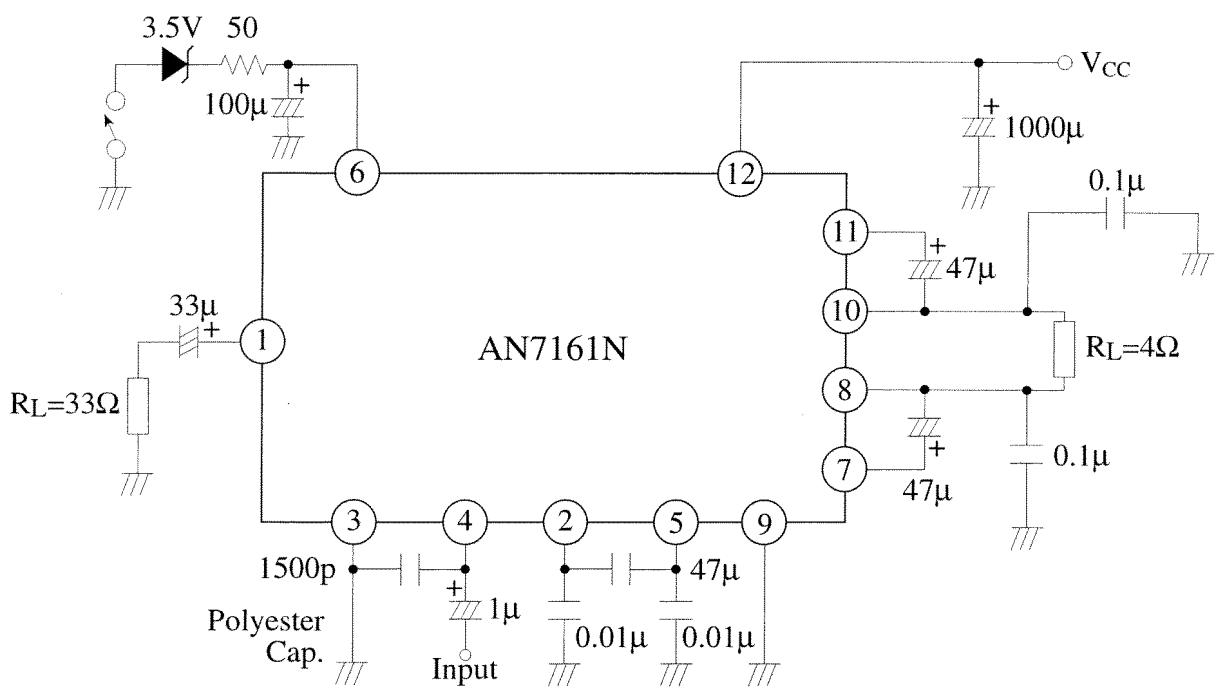
Product Specifications

AN7161N

Total Page	7
Page No.	3

(Description of test circuit and test method)

Test Circuit 1



Eff. Date	Eff. Date	Eff. Date	Eff. Date
12-DEC-95	11-JUL-98		

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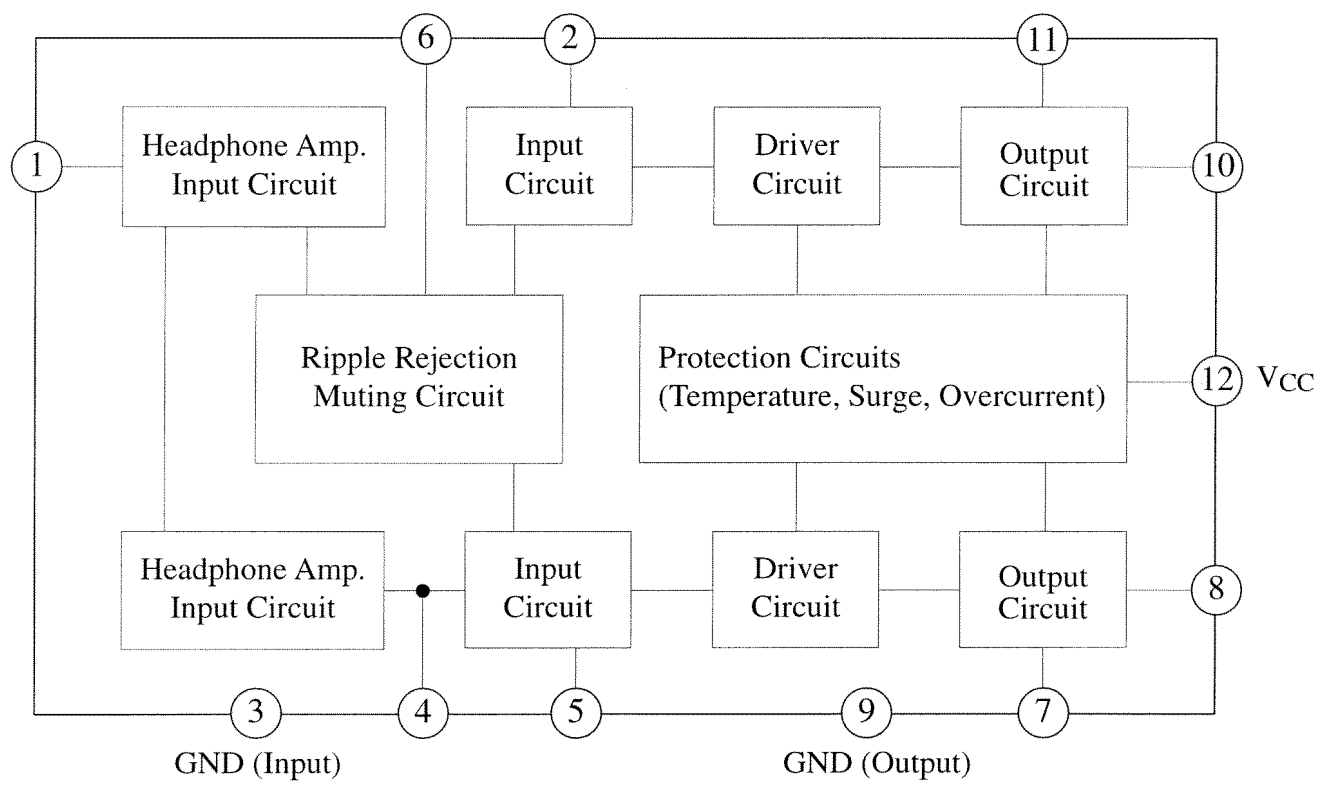
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Product Specifications

AN7161N

Page No.	4
Total Page	7

Circuit Function Block Diagram



Pin Descriptions

Pin No.	Description	Pin No.	Description
1	Output (Headphone)	7	Bootstrap Channel 1
2	Negative Feedback Channel 2	8	Output Channel 1
3	GND (Input)	9	GND (Output)
4	Input	10	Output Channel 2
5	Negative Feedback Channel 1	11	Bootstrap Channel 2
6	Ripple Filter	12	VCC

Eff. Date	Eff. Date	Eff. Date	Eff. Date
12-DEC-95	11-JUL-98		

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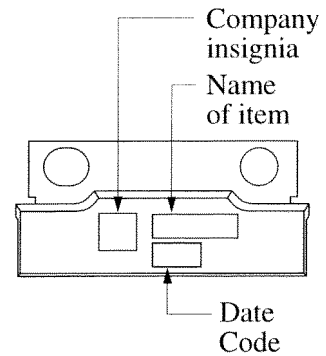
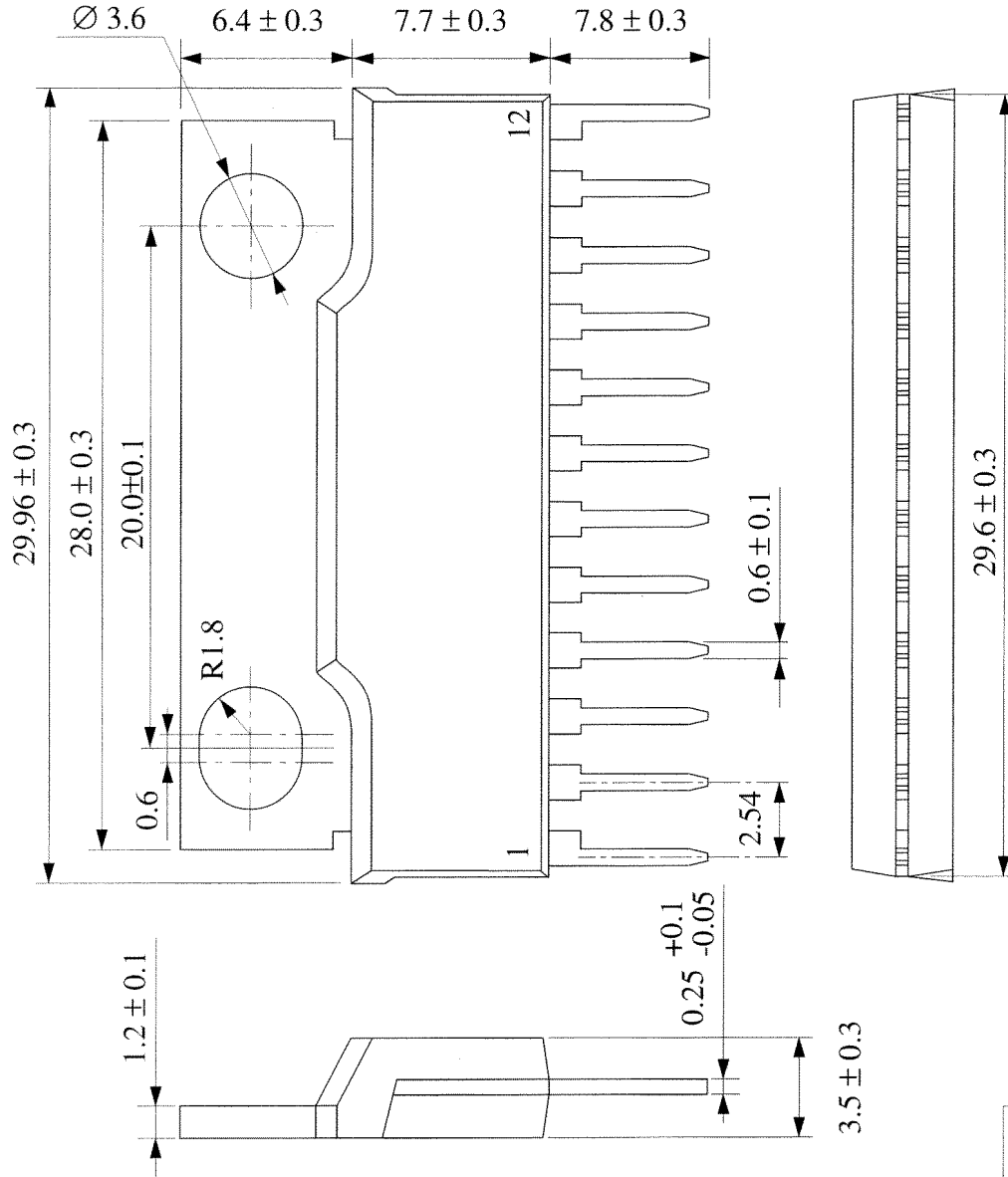
Product Specifications

AN7161N

Ref. No.	5
Total Page	7
Page No.	5

Package Name FP-12S

Unit : mm



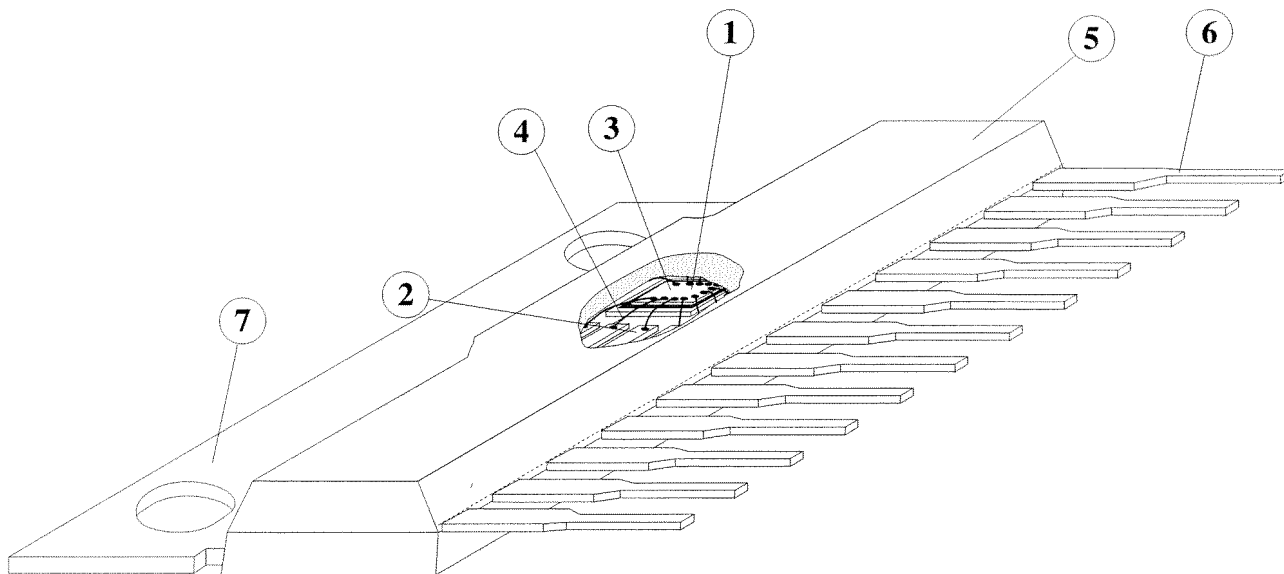
Eff. Date	Eff. Date	Eff. Date	Eff. Date
12-DEC-95	11-JUL-98		

Prepared		Product Specifications AN7161N	EXTERNAL ISSUE	
Checked			Total Page	7
Approved			Page No.	6

(Structure Description)

Chip surface passivation	SiN, PSG, Others ()	①
Lead frame material	Fe group, Cu group, Others ()	②, ⑥
Inner lead surface process	Ag plating, Au plating, Others ()	②
Outer lead surface process	Solder plating, Solder dip, Others ()	⑥
Chip mounting method	Ag paste, Au-Si alloy, Solder, Others ()	③
Wire bonding method	Thermalsonic bonding, Others ()	④
Wire material, Diameter	Au, Diameter <u>50</u> μm Others ()	④
Mold material	Epoxy, Others ()	⑤
Molding method	Transfer mold, Multiplunger mold, Others ()	⑤
Fin material	Cu Group Others ()	⑦

Package FP-12S



Eff. Date	Eff. Date	Eff. Date	Eff. Date
12-DEC-95	11-JUL-98		

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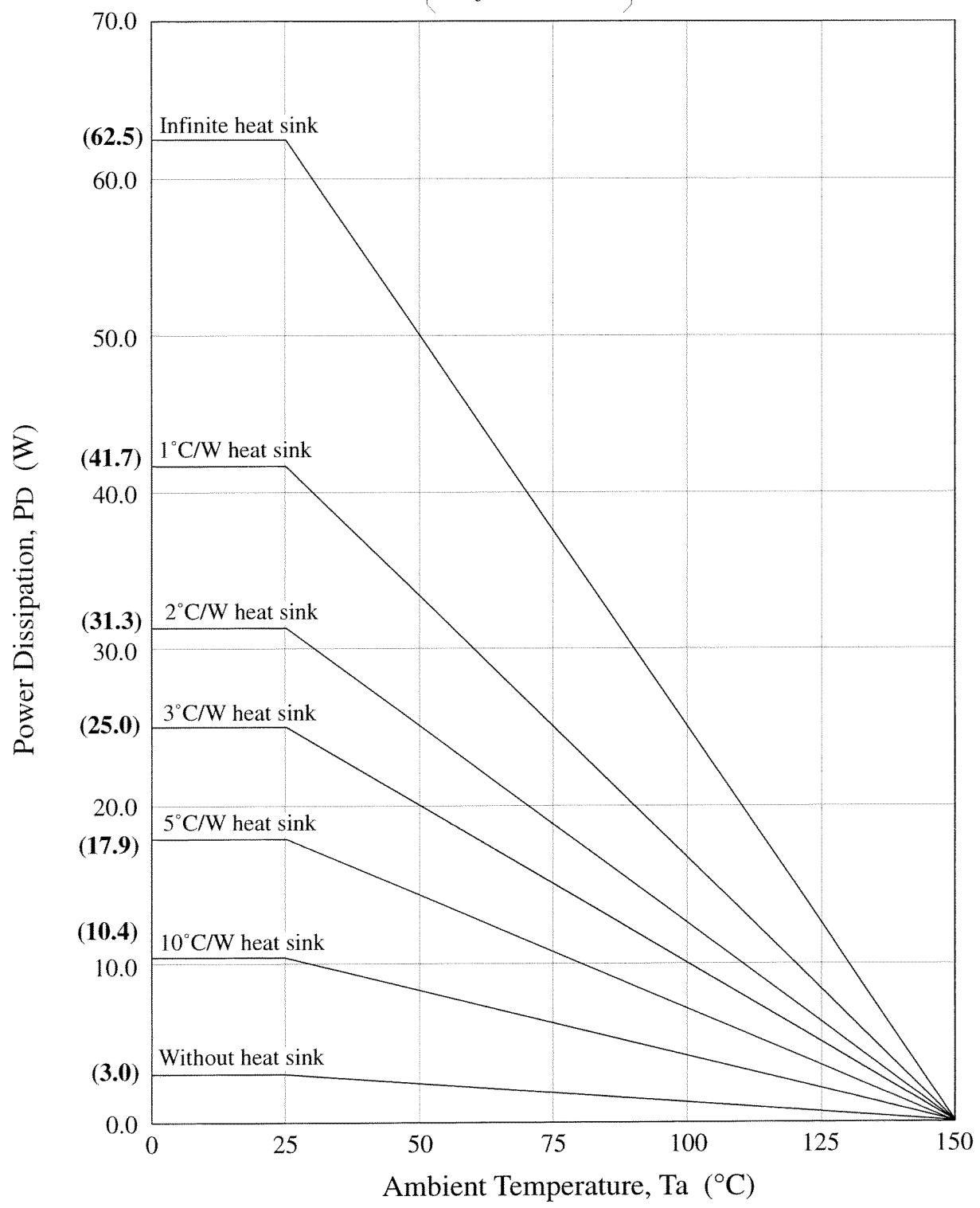
Product Specifications
(Technical Data)
AN7161N

Ref No.	
Total Page	7
Page No.	7

FP-12S Package Power Dissipation

$P_D - T_a$

$R_{th(j-c)} = 2^{\circ}C/W$
 $R_{th(j-a)} = 42^{\circ}C/W$



Eff. Date	Eff. Date	Eff. Date	Eff. Date
12-DEC-95	11-JUL-98		