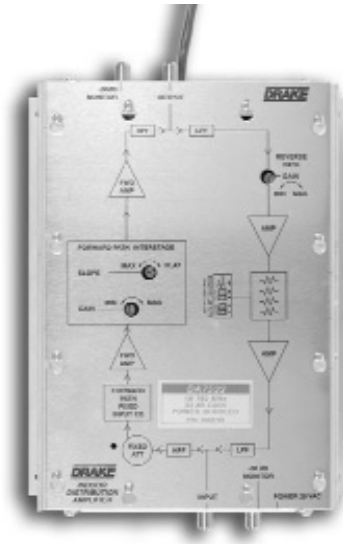




DA & DAR Series Distribution Amplifiers

DA7533 / DA7543 / DA8632 / DA8642

Standalone Power Doubling Distribution Amplifier



The R.L. Drake model DA7533, DA7543, DA8632, and DA8642 broadband distribution amplifiers are designed for indoor use in both residential and commercial buildings where RF signal distribution in the frequency range of 49 to 750 or 860 MHz is required. Each model incorporates a push-pull hybrid input preamp and a power doubled hybrid output amplifier to provide a very low distortion signal for a cable television "drop", the output of an SMATV headend, or a small CATV headend. The Gain and Slope control both have a range of 10 dB minimum and operate between the preamp hybrid and the output hybrid to maintain a low noise figure over a wide range of gain and slope settings.

Double-sided plated through hole, glass epoxy printed circuit boards, and SMT construction are used for low losses and maximum reliability.

The unit features three user selectable return path choices (internal jumper selectable):

- 1) No return path
- 2) Passive return path with variable 10 dB attenuator
- 3) Built in active return path

DAR8642 / DAR5633, DAR8618, DAR7542 / DAR7533

Rack Mounted Power Doubling Distribution Amplifier



The R.L. Drake model DAR8642, DAR5633, DAR8618, DAR7542, and DAR7533 broadband distribution amplifiers are designed for indoor headend use in both residential and commercial buildings where RF signal distribution in the frequency range of 54 to 750 or 860 MHz is required.

Each model incorporates a push-pull hybrid input preamp (except the DAR8618) and a power doubled hybrid output amplifier to provide a very low distortion signal for launch amplifier applications in the output of an SMATV and CATV headend. The Gain and Slope controls both have a range of 10 dB minimum and operate between the preamp hybrid and the output hybrid to maintain a low noise figure over a wide range of gain and slope settings. The DAR8618 has a power doubled output hybrid with no input preamplifier and no adjustable gain and slope controls.

All models have a provision for optional fixed input attenuators and equalizers.

Double-sided, plated through hole, glass epoxy printed circuit boards, and SMT construction are used for low losses and maximum reliability.

All DAR series models include a built-in diplexer filter. This allows the return path energy that is present at the output port of the DAR to be separated from the DAR output and passed to the return path output port.

Input and output test connectors are provided for convenient monitoring of the signal path. The amplifier circuitry is designed for maximum stability, low distortion, low noise figure, and is protected in a rugged aluminum housing.

DA & DAR Series Distribution Amplifiers

DA Series Stalalone Power Doubling Distribution Amplifier Specifications

	DA7533	DA7543	DA8632	DA8642	U/M
Frequency Coverage (forward path):	49 to 750	49 to 750	49 to 860	49 to 860	MHz
Frequency Coverage (return path):	5 to 36	5 to 36	5 to 36	5 to 36	MHz
Gain (forward path):	33	43	32	42	dB
Active Return Path Gain (minimum):	20	20	20	20	dB
Return Path Input Attenuator (adjustable):	0 to 10	0 to 10	0 to 10	0 to 10	dB
Noise Figure (maximum):	7	6.5	7.5	7	dB
Return Loss, Input and Output:	14	14	12	12	dB
Input Level (maximum without using fixed input attenuator):	+20	+10	+18	+7	dBmV
Optimum Input Level Range:	+10 to +15	+0 to +5	+7 to +12	-3 to +2	dBmV
Forward Path Nonlinear Distortions					
DA7533 / DA7543	(110 channel loading, +44 dBmV output per channel)				
DA8632 / DA8642	(129 channel loading, +40 dBmV output per channel)				
Composite Triple Beat:	-58	-58	-60	-60	dB
Composite Second Order:	-58	-58	-58	-58	dB
Cross-modulation:	-62	-62	-64	-64	dB
Power Requirement:	26 VAC from supplied transformer with six foot amplifier-to-transformer cable				
Power Transformer:	Supplied transformer has 120 VAC/60 Hz $\pm 10\%$ input requirement at 35 W. Output is 26.3 VAC with screw terminals for attaching power cable from amplifier. Supplied 120 volt 3-wire line cord is six feet long.				
Size:	10.25"L x 7.25"W x 2.75"D (26 x 18.4 x 7 cm)				
Weight:	6 lbs, 12 oz (14.9 k), including AC adapter				

DA Series Stalalone Power Doubling Distribution Amplifier Specifications

	DAR8642	DAR8633	DAR8618	DAR7542	DAR7533	U/M
Frequency Coverage (forward path):	54 to 860	54 to 860	54 to 860	54 to 750	54 to 750	MHz
Frequency Coverage (return path):	5 to 42	5 to 42	5 to 42	5 to 42	5 to 42	MHz
Gain:	42	33	18	42	33	dB
Noise Figure (maximum):	7	7.5	7.5	6.5	7	dB
Channel Loading:	129	129	129	110	110	channels
Output Level (max per channel for specified distortion):	+40	+40	+40	+44	+44	dBmV
Input Level (maximum without using fixed input attenuator):	+7	+18	+22	+10	+20	dBmV
Optimum Input Level Range:	-3 to +2	+7 to +12	N/A	+0 to +5	+10 to +15	dBmV
Forward Path Nonlinear Distortions						
Composite Triple Beat:	-60	-60	-61	-58	-58	dB
Composite Second Order:	-60	-60	-60	-58	-58	dB
Cross-modulation	-64	-64	-68	-60	-60	dB
Power Requirement:	115 VAC, 60 Hz, 24 Watts (Model DAR8618 - 18 watts)					
Size:	19" W x 7.5"L x 1.75"D (48.3 x 19.1 x 4.5 cm)					
Weight:	6 lbs, 4 oz (2.9 kg)					

Specifications common to all models

Forward Gain Adjustment (except DAR8618):	10 dB minimum
Slope Control Adjustment (54 MHz):	10 dB minimum
Input/Output Impedances:	75 ohms
Return Loss, Input and Output:	14 dB
Monitor Port Levels Input and Output:	-30 dB
Fixed Input Attenuator:	Plug-in (SXP type) available
Fixed Input Equalizer:	Plug-in (QSA type) available
Hum Modulation:	-70 dB
RF Shielding:	Leakage complies with FCC part 76
Operating Temperature:	-20° to 60°C