

# **BALDOR**® • **RELIANCE**

## **Product Information Packet**

### **D50125RS-BV**

**125HP, 1750RPM, DC, 3212ATZ, DPG-FV,**

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Part Detail			
Type:	DC	Prod. Type:	TR
Power Code:	C	Weight:	1290
Frame Group:	LC 3212ATZ	Mounting Pos.:	F2
HP:	125	Enclosure:	DPFV
RPM:	1750/2000	Wound:	STAB SHUNT
Service Factor:	1.0	Arm V:	500
Arm A:	203.00	Field V:	300
Field A:	4.40	Field A Hot:	3.18/2.59
Insulation Class:	F	Ambient:	40
Duty:	CONT	DE Bearing:	70BC03J30X
ODE Bearing:	60BC02J30X	Brushes:	419904-52Z
Brush Qty.:			

**INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS - RPM III**

ENCLOSURE: DRIP-PROOF FULLY-GUARDED      COOLING: FORCE VENTILATED WITH INTEGRAL BLOWER AND MOTOR AIR FILTERED-SPECIAL BAFFLE  
 MOUNTING: FOOT      SPLASHPROOF

FRAMES SC3210ATZ THRU ULC3214ATZ

DIMENSIONS ARE IN INCHES

FRAME	XC	XE	XF	XO
SC3210ATZ-ULC3214ATZ	4.00	10.00	20.25	31.12

FRAME	A	BX (1)	E	G	H	HG	J	O	P	T	BA	K	FK	STD.	LG (8)	BK
SC3210ATZ-ULC3214ATZ	15.50	8.00	6.25	.75	.69	2.25	3.00	15.81	15.62	3.54	5.25	6.75	7.94	10.44	4.00	

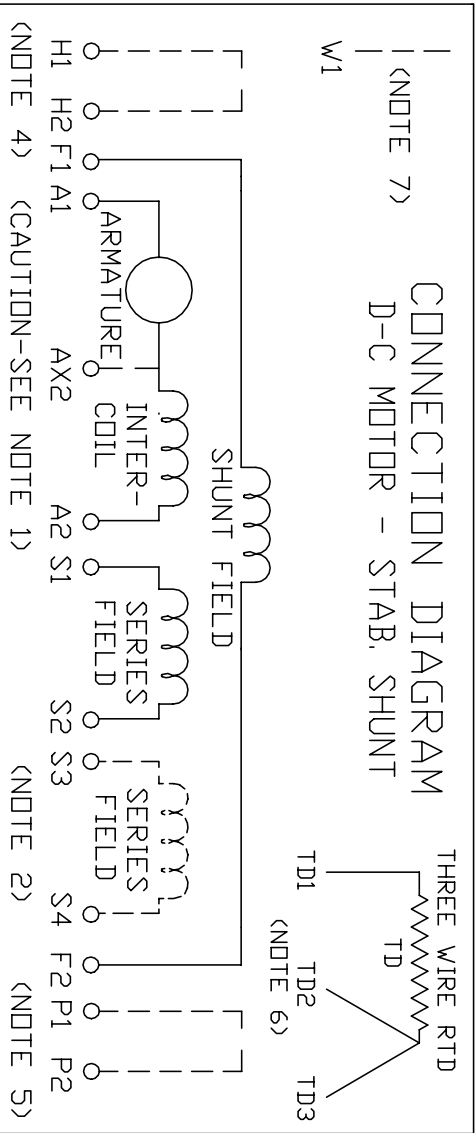
FRAME	METHOD OF DRIVE	(7)	B	DRIVE END SHAFT AND KEY										OPPOSITE DRIVE END SHAFT AND KEY (5)			WT.					
FRAME	DRIVE	STD.	LLC (8)	BS	ZF	N	N-W	ULC (2)	V	FR (3)	ISO	LG (4)	FN	FN-FW	FR (2)	FR (3)	SD	LG (4)	BS.			
SC3210ATZ-LSC3210ATZ	COUPLED	36.25	38.75	28.31	30.81	13.38	20.00	5.50	5.25	2.625	5.00	2.275	6.25	4.00	4.75	4.50	2.250	4.25	1.972	500	3.25	1115
ULC3210ATZ-ULC3210ATZ	BELTED	36.75	39.25	28.31	30.81	13.38	20.00	6.00	5.75	2.875	5.50	2.450	7.50	4.25	4.75	4.50	2.250	4.25	1.972	500	3.25	1120
MC3210ATZ-LMC3210ATZ	COUPLED	39.25	41.75	31.31	33.81	16.38	25.00	5.50	5.25	2.625	5.00	2.275	6.25	4.00	4.75	4.50	2.250	4.25	1.972	500	3.25	1210
ULC3210ATZ-ULC3210ATZ	BELTED	39.75	42.25	31.31	33.81	16.38	25.00	6.00	5.75	2.875	5.50	2.450	7.50	4.25	4.75	4.50	2.250	4.25	1.972	500	3.25	1215
LC3212ATZ-LC3212ATZ	COUPLED	41.25	43.75	33.31	35.81	18.38	25.00	5.50	5.25	2.625	5.00	2.275	6.25	4.00	4.75	4.50	2.250	4.25	1.972	500	3.25	1290
ULC3212ATZ-ULC3212ATZ	BELTED	41.75	44.25	33.31	35.81	18.38	25.00	6.00	5.75	2.875	5.50	2.450	7.50	4.25	4.75	4.50	2.250	4.25	1.972	500	3.25	1295
C3214ATZ-LC3214ATZ	COUPLED	46.25	48.75	38.31	40.81	23.38	30.00	5.50	5.25	2.625	5.00	2.275	6.25	4.00	4.75	4.50	2.250	4.25	1.972	500	3.25	1470
ULC3214ATZ-LC3214ATZ	BELTED	46.75	49.25	38.31	40.81	23.38	30.00	6.00	5.75	2.875	5.50	2.450	7.50	4.25	4.75	4.50	2.250	4.25	1.972	500	3.25	1475

(1) \*D\* DIMENSION WILL NOT BE EXCEEDED. SHIMS UP TO .06 INCHES IN THICKNESS ARE USUALLY REQUIRED FOR COUPLED OR GEARED MACHINES.  
 (2) \*F\* & \*FW\* VARY----- .000 - .01  
 (3) \*R\* & \*FR\* VARY----- .000 - .015  
 (4) TERMINAL BOX VARIES WITH H.P. FOR DIMENSIONS \*AA\*, \*AB\*, \*AC\*, \*AF\*, \*X\* AND \*Y\*. REFER TO BOX D/S. (STD. 699979-1, \*X/P\* 609979-2, MILL 609979-3)  
 (5) OPPOSITE DRIVE END SHAFT SUPPLIED ONLY WHEN SPECIFIED.  
 (6) MOTOR SHAFT TAPPED FOR SCREW IN STUB SHAFT.  
 (7) WHEN THE MOTOR APPLICATION DOES NOT REQUIRE THE USE OF DRIP DRIVE END, ADD .25 TO \*C\* DIM. FOR BRACKET COVER.  
 (8) DIMENSION FOR FRAMES WITH PREFIX LSC, LMC, LLC, LC, ULSC, ULMC, ULLC OR ULC.  
 (9) FOR HORIZONTAL APPLICATIONS ONLY.

TERMINAL BOX CAN BE ROTATED FOR LEAD OUTLET AT TOP, SIDES OR BOTTOM.  
 TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2, W-1, V-4, V-5, W-7, OR C-1 MOUNTING IS SPECIFIED.  
 BOX LOCATED ON TOP WHEN SPECIFIED.  
 BLOWER ASSEMBLY CAN BE LOCATED AT POSITIONS 1, 2 OR 4, EXCEPT BLOWER ASSEMBLY AND TERMINAL BOX CAN NOT BE LOCATED AT THE SAME POSITION.  
 MOTOR WEIGHT MAY VARY 15% FOR NON-STANDARD RATINGS AND/OR ACCESSORIES.  
 IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

REV. DESC: LOADED TO BUS	VERSION: 00	TDR: 0000005780087	<b>BALDOR</b> DIMENSION DRAWING, SC3210ATZ - ULC3214ATZ, DPG, FOOT MTG SH 1 of 1
REV. LTR: -	REVISED: 03; 52: 44 01/28/2011	BY: CONNAS	
FILE: \RGG\00016\046	MTL: -		



ARMATURE AND FIELD EXTERNAL CONNECTIONS  
WARNING- SEE NOTE 8 FOR GROUNDING INSTRUCTIONS



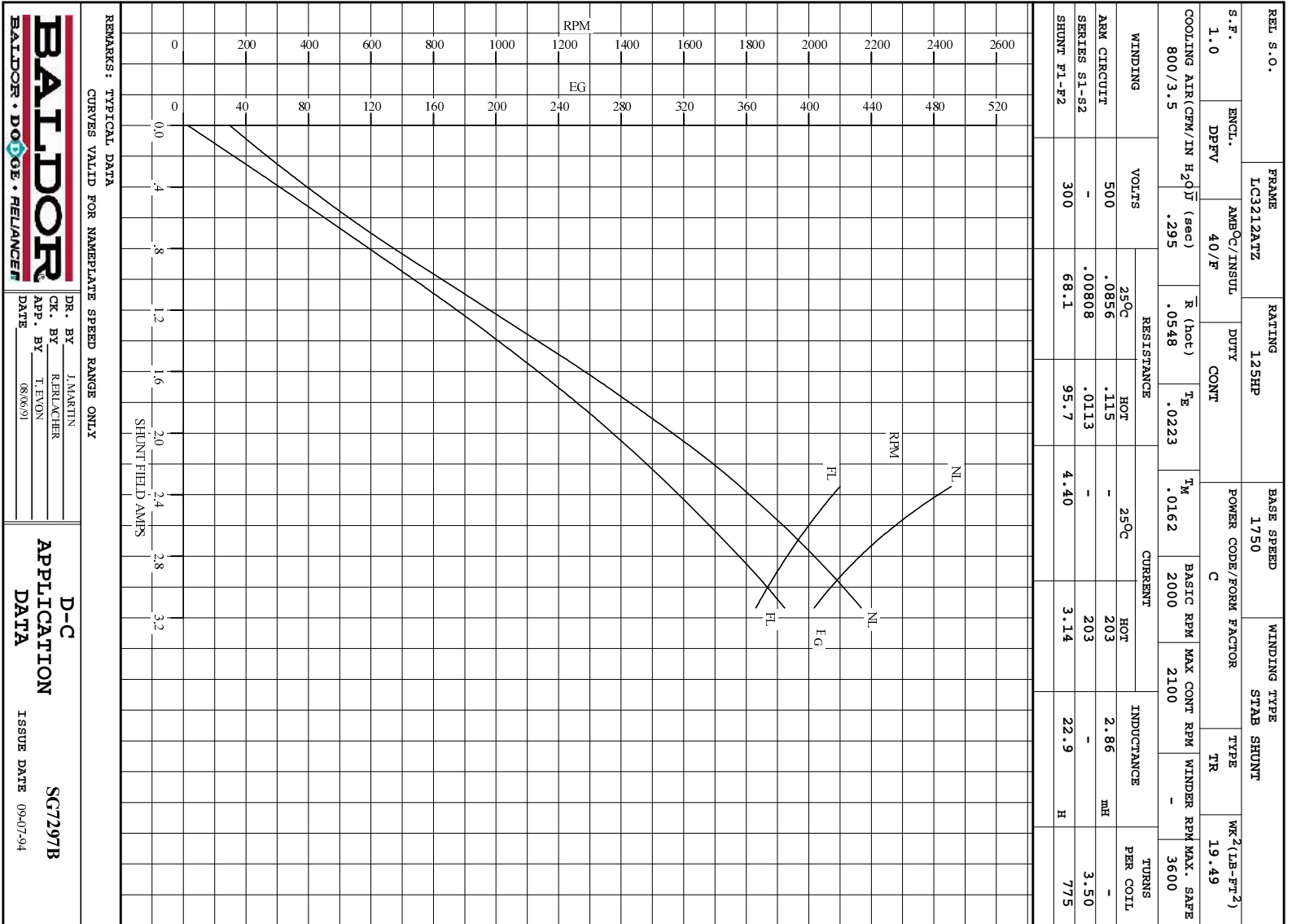
ROTATION FACING COMMUTATOR END

1. **CAUTION** — ARMATURE AND SERIES FIELD MAY HAVE MULTIPLE LEADS. CONNECT ALL LUGS WITH THE SAME MARKING TOGETHER.
2. OPTIONAL SERIES FIELD IS MARKED S3 AND S4. FOR CUMULATIVE SERIES FIELD, CONNECT S3 TO S2 AND CONNECT S4 TO NEGATIVE. FOR DIFFERENTIAL SERIES FIELD CONNECT S4 TO S2 AND S3 TO NEGATIVE.
3. OPTIONAL CONTROL SIGNAL LEAD IS MARKED AX2. ALWAYS TAKE INTERPOLE DROP BETWEEN A2 AND AX2. NOTE: NEMA DESIGNATION FOR AX2 IS LETTER C.
4. SPACE HEATERS, WHEN PROVIDED, WILL HAVE LEADS MARKED H1 AND H2, H3, H4, ETC.
5. THERMAL PROTECTOR, WHEN PROVIDED, WILL HAVE LEADS MARKED P1 AND P2, P3, P4, ETC.
6. WINDING RTDS, WHEN PROVIDED, WILL HAVE LEADS MARKED TD1, TD2, & TD3.
7. BRUSH WEAR SENSOR, WHEN PROVIDED, WILL HAVE LEAD MARKED W1.
8. **WARNING** — MOTOR MUST BE GROUNDED TO PREVENT SERIOUS INJURIES TO PERSONNEL. GROUND THE MOTOR PER IEC, NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL ELECTRICAL CODES. A TAPPED HOLE IS PROVIDED IN THE CONDUIT BOX, ON THE FOOT. FRAME BRACE OR OPPOSITE OPPOSITE DRIVE END BRACKET, ADJACENT TO THE TERMINAL BOX FOR FOR MOTOR GROUNDING. GROUND LEAD, WHEN PROVIDED, WILL BE GREEN.

CUSTOMER \_\_\_\_\_ RELIANCE  
ORDER NO. \_\_\_\_\_ S.D. NO. \_\_\_\_\_

<p><b>RELIANCE ELECTRIC</b></p> <p>CLEVELAND, OHIO 44117 U.S.A.</p>	<p>Rev. by <u>N.L. EVANS</u> Ck. by <u>N. JESCHKE</u> App. by <u>E. L. HINER</u> DATE <u>5-5-69</u></p>
<p><b>CONNECTION DIAGRAM</b></p> <p><b>406770-1</b></p> <p>ORIGINAL AT RCC</p>	

C/R 290048, 354478, 354480




REL S.O.	FRAME	RATING	RPM	ARM. VOLTS	ARM. AMPS
	LC3212ATZ	125HP	1750	500	203
WINDING TYPE		S.F.	ENCL.	AMB °C/INSUL	DUTY
STAB. SHUNT		1.0	DPFV	40/F	CONT
					300
POWER CODE	TYPE	WK 2 (LB-PT 2)	HOT ARM. CIR. RES.	FLD. AMPS@25 °C	HOT FIELD RES
C	TR	19.49	.115	4.40	95.6
ARM. CIR. IND. (mh)	FIELD IND. (H)	COOLING AIR (CFM/IN H 20)		TURNS PER COIL	TEST DATE
2.86	22.8	800/3.5		SHUNT/SERIES	775/3.5
LOAD PERFORMANCE					

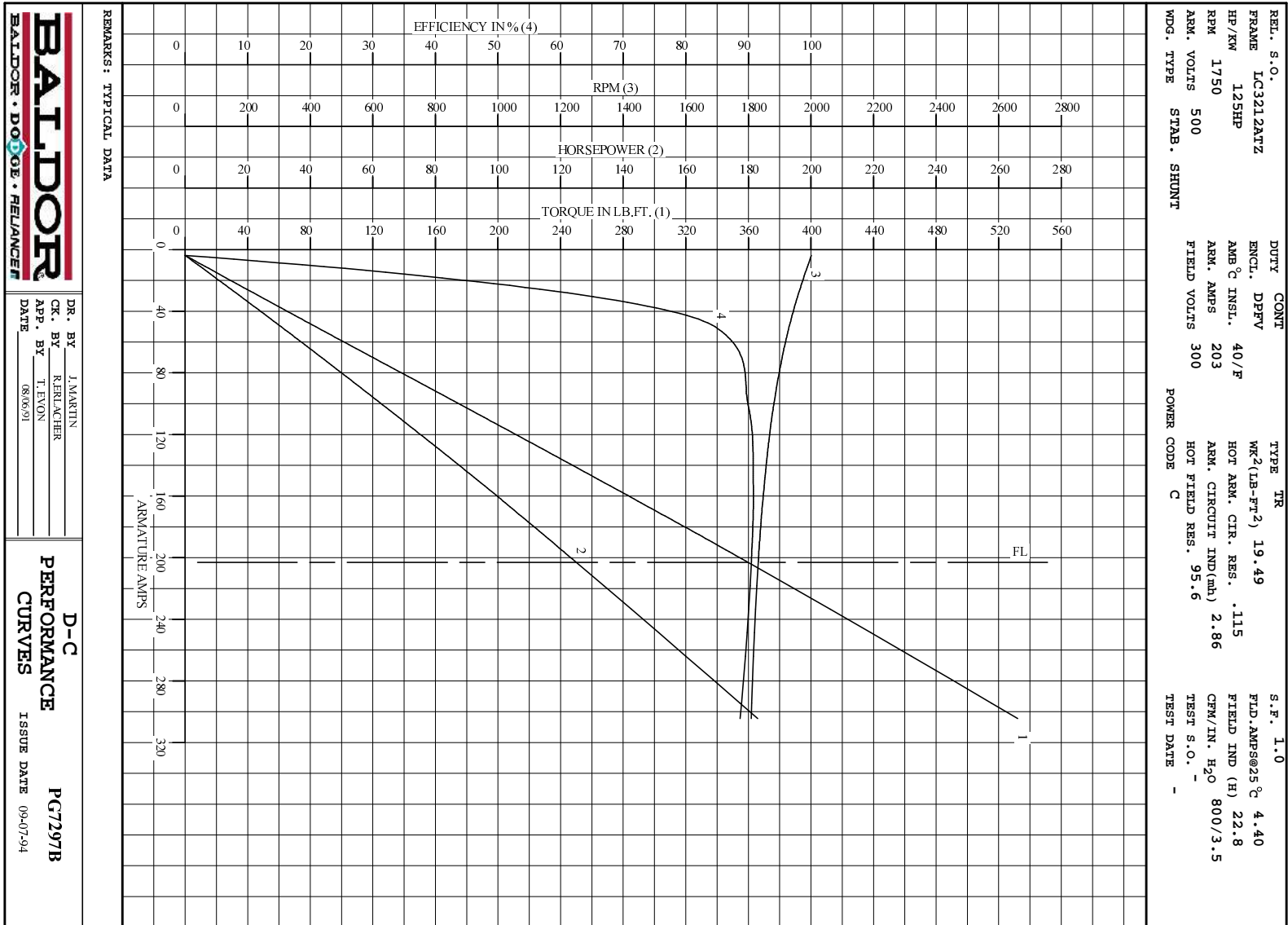
LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	RPM	% EFFICIENCY
NO LOAD	3.7	0	0	2002	0
1/4	51	84.8	31.1	1930	85.0
2/4	102	178	63.6	1881	90.0
3/4	152	270	95.0	1851	90.8
4/4	203	360	125	1832	90.5
O.L.	305	532	183	1809	88.7

RPM VS. FIELD AMPS			Eg VS. FIELD AMPS	
FIELD AMPS	RPM N.L.	RPM F.L.	Eg N.L. @ BASE SPEED	Eg F.L. @ BASE SPEED
3.13	2001	1831	433	384
2.93	2097	1887	417	367
2.74	2194	1950	398	350
2.54	2312	2020	378	331
2.34	2455	2100	356	311

MAXIMUM SAFE SPEED = 3600 RPM

REMARKS: TYPICAL DATA

	DR. BY J. MARTIN	<b>D-C MOTOR PERFORMANCE DATA</b> DG7297B ISSUE DATE 09-07-94
	CK. BY R. BRACKNER	
	APP. BY T. EVON DATE 08/06/91	



DR. BY J. MARTIN  
 CK. BY R. REINACHER  
 APP. BY T. EVONN  
 DATE 08/06/91

**D-C**  
**PERFORMANCE**  
**CURVES** ISSUE DATE 09-07-94  
**PG7297B**