

# **BALDOR® • RELIANCE**

## **Product Information Packet**

### **D5060RS-BV**

**60HP, 1750RPM, DC, 2812ATZ, DPG-FV,**

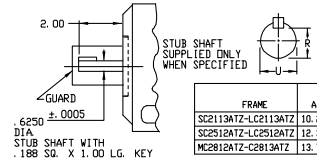
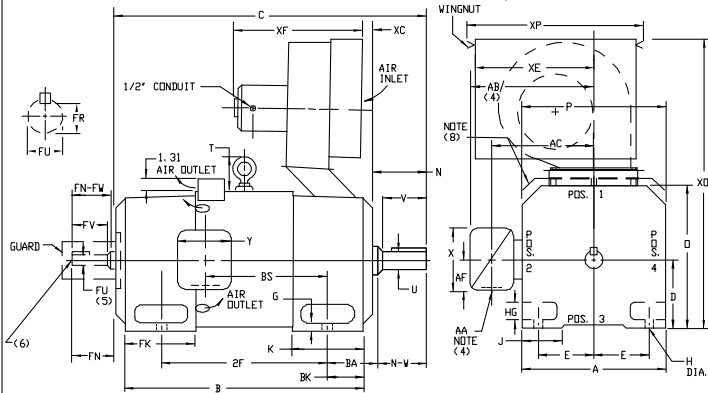
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Part Detail			
Type:	DC	Prod. Type:	TR
Power Code:	C	Weight:	860
Frame Group:	MC 2812ATZ	Mounting Pos.:	F2
HP:	60	Enclosure:	DPFV
RPM:	1750/2100	Wound:	STAB SHUNT
Service Factor:	1.0	Arm V:	500
Arm A:	100.00	Field V:	300
Field A:	3.43	Field A Hot:	2.41/1.90
Insulation Class:	F	Ambient:	40
Duty:	CONT	DE Bearing:	65BC03J30X
ODE Bearing:	55BC02J30X	Brushes:	419904-51AD
Brush Qty.:			

609952-096

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

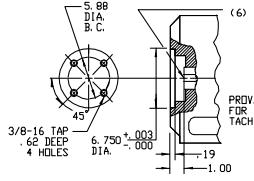
ENCLOSURE: DRIP-PROOF FULLY-GUARDED, SPLASHPROOF  
 COOLING: FORCE VENTILATED WITH INTEGRAL BLOWER AND MOTOR AIR FILTERED-SPECIAL BATTLE  
 MOUNTING: FOOT  
 METHOD OF DRIVE: COUPLED OR BELTED  
 FRAMES SC2113ATZ THRU C2813ATZ  
 ACCESSORIES: PROVISION FOR TACHOMETER MOUNTING ONLY WHEN SPECIFIED



DIMENSIONS ARE IN INCHES

FRAME	XC	XE	XF	XD	XP
SC2113ATZ-LC2113ATZ	1.00	10.00	17.25	28.00	14.50
SC2512ATZ-LC2512ATZ	2.50	10.00	17.25	30.31	14.50
MC2812ATZ-C2813ATZ	1.75	10.00	18.50	30.62	14.50

FRAME	C	B	BS	2F	DRIVE END SHAFT AND KEY					OPPOSITE DRIVE END SHAFT AND KEY(S)					WT. LBS.				
					N	N-V	Y	RC3	SD	LGTH	FN	FN-FW	FK2D	FV		FR2D	SR	LGTH	
SC2113ATZ	28.38	22.50	11.38	18.00	4.00	3.75	1.875	3.50	1.591	500	2.50	3.50	3.25	1.625	3.00	1.416	375	2.25	345
MC2113ATZ	29.62	23.75	12.62	18.00	4.00	3.75	1.875	3.50	1.591	500	2.50	3.50	3.25	1.625	3.00	1.416	375	2.25	370
LC2113ATZ	31.25	25.38	14.25	18.00	4.00	3.75	1.875	3.50	1.591	500	2.50	3.50	3.25	1.625	3.00	1.416	375	2.25	400
SC2512ATZ	31.69	25.06	12.06	20.00	4.50	4.25	2.125	4.00	1.845	500	3.00	4.00	3.75	1.875	3.50	1.591	500	2.50	535
MC2512ATZ	33.19	26.56	13.56	20.00	4.50	4.25	2.125	4.00	1.845	500	3.00	4.00	3.75	1.875	3.50	1.591	500	2.50	570
LC2512ATZ	34.69	28.06	15.06	20.00	4.50	4.25	2.125	4.00	1.845	500	3.00	4.00	3.75	1.875	3.50	1.591	500	2.50	610
MC2812ATZ	37.38	29.94	14.25	22.00	5.00	4.75	2.375	4.50	2.021	625	3.50	4.50	4.25	2.125	4.00	1.845	500	3.00	810
LC2812ATZ	39.62	32.19	16.50	22.00	5.00	4.75	2.375	4.50	2.021	625	3.50	4.50	4.25	2.125	4.00	1.845	500	3.00	885
LC2813ATZ	41.25	33.81	18.12	25.00	5.00	4.75	2.375	4.50	2.021	625	3.50	4.50	4.25	2.125	4.00	1.845	500	3.00	940



- (1) "P" DIMENSION WILL NOT BE EXCEEDED. SHIMS UP TO .03 INCHES IN THICKNESS ARE USUALLY REQUIRED FOR COUPLED OR GEARED MACHINES.
  - (2) "F" AND "FV" VARY .000 - .001.
  - (3) "R" AND "RV" VARY .000 - .015.
  - (4) TERMINAL BOX VARIES WITH H.P. FOR DIMENSIONS "AA", "AB", "AC", "AF", "X" AND "Y". REFER TO BOX DIA. (STD. 609959-1, "X" 609959-2, WILL 609959-3).
  - (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 DPP DRIVE END, ADD .25 TO "C" DIM FOR BRACKET COVER.
  - (8) 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, V=1, W=4, W=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. 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.

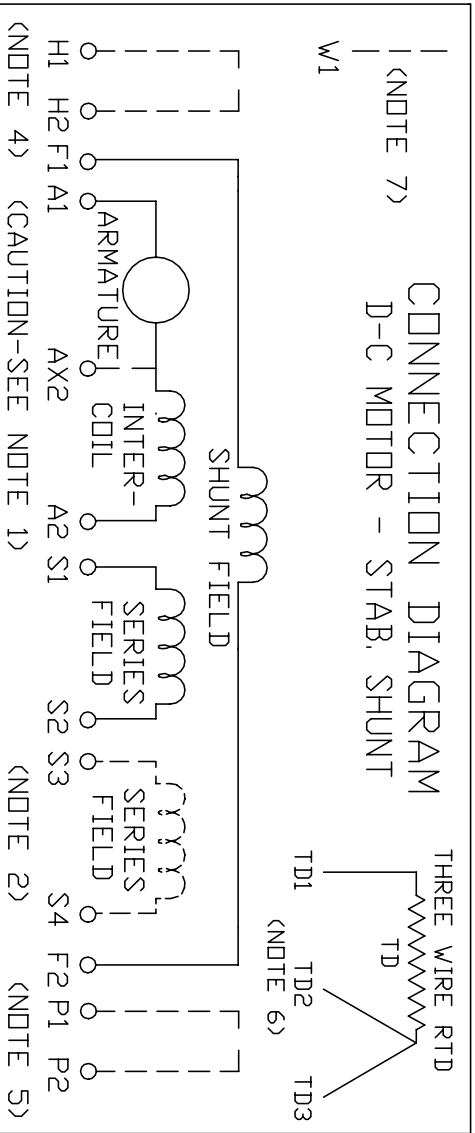
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REV. LTR: -	REVISED: 11:42:37 01/26/2011	BY: CONNAS
FILE: \RGG\00015\585		
MTL: -		

**BALDOR**

DIMENSION DRAWING, SC2113ATZ - C2813ATZ, DPP, FOOT MTC.

SH 1 of 1

609952-096



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

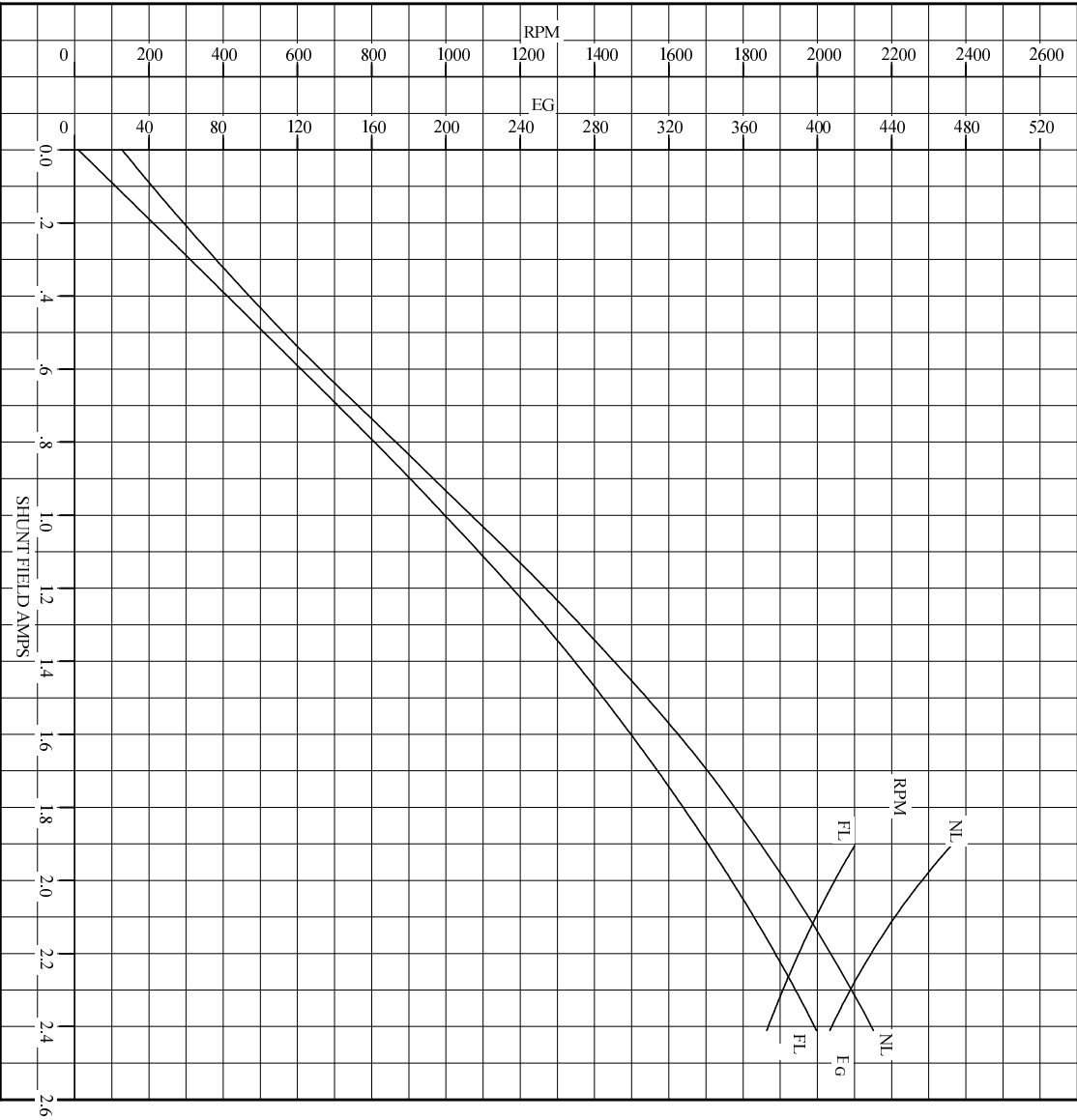
RELIANCE ELECTRIC CLEVELAND, OHIO 44117 U.S.A.	DR. BY N.L. EVANS CK. BY N. JESCHKE APP. BY E. J. HINER DATE 5-5-69
<b>CONNECTION DIAGRAM</b>	<b>406770-1</b> ORIGINAL AT RCC

C/R 290048, 354478, 354480

REL. S.O.	FRAME	RATING	RPM	ARM. VOLTS	ARM. AMPS
	MC2812ATZ	60.0HP	1750	500	100
WINDING TYPE		S.F.	ENCL.	AMB °C/INSUL	DUTY
STAB. SHUNT		1.0	DEPRV	40/F	CONT
					FIELD VOLTS
					300
POWER CODE	TYPE	WK <sup>2</sup> (LB-FT <sup>2</sup> )	HOT ARM. CIR. RES.	FLD. AMPS@25 °C	HOT FIELD RES
C	TR	8.469	.330	3.43	124
ARM. CIR. IND. (mh)	FIELD IND. (H)	COOLING AIR (CFM/IN H 20)		TURNS PER COIL SHUNT/SERIES	TEST DATE
5.12	22.7	550/3.25		900/3.5	-
LOAD PERFORMANCE					
LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	RPM	% EFFICIENCY
NO LOAD	2.4	0	0	2023	0
1/4	25	39.5	14.8	1970	82.7
2/4	50	83.6	30.6	1923	88.2
3/4	75	127	45.7	1889	88.9
4/4	100	169	60.2	1865	88.3
O.L.	150	249	87.2	1836	85.7
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	
	2.41	2022	1865	430	399
	2.28	2096	1913	417	386
	2.15	2170	1968	402	372
	2.03	2257	2030	387	357
	1.90	2359	2100	370	341
REMARKS: TYPICAL DATA      MAXIMUM SAFE SPEED = 4500      RPM					
		DR. BY J. MARTIN CK. BY K. BRACKER APP. BY T. STEVON DATE 07/10/91		D-C MOTOR PERFORMANCE DATA DG7693A ISSUE DATE 05-18-93	

c/r -

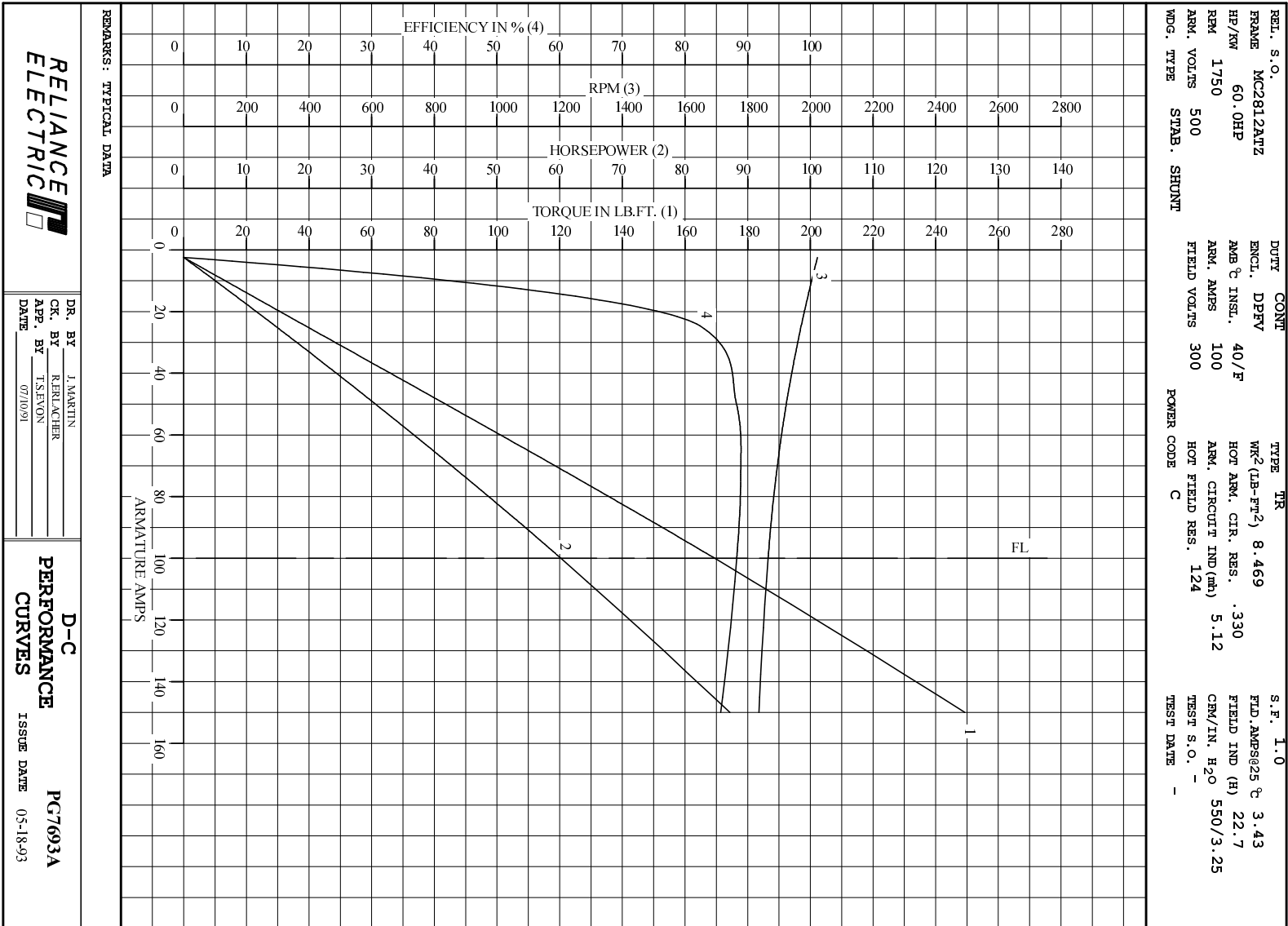
REL. S. O.	FRAME	MC2812ATZ	RATING	60.0HP	BASE SPEED	1750	WINDING TYPE	STAB SHUNT
S. F.	ENCL.	AMB°C/INSUL	DUTY	CONT	POWER CODE/FORM FACTOR	C	TYPE	TR
1.0	DPFV	40/F						WK <sup>2</sup> (LB-FT <sup>2</sup> )
								8.469
COOLING AIR (CFM/IN H <sup>2</sup> O)	R (sec)	R (hot)	T <sub>e</sub>	T <sub>m</sub>	BASIC RPM	MAX CONT RPM	WINDER RPM	MAX. SAFE
550/3.25	.267	.0759	.0145	.0203	1950	2100	-	4500
WINDING	VOLTS	RESISTANCE			CURRENT		INDUCTANCE	TURNS PER COIL
		25°C	HOT	25°C	HOT			
ARM CIRCUIT	500	.236	.330	-	100		5.12 mH	-
SERIES S1-S2	-	.0156	.0210	-	100		-	3.50
SHUNT F1-F2	300	87.4	124	3.43	2.41		22.8 H	900



REMARKS: TYPICAL DATA  
CURVES VALID FOR NAMEPLATE SPEED RANGE ONLY

	DR. BY	J. MARTIN	<b>D-C</b> <b>APPLICATION</b> <b>DATA</b>	SG7693A ISSUE DATE 05-18-93
	CR. BY	R. R. ACHER		
	APP. BY	T. SIMON		
	DATE	07/09/91		

C/R



DR. BY J. MARTIN  
 CK. BY R. REINACHER  
 APP. BY T. SIMON  
 DATE 07/10/91

**D-C**  
**PERFORMANCE**  
**CURVES** ISSUE DATE 05-18-93  
**PG7693A**

C/R