

TRANSISTOR CROSS REFERENCE LIST



ORIGINAL IN-HOUSE NUMBER	ALTERNATE IN-HOUSE NUMBER	FIELD REPLACEMENT NUMBER	NOTES
2N3391(A)*	SPS953 (A,B), MPS8097, 2N6520	MPS-A18, 2N6539, SK3919	Lead configuration different on 2N3391
2N4249	SPS690, 699-1	2N5086, 2N4249	Replace with SPS-761 when used in differential amp
2N3904	SPS7239, MPS3405, MPS3417, 30615	MPS8098	Used in differential amp; replace in pairs
2N4888	SPS761	2N5400, 2N5401	Used in differential amp; replace in pairs
SPS761	2N5400, 2N5401		Used in differential amp; replace in pairs
2N5400	2N5401, SPS761		Used in differential amp; replace in pairs
2N5401	SPS761, 2N5400		Used in differential amp; replace in pairs
SPS953(A,B)*	SK3919, MPS8097, 2N6520	2N3391(A), MPS-A18, 2N6539	A = low noise; B = super low noise
SK3919	SPS953(A,B), MPS8097, 2N6520	2N3391(A)	2N3391 (see above)
2N6520	SPS953(A,B), SK3919, MPS8097	2N3391(A)	2N3391 (see above)
SPS690	2N4249, 699-1	2N5086, 2N4249	
699-1	SPS690, 2N4249	2N4249, 2N5086	
SPS7239	2N3904, 30615	MPS8098, MPS3405, MPS3417	
30615	2N3904, SPS7239		
EP-430	TIP31C, TIP29C	TIP31C, TIP29C	
EP-431	TIP30C	TIP30C	
TIP29C	EP-430	TIP31C	
TIP31C	EP-430	TIP29C	
TIP30C	EP-431		
64278*	65837, SDS7204, 1034	2N3439, MJE 3439	Used as tube drivers; replace in pairs
65837*	SDS7204, 1034	2N3439, MJE 3439	Used as tube drivers; replace in pairs
SJE 6018	355-1	MJE 340, SJE 3517	
SJE 6019		MJE 350	
SDS7204	1034	2N6557	Used as tube drivers; replace in pairs
SDS7205	MPS-U60, BF463, 9058S, 0694	MPS-U60	
2N3638	MPS6533, MPS6534, 2N3644; 2N4403	2N3638, 2N3644	
2N3642	MPS6530, MPS6531	2N3642	2N3642 must be used as positive limiter in Backstage™ 30
MPS6530	2N3642		
MPS6531	2N3642		
MPS6533	2N3638		
MPS6534	2N3638		
2N4403	2N3638		
2N3644	2N3638		
2N4401	2N3642		

SJE 5331	SJE 360, SJE 5919, MJE 243/4 (Warning! See below), M10049 (Warning! See below)	MJE 243	Lead configuration may be different on all crossed
MJE 243/4 M10049	SJE 5331 SJE 5331	MJE 243	WARNING: These parts replace SJE 5331 ONLY in amps with power supply rails of + and - 42 volts or less. Lead configuration may be different on all crossed.
SJE 5332	SJE 5920, FT-417B, MJE 253/4 (Warning! See below), SJE 5986 (Warning! See below), SJE 7036 (Warning! See below)	MJE 253, MJE 15029	Lead configuration may be different on all crossed
MJE 253/4 SJE 5986 SJE 7036	SJE 5332 SJE 5332 SJE 5332		WARNING: These parts replace SJE 5332 ONLY in amps with power supply rails of + and - 42 volts or less. Lead configuration may be different on all crossed.
SJE 360	SJE 5331 (see above)		
SJ6465	MJ4247	MJ4247	
SJ5884		MJE 15028	
CA2004M			
CA2008		TDA2008	
TDA2030			
MJE 700T	SJE 5879	SJE 5879	PNP Darlington output compliment to the MJE 800T (NPN). Replace in pairs!
SJE 5879	MJE 700T		
MJE 800T	SJE 5880	SJE 5880	NPN Darlington output compliment to the MJE 700T (PNP). Replace in pairs!
SJE 5880	MJE 800T		
40411*	60142	2N3772	
60142*	See Summary	2N3772	
62188*	See Summary	2N3773	
62792*	See Summary	2N3055	
64601*	66161	1B05	See CS-800 chronological order of usage
66161*	68271	1B05	See CS-800 chronological order of usage
67068*	68271	1B09	See CS-800 chronological order of usage
67376	SJ6357		See Summary
SJ6392	2N5760, 2N5758, 2N5634, 2N5633, MJ15001	MJ15015, 2N3055A	For reliability reasons, do not mix SJ6392 with alternate number transistors or vice versa. See Summary.
SJ6357,-1,-2	2N5630, 67376	2N3773, MJ15003	See Summary
SJ6344	SJ6387	MJ13330	
SJ6387		MJ13330	See CS-800 chronological order of usage
SJ6343(A,B)		MJ15024	See CS-800 chronological order of usage
SJ6451*		MJ15024	See CS-800 chronological order of usage
68271		MJ15024	Not mixable with Motorola output devices; See CS-800 chronological order of usage
SJ6505		MJ15016, 2N6228	PNP compliment to SJ6392

*Original In-House Part Obsolete; No Longer Available. Use Alternate Part Number or Field Number.

OUTPUT TRANSISTOR SUMMARY

ORIGINAL IN-HOUSE NUMBER	ALTERNATE IN-HOUSE NUMBER	FIELD REPLACEMENT NUMBER	NOTES
40411* 62792* 60142* 62188* 67376		2N3772 2N3055 2N3772 2N3773	Replace all of these devices with SJ6357 as a universal part. All devices must be replaced in any unit. <u>DO NOT MIX!</u>
SJ6392		MJ15015, 2N3055A	Use only to replace other SJ6392's. These are not to be used in other applications. (Other possible numbers: MJ15001, 2N5760, 2N5634, 2N5758) <u>DO NOT MIX!</u>
SJ6357 SJ6357-1 SJ6357-2		MJ15003	These devices are mixable in amplifiers, with the exception of the CS-400

*Original In-House Part Obsolete; No Longer Available.

Note: Save good devices left over for future use.

Our semiconductors are selected for "Safe Operating Area" and Beta range. Commercially available equivalents may not parallel these specs.

SPECIAL APPLICATIONS

ORIGINAL IN-HOUSE NUMBER	FIELD REPLACEMENT NUMBER	NOTES
SAC187	2N6346A	12A, 200V Triac (Output)
SBS14	MBS4992	8V Unidirectional Switch
Q4025		25A, 400VC AC Switch Triac
CL60		Thermistor/In-Rush Current Limiter. 10 Ohms +/- 25% @ 25°C @ 3A RMS = .39 Ohms +/- 25%

CS-800/CHRONOLOGICAL ORDER OF USAGE

Original Device (1976) RCA #64601 - No longer available. Replace with RCA #68271, Part #70468271.

Driver Output for above is #64601 - No longer available. Replace with RCA #68271, Part #70468271.

Later CS-800's (1977) used RCA #66161 - No longer available. Replace with RCA #68271, Part #70468271.

Driver Output for above is RCA #67068 - No longer available. Replace with RCA #68271, Part #70468271.

NOTE: REPLACEMENT OF THE ABOVE DEVICES WITH THE RCA DEVICE #70468271 REQUIRES NO CIRCUIT MODIFICATION. DEVICES MAY BE MIXED OR TOTALLY CHANGED OVER TO #70468271.

Later CS-800's (1978-1979) used Motorola SJ-6451, Part #70406451 - No longer available. Replace all 10 in each module with Motorola #70406343 (6343B). DO NOT MIX #70406343 with #70406451.

Driver Output for above is Motorola #SJ-6387, Part #70406387. SJ-6387 will safely drive Motorola #70406343, #70406343 (A and B), and RCA #68271.

NOTE: DO NOT DRIVE RCA #66161 WITH MOTOROLA #70406387. USE RCA #67068 IF IN STOCK OR USE ANOTHER #66161.

Later CS-800's (1979) used Motorola #6343 or #6343A - No longer available. Replace with Motorola #6343B, Part #70406343.

Current CS-800's (1983-1984) use Motorola #6343B or RCA #68271 alternately - Both are still available. Replace each with same type.

Current CS-800's (1979-Present) also use RCA #68271, Part #70468271. Still available. Replace with same.

NOTE: #6343's, #6343A's and #6343B's MAY BE MIXED AS NECESSARY OR TOTALLY CHANGED OVER TO #70406343.

DO NOT MIX RCA DEVICES WITH MOTOROLA DEVICES!

IC'S

ORIGINAL IN-HOUSE NUMBER	ALTERNATE IN-HOUSE NUMBER	NOTES
SC5278*	LF355, UA741, TL071	Use NE5534 in CS Drive Board Application
LF355*	UA741, TL071	Use NE5534 in CS Drive Board Application
TL071*	UA741, LF355N, UA741, SC5278	
TL072	RC4558, NE5532**	RC4558 replaces TL072 in all but Low Noise Applications, but sometimes will cause scratch or DC offset
UA741	TL071, LF355N, UA741, SC5278	
TL074	TL084, XR4741	XR4741 replaces TL074 in some circuits
TL084	TL074	
XR4741	TL074, TL084	XR4741 used in EQ circuits
RC4558	TL072, MC1458	Replaces TL072 in most applications, but sometimes will cause scratch or DC offset
TL604		CMOS DEVICE - Special handling required
SN99661	TL604	CMOS DEVICE - Special handling required
NE5532**		Now used as Low Noise Input Device for most high-end mixers. <u>No Substitutes!</u>
NE5534		Used in CS Drive Board Application
MC3302	LM3302N	
LM3302N		
LM325		Do not use LM325 with date code 825 through 845
LM3915	No Substitutes	
CA3094	70487478	
70487478	CA3094	
UAA180	No Substitutes	
LM320T	UA7915KC, 79M15C	TO 220 pkg. Neg. 15V Regulator
LM340T	UA7815CKC, 78M15C	TO 220 pkg. Pos. 15V Regulator
UA7915CKC	79M15C, LM320T	TO 220 pkg. Neg. 15V Regulator
UA7815CKC	78M15C, LM340T	TO 220 pkg. Pos. 15V Regulator
79M15C	LM320T, UA7915CKC	TO 220 pkg. Neg. 15V Regulator
78M15C	LM340T, UA7815CKC	TO 220 pkg. Pos. 15V Regulator
MC7815CK		TO 3 pkg. Pos. 15V Regulator
MC7915CK		TO 3 pkg. Neg. 15V Regulator
MC7824CK		TO 3 pkg. Pos. 24V Regulator

*Original In-House Part Obsolete; No Longer Available

**When used as Input Chip in UT Series amps, can cause scratch or DC on Pregain Control

Note: Numbers with No Substitutes must be replaced with the original component number.

FET IN-HOUSE CROSS REFERENCE

ORIGINAL IN-HOUSE NUMBER	VOLTAGE RATING	IN-HOUSE ALTERNATE NUMBER	DESCRIPTION
SPS576*	(40V)	MPF161, 2N5461, J175, SPS3008, 2N5462	P - Channel FET
SPF558*	(25V)	2N5458, 2N5951**	N - Channel FET
MPF161*	(30V)	SPS576, 2N5461, J175**	P - Channel FET
SPS3008	(40V)	MPF161*, 2N5461, J175*, SPS576*	P - Channel FET
2N5458*	(25V)	SPF558, 2N5951**	N - Channel FET
2N5461	(40V)	SPS576, J175**	P - Channel FET
2N5951	(30V)	SPF558**, 2N5458**, SKA3586**, J231	N - Channel FET
E-203*	(40V)	SKA3586, 2N5951**, J231**	N - Channel FET
SKA3586	(40V)	2N5951**, J231**	N - Channel FET
J111	(35V)	J112 (35V)	N - Channel FET (used in special applications)
J174	(30V)	2N5461**, SPS576	P - Channel FET
J175	(30V)	2N5461**, SPS576	P - Channel FET
J231	(40V)	SKA3586**, 2N5951	N - Channel FET
J270	(30V)	SPS576, 2N5461**, SPS3008	P - Channel FET

*Original In-House Part Obsolete; No Longer Available

**WARNING: Basing Different; Check Basing Diagram Below

Note: Use only 40V FET's in all transient suppressor circuits.

FET BASING DIAGRAM

2N5461, 576*, MPF161*, SPS3008

From Bottom



J174, J270, J175

From Bottom



558, 2N5458, J231, J111, J112

From Bottom



SKA3586, 2N5951

From Bottom



DIODES

ORIGINAL IN-HOUSE NUMBER	ALTERNATE IN-HOUSE NUMBER	FIELD REPLACEMENT NUMBER	NOTES
BA5C5*	1N4003	1N4003	1A, 200V
1N4003			1A, 200V
1N4004		1N4004	1A, 200V
1N4007			1A, 1KV
MA5C5*	MR752, P600D		6A, 200V
MR752	P600D		6A, 200V
P600D			6A, 200V
IR20F20	B400	GEA327B	10A, 200V (Stud Mount)
B400*	IR20F20	GEA327B	10A, 200V (Stud Mount)
MR502		1N5402	3A, 200V
MR812			1A, 200V (Fast Recovery Diode)
SR2873		MR2502	2K PIV, 250MA (Tube Flyback Protection)
1N34A			5MA, 60V (Germanium)
1N4148		1N914, 1N4531	10MA, 75V
SZG40102	1N4744	1N4745	15V Zener 1 Watt
SZP30050	1N4744	1N4745	16V Zener 1 Watt
1N4744		1N4745	15V Zener 1 Watt
SZP20100	1N4749		24.5V Zener 1 Watt
1N4749			24.5V Zener 1 Watt
SZ13885	SZ13886	MZ2361	Dual Diode - CAUTION**
SZ13886		MZ2361	Dual Diode - CAUTION**
1N5393			1.5A, 200V
15AF40	KBPC2504		25A, 400V Bridge Rectifier Block
SZG30720		1N978ARL	51V Zener 0.5 Watt

*Original In-House Part Obsolete; No Longer Available

**SZ-13886 is a special selection from MZ2361 for voltage drop characteristics. Commercially available parts may not perform to these specs.