Class C UHF Power Bipolar Transistors

Series	NE Part Number	EIAJ[1] Registered Number	Package Code	ABSOLUTE MAXIMUM RATINGS (T_a = 25 °C)								I_{CBO}		I_{EBO}	
				V_{CBO} (V)	V_{CEO} (V)	V_{EBO} (V)	I_C (A)	$R_{th(j-c)}$ (°C/W)	P_T (W)	T_j (°C)	T_{stg} (°C)	V_{CB} (V)	(mA) MAX.	V_{EB} (V)	(mA) MAX.
NE0500[14] 7 V or 10 V	NE050220-07		20	25	12	2.0	0.75	20	8.75	200	−65 to +150	20	0.1	1.5	0.1
	NE050725-10	2SC3410	25	35	18	3.0	2.0	8	22	200	−65 to +200	20	0.25	2	0.25
NE0500[14] 12 V	NE050214E-12	2SC2586	14E	35	18	3.0	0.4	25	7.0	200	−65 to +200	20	0.1	2	0.1
	NE050214-12	2SC2762	14	35	18	3.0	0.4	25	7.0	200	−65 to +200	20	0.1	2	0.1
	NE050320-12	2SC2081	20	38	18	3.0	0.75	15	10	175	−65 to +175	30	0.25	2	0.25
	NE051025-12	2SC2082	25	38	18	3.0	2.2	6.0	25	175	−65 to +175	30	0.75	2	0.75
	NE051525-12	2SC2083	25	38	18	3.0	3.0	4.4	34	175	−65 to +175	30	1.0	2	1.0
	NEM054029-12	2SC2496A	29	35	18	3.0	10	1.8[6]	100[6]	200	−65 to +150	20	2.0	2	2.0
NE0800[14] 12 V	NE080190-12	2SC2558-KA	90	35	18	3.0	0.25	21	8.3	200	−65 to +200	20	0.1	2	0.1
	NE080191-12	2SC2558-MA	91	35	18	3.0	0.25	21	8.3	200	−65 to +200	20	0.1	2	0.1
	NE080490-12	2SC2559-KA	90	35	18	3.0	1.5	10	17.5	200	−65 to +150	20	0.2	2	0.2
	NE080491-12	2SC2559-MA	91	35	18	3.0	1.5	10	17.5	200	−65 to +150	20	0.15	2	0.15
	NE080481E-12		81	35	18	3.0	1.5	10	17.5	200	−65 to +150	20	0.2	2	0.2
	NE081090-12	2SC2850-KA	90	35	18	3.0	3.0	5	35	200	−65 to +150	20	0.4	2	0.4
	NE081091-12	2SC2850-MA	91	35	18	3.0	3.0	5	35	200	−65 to +150	20	0.4	2	0.4
	NEM082081B-12	2SC3282A	81	35	16	2.5	7.5	2.5	70	200	−65 to +150	20	2.0	2	2.0
	NEM084081B-12	2SC3283A	81	35	16	2.5	15	1.5	120	200	−65 to +150	20	4.0	2	4.0
NE0800[14] 24 V or 28 V	NEL080120-28	2SC3139	20	50	30	3.0	1	15	12	200	−65 to +200	30	0.1	2	0.1
	NEL080200-28	2SC3140	20	50	30	3.0	2	10	17.5	200	−65 to +200	30	0.2	2	0.2
	NEL080525-28	2SC3141	25	50	30	3.0	4	5.5	32	200	−65 to +200	30	0.4	2	0.4
	NEL080581-28	2SC3500(1)	81[13]	50	30	3.0	4.0	5.0	35	200	−65 to +150	30	0.4	2	0.4
	NEM081568-28[5]	2SC3217	68	50	32	3.0	12	1.75	100	200	−65 to +150	30[8]	2.0[8]	2[8]	2.0[8]
	NEM085068-28[5]	2SC3218-M	68	55	32	3.0	15	1.09	160	200	−65 to +150	30[8]	4.0[8]	2[8]	4.0[8]
	NEM060C69-28[5]	2SC3660-M	69	55	32	3.0	24	0.55	320	200	−65 to +150	30[8]	8.0[8]	2[8]	8.0[8]
	NEM080C69-28[5]	2SC3660A	69	55	32	3.0	24	0.55	320	200	−65 to +150	30[8]	8.0[8]	2[8]	8.0[8]
	NEM092081B-28	2SC3537	81	50	50[7]	3.0	3	4	50	200	−65 to +150	30	2.0	2	2.0
	NEM094081B-28	2SC3538	81	50	50[7]	3.0	6	1.6	110	200	−65 to +150	30	4.0	2	4.0
	NEM096081B-28	2SC3539	81	50	50[7]	3.0	9	1.03	170	200	−65 to +150	30	8.0	2	8.0

Notes:
[1] Electronic Industries Association—Japan
[2] Pulsed (PW ≦ 350 μs, Duty Cycle ≦ 2 %)
[3] Emitter and case grounded, f = 1 MHz
[4] At rated power output
[5] Push-Pull structure, Class AB
[6] Pulsed (50 ms)
[7] V_{CER}, R_{BE} = 10 Ω
[8] Each Side
[9] I_q = 150 mA x 2
[10] I_q = 150 mA x 2
[11] I_q = 100 mA x 2
[12] I_q = 400 mA x 2
[13] Emitter Leadless type #81 pkg
[14] WARNING:
These devices contain Beryllium Oxide, the fumes or dust of which is toxic. Do not dismantle or chemically treat this product. Disposal via public waste is strictly forbidden.

ELECTRICAL CHARACTERISTICS (T_a = 25 °C)								PERFORMANCE SPECIFICATION (T_a = 25 °C)							Package Code	NE Part Number	Series
		h_{FE}			C_{cb}[3]					P_{out}			η_c[4]				
V_{CE} (V)	I_C[2] (A)	MIN	TYP	MAX	V_{CB} (V)	TYP	MAX	V_{CC} (V)	f (MHz)	P_{in} (W)	(W) MIN	(W) TYP	(%) MIN	(%) TYP			
7	0.1	20	60	200	10	4	5	7.2	500	0.25	1.26	1.58	50	60	20	NE050220-07	NE0500[14] 7 V or 10 V
10	0.4	20	60	200	10	—	15	9.6	500	1.58	5.6	7.2	60	70	25	NE050725-10	
10	0.1	20	60	200	10	2.5	4.0	12.6	500	0.20	1.1	1.6	55	65	14E	NE050214E-12	NE0500[14] 12 V
10	0.1	20	60	200	10	2.5	4.0	12.6	500	0.25	1.0	1.4	60	80	14	NE050214-12	
10	0.2	20	60	200	10	6	8	12.6	500	0.32	2.8	3.2	55	60	20	NE050320-12	
10	0.6	20	60	200	10	17	22	12.6	500	2.5	7.9	8.9	60	70	25	NE051025-12	
10	0.8	20	60	200	10	24	30	12.6	500	6.3	14.1	15.8	65	75	25	NE051525-12	
10	1.0	20	60	200	10	60	80	13.5	500	10	36	42	55	65	29	NEM054029-12	
10	0.1	20	60	200	10	2.3	3.5	13.5	860	0.1	1.0	1.3	50	55	90	NE080190-12	NE0800[14] 12 V
10	0.1	20	60	200	10	2.3	3.5	13.5	860	0.1	1.0	1.3	50	55	91	NE080191-12	
10	0.3	20	60	200	10	7.0	10	13.5	860	0.89	4.0	6.0	55	65	90	NE080490-12	
10	0.3	20	60	200	10	7.0	10	13.5	860	0.89	4.0	5.0	55	65	91	NE080491-12	
10	0.3	20	60	200	10	7	10	13.5	860	0.89	4.0	6.0	55	60	81	NE080481E-12	
10	0.5	20	60	200	10	14	20	13.5	860	4.0	8.9	10.5	65	75	90	NE081090-12	
10	0.5	20	60	200	10	14	20	13.5	860	4.0	8.9	10.5	65	75	91	NE081091-12	
10	1.0	20	50	200	10	25	35	13.5	860	4	18	22	50	58	81	NEM082081B-12	
10	2.0	20	50	200	10	50	70	13.5	860	8	30	37	50	55	81	NEM084081B-12	
10	0.15	20	60	200	28	2	3.5	24	860	0.1	0.9	1.2		60	20	NEL081020-28	NE0800[14] 24 V or 28 V
10	0.3	20	60	200	28	4	6	24	860	0.25	1.7	2.4		70	20	NEL080220-28	
10	0.6	20	60	200	28	8	12	24	860	0.4	3.6	4.8		65	25	NEL080525-28	
10	0.6	20	60	200	28	8	12	24	860	0.4	3.6	4.8			81[13]	NEL080581-28	
10[8]	0.8[8]	20[8]	60[8]	120[8]	28[8]	24[8]	36[8]	24[9]	860	2	12.6	16		50	68	NEM081568-28[5]	
10[8]	1.0[8]	20[8]	60[8]	120[8]	28[8]	40[8]	60[8]	28[10]	860	10	42	52	40	50	68	NEM085068-28[5]	
10[8]	2.0[8]	30[8]	60[8]	100[8]	28[8]	120[8]	200[8]	28[11]	620	16	89	105	50	60	69	NEM060C69-28[5]	
10[8]	2.0[8]	30[8]	60[8]	120[8]	28[8]	120[8]	200[8]	28[12]	860	25	79	91	40	50	69	NEM080C69-28[5]	
10	1.0[8]	20	60	200	28	25	40	24	900	2.5	15.8	20	50	60	81	NEM092081B-28	
10	2.0[8]	20	60	200	28	50	80	24	900	6.3	32	40	50	60	81	NEM094081B-28	
10	3.0[8]	20	60	200	28	80	140	24	900	10	50	60	45	55	81	NEM096081B-28	

Transistor Packages (Units in mm)

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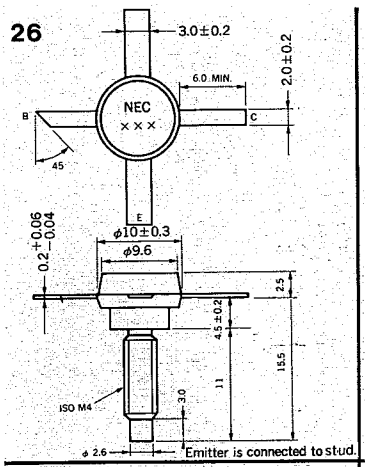

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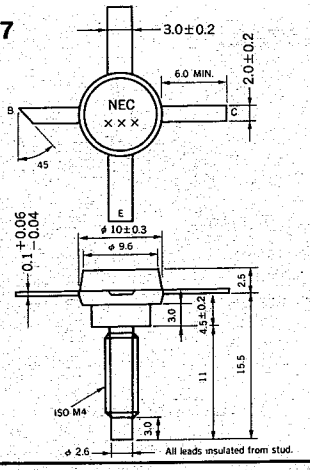

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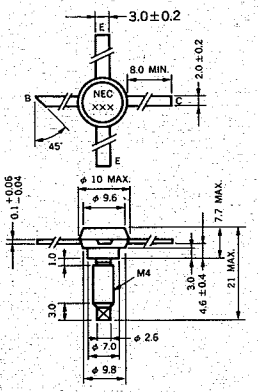
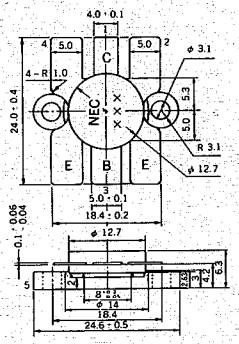


All leads insulated from stud.

29



All leads insulated from stud.

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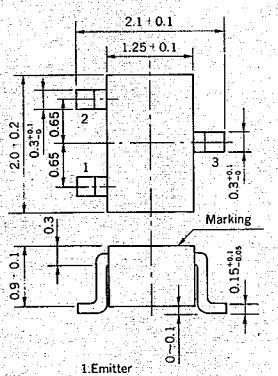
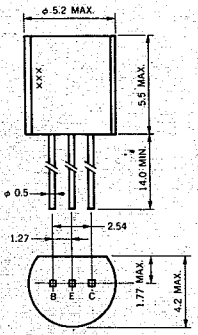


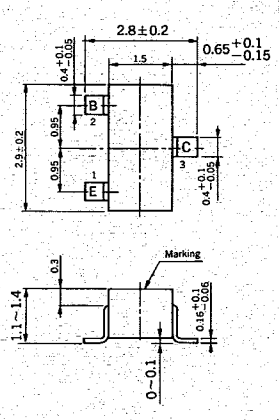
1.Emitter
2.Base
3.Collector

32E/B*



*32B has emitter and base reversed

33



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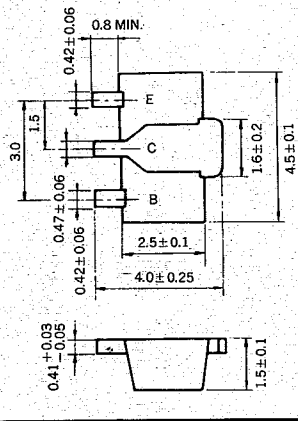

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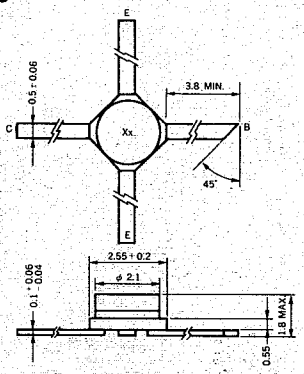

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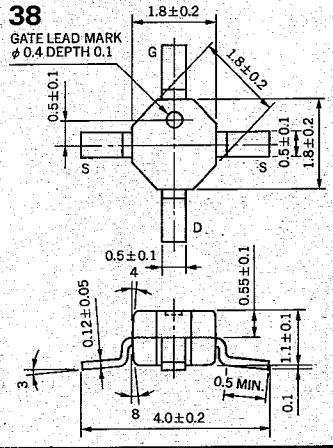
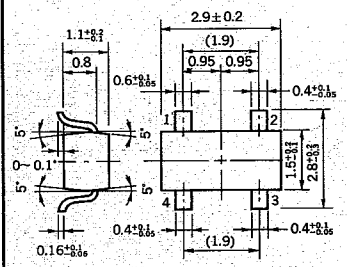
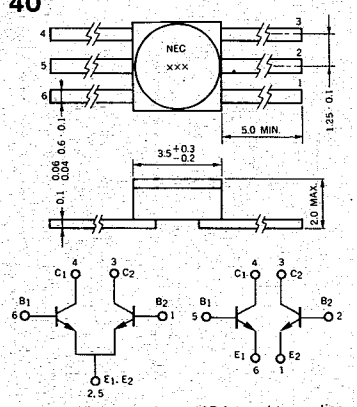


39E/B*



*39B has emitter and base reversed.

40



40A Internal connection 40B Internal connection

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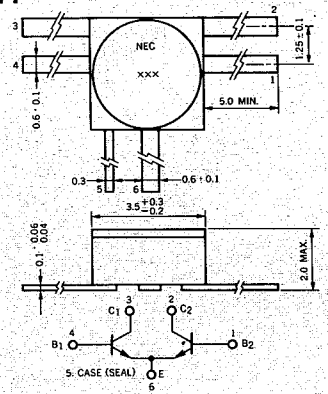

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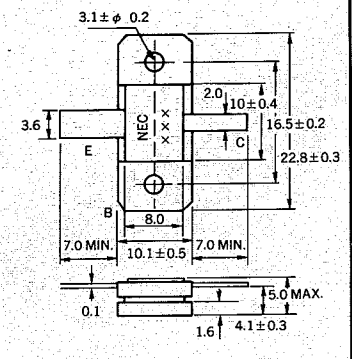

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