

TO-220 Plastic Package

CSA968, CSA968A, CSA968B

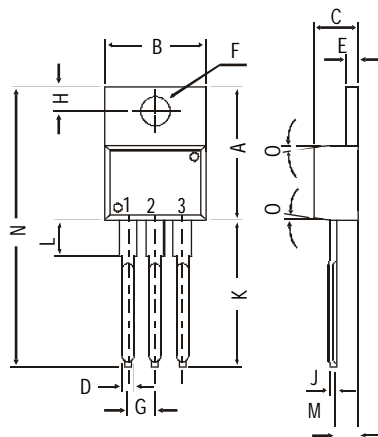
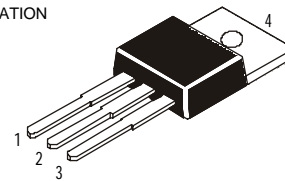
CSA968, 968A, 968B PNP PLASTIC POWER TRANSISTORS

Complementary CSC2238, 2238A, 2238B

Power Amplifier Applications and Driver Stage Amplifier Applications

PIN CONFIGURATION

1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR



All dimensions in mm.

DIM	MIN.	MAX.
A	14.42	16.51
B	9.63	10.67
C	3.56	4.83
D		0.90
E	1.15	1.40
F	3.75	3.88
G	2.29	2.79
H	2.54	3.43
J		0.56
K	12.70	14.73
L	2.80	4.07
M	2.03	2.92
N		31.24
O		DEG 7

ABSOLUTE MAXIMUM RATINGS

		968 968A 968B			
Collector-base voltage (open emitter)	V_{CBO} max.	160	180	200	V
Collector-emitter voltage (open base)	V_{CEO} max.	160	180	200	V
Collector current	I_C max.		1.5		A
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_{tot} max.		25		W
Junction temperature	T_j max.		150		$^\circ\text{C}$
Collector-emitter saturation voltage					
$I_C = 500\text{ mA}; I_B = 50\text{ mA}$	V_{CEsat} max.		1.5		V
D.C. current gain					
$I_C = 100\text{ mA}; V_{CE} = 5\text{ V}$	h_{FE} min.		70		
			max.	240	

RATINGS (at $T_A=25^\circ\text{C}$ unless otherwise specified)

Limiting values		968 968A 968B			
Collector-base voltage (open emitter)	V_{CBO} max.	160	180	200	V
Collector-emitter voltage (open base)	V_{CEO} max.	160	180	200	V
Emitter-base voltage (open collector)	V_{EBO} max.		5.0		V

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Collector current	I_C	max.	1.5	A
Emitter current	I_E	max.	1.5	A
Total power dissipation up to $T_C = 25^\circ\text{C}$	P_{tot}	max.	25	W
Junction temperature	T_j	max.	150	$^\circ\text{C}$
Storage temperature	T_{stg}		-65 to +150	$^\circ\text{C}$

CHARACTERISTICS

$T_{amb} = 25^\circ\text{C}$ unless otherwise specified

			968	968A	968B	
Collector cutoff current $I_E = 0; V_{CB} = 160\text{ V}$	I_{CBO}	max.	1.0			μA
Emitter cut-off current $I_C = 0; V_{EB} = 5\text{ V}$	I_{EBO}	max.	1.0			μA
Breakdown voltages $I_C = 10\text{ mA}; I_B = 0$	V_{CEO}	min.	160	180	200	V
$I_C = 1\text{ mA}; I_E = 0$	V_{CBO}	min.	160	180	200	V
$I_E = 1\text{ mA}; I_C = 0$	V_{EBO}	min.	5.0			V
Saturation voltage $I_C = 500\text{ mA}; I_B = 50\text{ mA}$	V_{CEsat}	max.	1.5			V
Base emitter on voltage $I_C = 500\text{ mA}; V_{CE} = 5\text{ V}$	$V_{BE(on)}$	max.	1.0			V
D.C. current gain $I_C = 100\text{ mA}; V_{CE} = 5\text{ V}^{**}$	h_{FE}	min.	70			
		max.	240			
Output capacitance at $f = 1\text{ MHz}$ $I_E = 0; V_{CB} = 10\text{ V}$	C_o	typ.	30			pF
Transition frequency $I_C = 100\text{ mA}; V_{CE} = 10\text{ V}$	f_T	typ.	100			MHz

**** h_{FE} classification: O: 70-140 Y: 120-240**

Customer Notes

Disclaimer

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